THE JOHNS HOPKINS UNIVERSITY

2015-2016

FALL TERM
UNDERGRADUATE

SCHEDULE OF COURSES

as of March 16, 2015

ARTS AND SCIENCES

AND

ENGINEERING

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Anthropology

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.070.113	01	HS		**Freshman Seminar: Water and Collective Life** *Pandian, Anand* This course explores the place of water in human collective life, religious practice, cultural identity, and political aspiration. Students will learn basic ethnographic methodologies and writing strategies through both seminar discussions and class fieldtrips to water sources and sites in and around Baltimore. Some seminar discussions and fieldtrips will be carried out jointly with the freshman seminar in Political Science 090.199 ("Politics of Water")	3.00	18	W 1:30-3:50PM
AS.070.132	01	HS		**Invitation to Anthropology** *Han, Clara* The screen that brings you last night's Instagrams and celebrity gossip also flashes glimpses of melting icecaps and burning rubble. These are complex times for human beings, both exhilarating and deeply unsettling. This course introduces anthropology as a way of reflecting on the challenges of contemporary life around the globe, focusing on themes such as faith, war, technology, money and ecology.	3.00	60	TTh 10:30-11:45AM
AS.070.317	01	HS	W	**Methods** *Khan, Naveeda* Topic: Understanding Baltimore. This course aims to teach basic fieldwork skills: Choosing and entering a community; establishing contacts; learning to listen and to ask questions and locating archival material that might be relevant. It is a hands-on course that will focus on the Arts District North Station in Baltimore. Required course background: two or more prior courses in anthropology (not cross-listed courses). Course is a requirement for anthropology majors.	3.00	15	TTh 1:30-2:45PM
AS.130.102	01	H	W	**From the Neanderthals to the Neolithic** *McCarter, Susan* Emphasizing theories about human biological and cultural development, this course consists of an in-depth survey of Neanderthal morphology and culture, a brief discussion of evolutionary theory and our fossil ancestors, and concludes with an exploration of the mechanisms and results of the shift from hunting and gathering to farming. (Course formerly known as Introduction: Human Prehistory.) Cross-listed with Anthropology.	3.00	50	TTh 1:30-2:45PM
AS.130.110	01	HS		**Introduction To Archaeology** *Schwartz, Glenn M* An introduction to archaeology and to archaeological method and theory, exploring how archaeologists excavate, analyze, and interpret ancient remains in order to reconstruct how ancient societies functioned. Specific examples from a variety of archaeological projects in different parts of the world will be used to illustrate techniques and principles discussed. Cross-listed with Anthropology.	3.00	80	TTh 10:30-11:45AM
AS.130.177	01	HS		**World Prehistory** *Harrower, Michael James*	3.00	35	TTh 12:00-1:15PM

Anthropology

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				How and why did our nomadic hunting and gathering ancestors become farmers? What led agricultural societies to build cities, develop writing, religious institutions, wage war, and trade for exotic goods? This course surveys prehistory and ancient history from the origins of human culture to the emergence civilization. Although prehistory and ancient history yield evidence of tremendous cultural diversity this course emphasizes common elements of past human experience, culture, and culture change. These include the origins of modern humans and their adjustment to a variety of post-ice age environments, shifts from hunting and gathering to agricultural lifeways, and the initial development of the world's earliest cities and civilizations.			
AS.130.376	01	H		**Ancient Ritual** *Delnero, Paul* This course will introduce students to the vast body of rituals that were practiced and performed in antiquity, with a particular emphasis on rituals from ancient Mesopotamia, Egypt, and the Hebrew Bible. In addition to examining rituals from a comparative perspective, anthropological and sociological studies of ritual will be read and discussed to shed light on the social, cultural, and political significance of ritual in the ancient world and beyond.	3.00	30	MW 3:00-4:15PM
AS.140.343	01	HS		**What it Means to be Human: Perspectives in the History of Anthropology, 1860-1995** *Link, Adrianna Halina* This course explores the changing scientific, social, and cultural ideas that shaped how anthropologists and other scholars approached the study of human beings from the mid-nineteenth through the twentieth centuries.	3.00	15	MW 1:30-2:45PM
AS.310.115	01	H		**Ghost Tales from China and Japan, 14th-19th Centuries** *Joo, Fumiko* We cannot express our own experience of death – only imagine life after death. How did people in the past conceptualize the world of the dead? Ghost tales will teach us what we imagine as the experience of dead and life after death. This course aims to introduce students to a variety of ghost stories in Late Imperial China and Tokugawa Japan and connect their literary imagination of the dead to the cultural, socio-historical, and religious context of each society as well as to the broad East Asian tradition of supernatural narratives. While we also touch upon earlier traditions on narrating the dead, most of the stories in class readings are from the Ming (1368-1644) and Qing (1644-1911) dynasties of China, and the Tokugawa period (1600-1868) of Japan. Key issues include family, gender, sexuality, body, medicine and many more. Although we will also take a look at visual and theatrical representations of the dead, we will primarily focus on literary texts about ghostly phenomena. Film screenings required. All readings are in English.	3.00	25	MW 3:00-4:15PM

Anthropology

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.389.201	01	HS		**Introduction to the Museum: Past and Present** *Kingsley, Jennifer P* This course surveys museums, from their origins to their most contemporary forms, in the context of broader historical, intellectual, and cultural trends. Anthropology, art, history, and science museums are considered. Cross-listed with Anthropology, History, and History of Art.	3.00	25	TTh 1:30-2:45PM
AS.389.353	01	H	W	**Revolutions of the Book: Material Culture & the Transformation of Knowledge from Antiquity to the Renaissance** *Havens, Earle* Explores the material culture of knowledge through transformations in the technologies and arts of communication, taught entirely from rare books, manuscripts, and artifacts in JHU libraries and museum collections.	3.00	15	T 3:00-5:30PM
EN.570.147	01	HS	W	**Adam Smith & Karl Marx** *Schoenberger, Erica* Smith and Marx are iconic figures in the history of political economic thought, often cited, rarely read. They are positioned as polar opposites in highly consequential debates about how society should be ordered. In this class, we will read and discuss their work, closely and carefully. We concentrate on the two iconic texts – The Wealth of Nations and Capital, Vol. 1 – but also explore some of their less well-known writings. Freshmen Only.	3.00	25	W 4:00-7:00PM

Art

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.371.131	01			**Studio Drawing I** *Hankin, Craig* This course focuses on developing fundamental drawing skills for the student with little or no previous studio experience. Basic concepts of form and composition will be taught through exercises based on the book, Drawing On The Right Side Of The Brain, and with the aid of still-life setups and live models. Attendance at 1st class is mandatory.	2.00	15	T 1:30-4:50PM
AS.371.131	02			**Studio Drawing I**	2.00	15	Th 1:30-4:50PM
AS.371.133	01			**Painting Workshop I** *Hankin, Craig* This course offers the fundamentals of oil painting techniques for the serious student with minimal prior studio experience. Observational skills are taught through the extensive use of still-life setups, with particular attention paid to issues of light, color, and composition. Slide lectures and a museum trip give students an art historical context in which to place their own discoveries as beginning painters.	2.00	12	W 1:30-4:50PM
AS.371.134	01			**Painting Workshop II** *Gruber, Barbara* Students who have mastered basic painting skills undertake sustained projects, including portrait and plein air landscape work. Slide lectures and handouts deepen students' appreciation of representational traditions. Advanced techniques, materials, and compositional issues are also investigated. Recommended Course Background: AS.371.133 or equivalent.	2.00	12	Th 1:30-5:00PM
AS.371.149	01	H		**Visual Reality** *Bakker, D.S.* In art, "Realism" is a simulation of visual reality. But art can also simulate alternative realities, those realities or truths which exist only in daydreams or nightmares. In this class, we will learn to explore and create representations of these additional moments of existence. This will require thinking creatively or "outside the box," a useful skill in any field. Using a variety of media, students are asked to solve problems to which there is no one correct answer.	3.00	12	F 1:30-4:20PM

Art

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.371.151	01	H		**Photoshop/Digital Darkroom** *Ehrenfeld, Howard* Photoshop is not only the digital darkroom for processing images created with digital cameras; it is also a creative application for making original artwork. In this course, students use Photoshop software as a tool to produce images from a fine art perspective, working on projects that demand creative thinking while gaining technical expertise. Students will make archival prints, have regular critiques, and attend lectures on the history of the manipulated image and its place in culture. We will look at art movements which inspire digital artists, including 19th century collage, dada, surrealism, and the zeitgeist of Hollywood films. Students must have a digital camera. Prior knowledge of Photoshop is not required. Attendance at first class is mandatory.	3.00	10	M 10:00AM-12:50PM
AS.371.152	01	H		**Introduction to Digital Photography** *Ehrenfeld, Howard* Introduction to Digital Photography Students learn to use their digital cameras through a variety of projects, which will help them develop technical and creative skills. Students explore documentary, landscape and portrait photography. Critiques and slide lectures of historic photographs, which range from postmortem daguerreotypes to postmodern digital imagery, help students develop a personal vision. Students gain camera proficiency with one-on-one instruction in the field. Basics for print adjustment and output will be covered. Attendance at first class is mandatory.	3.00	10	T 10:00AM-12:50PM
AS.371.154	01			**Introduction to Watercolor** *Ober, Caroline* Watercolor is simultaneously the most accessible of all painting media and the most misunderstood. This course provides experience and instruction in observational and expressive watercolor techniques, materials, concepts, and vocabulary. Topics to be reviewed include line, perspective, value, texture,composition, color, and pictorial space. There will be an introduction to contemporary practices in watercolor, as well as experimental and abstract exercises, collage, and conceptual work.	2.00	12	T 1:30-4:20PM
AS.371.155	01			**Introduction to Sculpture** *Premo, Larcia C.* A studio course introducing students to sculptural concepts and methods. Emphasis is on the process of creating. Even the simplest materials can effectively activate space, convey meaning, and elicit emotion when used thoughtfully and imaginatively. Students will learn different methods including additive and reductive techniques, construction, modeling, and mold-making. No prerequisites except a willingness to experiment, make mistakes... and clean up when you are done. Seniors only or permission required.	2.00	12	M 1:30-4:20PM
AS.371.162	01	H		**Black and White: Digital Darkroom** *Berger, Phyllis A*	3.00	10	W 10:00AM-12:50PM

Art

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				In this digital course, students explore the black-and-white aesthetic. They develop camera skills on numerous field trips including Ladew Topiary Gardens, the Maryland Zoo & Botanical Gardens, and an optional weekend trip to Cape Henlopen State Park in Delaware. Students meet frequently for critiques and discussions based on historic and contemporary imagery. They will learn to use Photoshop for image adjustment. Techniques such as high dynamic range, duotone, panorama and infrared will be covered. Students work on a project of their choice and produce a portfolio of ten prints. Digital SLRs are provided. Attendance at 1st class is mandatory.			
AS.371.162	02	H		**Black and White: Digital Darkroom**	3.00	10	W 2:00-4:50PM
AS.371.165	01	H		**Location Photography** *Ehrenfeld, Howard* Working in the studio and in various locations, students will learn the fundamentals of lighting interiors and strategies for working in almost any environment. Field trips will include the National Aquarium, Evergreen Museum & Library, a Howard County horse farm, a Tiffany-designed church and a Hampden photo studio. Students will also concentrate on the fine art of printing in our new digital lab. They will develop a final portfolio of 10 photographs which express a personal vision about a location of their choice. A basic knowledge of digital photography is helpful, but not required.	3.00	10	T 1:30-4:20PM
AS.371.303	01	H		**Documentary Photography** *Berger, Phyllis A* In this course, we will explore different genres of documentary photography, including the fine art document, photojournalism, social documentary photography, the photo essay and photography of propaganda. Students will work on a semester-long photo-documentary project on a subject of their choice. Digital SLRs will be provided. First class is mandatory.	3.00	10	F 10:00AM-12:50PM
AS.371.303	02	H		**Documentary Photography**	3.00	10	F 2:00-4:50PM

Behavioral Biology

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.020.151	01	N		**General Biology I** *Pearlman, Rebecca Shari* This course begins with an overview of the biosphere, followed by analysis of ecosystem and exploration of animal behavior in the context of ecosystems and evolution. Next, the cellular and molecular basis of life and the energetics of organisms are presented as unifying themes. The biochemistry of organic molecules, factors controlling gene expression, cellular metabolism, and advances in biotechnology represent topics of concentration. Mechanisms of inheritance and evolution are introduced. Cross-listed with Behavioral Biology. Note: The Tuesday workshop is a required part of this course.	3.00	215	MWF 12:00-12:50PM; T 12:00-12:50PM
AS.020.151	02	N		**General Biology I** *Shingles, Richard*	3.00	210	TTh 12:00-1:20PM
AS.020.153	01	N		**General Biology Laboratory I** *Pearlman, Rebecca Shari* Student must have enrolled in AS.020.151 either this term or in past terms. Students who have credit for AP Biology but take General Biology Lab I will lose all eight credits of AP Biology credit. This course reinforces the topics covered in AS.020.151. Laboratory exercises explore subjects ranging from forest ecology to molecular biology to animal behavior. Students participate in a semester-long project, identifying bacteria using DNA sequencing.	1.00	72	M 1:30-4:20PM
AS.020.153	02	N		**General Biology Laboratory I**	1.00	72	T 1:30-4:20PM
AS.020.153	03	N		**General Biology Laboratory I**	1.00	72	W 1:30-4:20PM
AS.020.153	04	N		**General Biology Laboratory I**	1.00	72	Th 1:30-4:20PM
AS.020.153	05	N		**General Biology Laboratory I**	1.00	72	F 1:30-4:20PM
AS.020.153	06	N		**General Biology Laboratory I**	1.00	44	T 9:00-11:50AM
AS.080.330	01	N	W	**Brain Injury & Recovery** *Gorman, Linda K* This course investigates numerous types of brain injuries and explores the responses of the nervous system to these injuries. The course's primary focus is the cellular and molecular mechanisms of brain injury and the recovery of function. Discussions of traumatic brain injury, stroke, spinal cord, and tumors, using historical and recent journal articles, will facilitate students' understanding of the current state of the brain injury field. Cross-listed with Psychological and Brain Sciences and Behavioral Biology.	3.00	15	WF 12:00-1:15PM
AS.200.141	01	NS		**Foundations of Brain, Behavior and Cognition** *Gorman, Linda K* Formerly listed as Introduction to Physiopsychology. A survey of neuropsychology relating the organization of behavior to the integrative action of the nervous system. Cross-listed with Behavioral Biology and Neuroscience.	3.00	250	TTh 9:00-10:15AM
AS.200.328	01	S	W	**Theory & Methods in Clinical Psychology**	3.00	25	M 6:00-8:20PM

Behavioral Biology

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Edwin, David H A critical examination of the methods of observation, description, reasoning, inference, measurement and intervention that underlie the clinical practice of psychology and psychiatry. Cross listed with Behavioral Biology. Junior and senior Psychology, Behavioral Biology and Cognitive Science majors only OR instructor approval.			
AS.290.420	01	S	W	**Human Sexual Orientation** *Kraft, Chris S* This course will examine the historical and current theories of sexual orientation and sexual variation development by examining the biological, psychological and social contributing factors that influence the development of sexual orientations and variations along with treatment and modification of problematic sexual behaviors. Limited to Juniors and Seniors with PBS, Neuroscience, Public Health, Behavioral Biology, and Biology majors, or Juniors and Seniors with PBS or Women's Studies minors.	3.00	25	T 3:00-5:30PM
AS.290.490	01	S		**Senior Seminar: Behavioral Biology** *Holland, Peter C* Great ideas in Behavioral Biology. Discussion of classic and cutting edge articles in the original literature. Student presentations and reaction papers. Capstone course for senior Behavioral Biology majors.	1.00	12	W 9:00-9:50AM

Biology

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AS.020.104	01	N		**Freshman Seminar: From Genes to DNA and Back** *Moudrianakis, E N* Students must obtain permission from Dr. Moudrianakis to register. A course consisting of introductory lectures followed by student presentations in the form of seminars. The issues analyzed will be: How did we arrive at the concept of the "gene"? Early experiments that gave substance to this concept. How did we arrive at the "one gene, one enzyme" dogma? What is the chemical nature of the gene? Is DNA enough for regulated gene expression? Is it "all in our genes"? What is genetic plasticity and epigenetics? What about genomics and proteomics? Freshmen Only.	1.50	22	W 3:00-4:20PM
AS.020.106	01	N		**Freshman Seminar: Tuberculosis** *Horner, Robert D* Mycobacterium tuberculosis is an extremely successful intracellular bacterial pathogen able to manipulate phagocytic cells and its own metabolism to survive within a host. The molecular mechanisms of this survival and resistance to antibiotics will be studied. Freshmen only.	1.00	12	T 3:00-3:50PM
AS.020.111	01	N		**Freshman Seminar: The 'Nobels" in Medicine and Chemistry** *Brand, Ludwig* Key events in our understanding of the life sciences will be traced with the aid of Nobel awards.	2.00	14	W 2:30-4:30PM
AS.020.115	01	N		**Bioenergetics** *Moudrianakis, E N* This course is a combination of lectures, student presentations and group discussions that address fundamental principles and also contemporary issues examining the way all forms of Life on Earth are ultimately dependent on sunlight to satisfy their food and energy requirements. We examine the steps from the capture of Physical energy (photons), to the development of electrochemical potentials and finally, to their utilization by cellular organelles towards the synthesis of the chemical "currency" that fuels all biological processes (biosynthesis, cell communication, movements, etc). Special emphasis will be on current developments in biotechnologies that utilize microbial populations to supply us with fuels and also to clean up environmental hazards. The course will also consider ways to extract lessons from Nature's successful designs and harmonious adaptations so that we, in the long run, can utilize them towards a minimization of our negative impact on the environment. Note: Freshmen and Sophomores only, with good foundations in two of the following: Physics, Chemistry, Biology, Biophysics.	2.00	19	T 6:30-8:00PM
AS.020.135	01	N		**Project Lab: Phage Hunting** *Fisher, Emily J*	2.00	18	MW 2:30-3:20PM; MW 3:30-5:00PM

Biology

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				This is an introductory course open to all freshman regardless of intended major. No science background is required. This is the first semester of a year-long research-based project lab course in which students will participate in a nation-wide program in collaboration with undergraduates at other colleges. Students will isolate and characterize novel bacteriophages (viruses that infect bacteria) from the environment using modern molecular biological techniques. The course includes two lab meetings per week. Continues in the spring. Each semester provides 2 credit hours of Natural Sciences (N) distribution credits and/or counts 2 hours toward the research requirement for the Molecular and Cellular Biology degree. No textbook is required. Freshmen only			
AS.020.135	02	N		**Project Lab: Phage Hunting** *Schildbach, Joel F*	2.00	18	TTh 2:00-3:30PM; TTh 1:00-1:50PM
AS.020.151	01	N		**General Biology I** *Pearlman, Rebecca Shari* This course begins with an overview of the biosphere, followed by analysis of ecosystem and exploration of animal behavior in the context of ecosystems and evolution. Next, the cellular and molecular basis of life and the energetics of organisms are presented as unifying themes. The biochemistry of organic molecules, factors controlling gene expression, cellular metabolism, and advances in biotechnology represent topics of concentration. Mechanisms of inheritance and evolution are introduced. Cross-listed with Behavioral Biology. Note: The Tuesday workshop is a required part of this course.	3.00	215	MWF 12:00-12:50PM; T 12:00-12:50PM
AS.020.151	02	N		**General Biology I** *Shingles, Richard*	3.00	210	TTh 12:00-1:20PM
AS.020.153	01	N		**General Biology Laboratory I** *Pearlman, Rebecca Shari* Student must have enrolled in AS.020.151 either this term or in past terms. Students who have credit for AP Biology but take General Biology Lab I will lose all eight credits of AP Biology credit. This course reinforces the topics covered in AS.020.151. Laboratory exercises explore subjects ranging from forest ecology to molecular biology to animal behavior. Students participate in a semester-long project, identifying bacteria using DNA sequencing.	1.00	72	M 1:30-4:20PM
AS.020.153	02	N		**General Biology Laboratory I**	1.00	72	T 1:30-4:20PM
AS.020.153	03	N		**General Biology Laboratory I**	1.00	72	W 1:30-4:20PM
AS.020.153	04	N		**General Biology Laboratory I**	1.00	72	Th 1:30-4:20PM
AS.020.153	05	N		**General Biology Laboratory I**	1.00	72	F 1:30-4:20PM
AS.020.153	06	N		**General Biology Laboratory I**	1.00	44	T 9:00-11:50AM
AS.020.243	01	N		**Proteins, Genetics and Human Diseases** *Prosser, Derek*	3.00	19	MW 11:00AM-12:50PM

Biology

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course will provide a theoretical and practical overview of the use of the genetic screening approaches as discovery tools relevant to human health and disease. Lecture topics will include cell biology and genetics of human diseases, gene mutation and inheritance, use of model organisms and discussion of different types of screening approaches. In addition, this course will give students hands-on exposure to scientific research in a laboratory setting. Students will undertake a research project that applies the concepts learned in lectures to ain new insights into the function of a gene involved in amyotrophic lateral sclerosis (aka Lou Gehrig's Disease).			
AS.020.303	01	N		**Genetics** *Hoyt, Myles Andrew* Presentation of the principles of heredity and variation, and their application to evolution and development; physico-chemical nature of the gene; problems of recombination; gene action.	3.00	320	MWF 10:00-10:50AM
AS.020.305	01	N		**Biochemistry** *Tifft, Kathryn Elizabeth* The molecules responsible for the life processes of animals, plants, and microbes will be examined. The structures, biosynthesis, degradation, and interconversion of the major cellular constituents including carbohydrates, lipids, proteins, and nucleic acids will illustrate the similarity of the biomolecules and metabolic processes involved in diverse forms of life. Sophomores, Juniors, and Seniors Only.	4.00	470	MWF 12:00-1:20PM
AS.020.305	31	N		**JHUBiochemistry** *Schildbach, Joel F*	4.00	10	TBA
AS.020.315	01	N		**Biochemistry Laboratory** *Horner, Robert D* This course will reinforce the topics presented in Biochemistry AS.020.305 or AS.250.307 through laboratory exercises which use quantitative measurement to study cellular components and processes. Topics include pH, proteins, carbohydrates, lipids, nucleic acids, and enzymes Sections 6-10 are for BIOLOGY AND MOLECULAR & CELLULAR BIOLOGY MAJORS ONLY.	2.00	40	M 1:30-4:30PM; W 1:30-2:20PM
AS.020.315	02	N		**Biochemistry Laboratory**	2.00	40	T 1:30-4:30PM; W 1:30-2:20PM
AS.020.315	03	N		**Biochemistry Laboratory**	2.00	40	W 1:30-2:20PM; W 2:30-5:30PM
AS.020.315	04	N		**Biochemistry Laboratory**	2.00	40	Th 1:30-4:30PM; W 1:30-2:20PM
AS.020.315	05	N		**Biochemistry Laboratory**	2.00	40	F 1:30-4:30PM; W 1:30-2:20PM
AS.020.315	06	N		**Biochemistry Laboratory**	2.00	40	M 1:30-4:30PM; W 1:30-2:20PM
AS.020.315	07	N		**Biochemistry Laboratory**	2.00	40	T 1:30-4:30PM; W 1:30-2:20PM
AS.020.315	08	N		**Biochemistry Laboratory**	2.00	40	W 2:30-5:30PM; W 1:30-2:20PM
AS.020.315	09	N		**Biochemistry Laboratory**	2.00	40	Th 1:30-4:30PM; W 1:30-2:20PM
AS.020.315	10	N		**Biochemistry Laboratory**	2.00	40	F 1:30-4:30PM; W 1:30-2:20PM
AS.020.315	31	N		**Biochemistry Laboratory** *Schildbach, Joel F*	2.00	6	TBA; TBA
AS.020.329	01	N		**Microbiology**	3.00	37	TTh 10:30-11:45AM

Biology

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Diruggiero, Jocelyne This course explores the physiology and genetics of microorganisms within an evolutionary and ecological framework. Concepts in microbiology will be supported by molecular studies of microbial evolution and microbial communities including that of the human microbiome. Recommended Course Background: AS.020.305			
AS.020.334	01	N		**Planets, Life and the Universe** *Diruggiero, Jocelyne* This multidisciplinary course explores the origins of life, planet formation, Earth's evolution, extrasolar planets, habitable zones, life in extreme environments, the search for life in the Universe, space missions, and planetary protection. Recommended Course Background: Three upper level (300+) courses in sciences (Biophysics, Biology, Chemistry, Physics, Astronomy, Math, or Computer Science)	3.00	38	MWF 11:00-11:50AM
AS.020.340	01	N		**Genetics Laboratory** *Norris, Carolyn R* This laboratory explores the genetics of living organisms, and students in each section will therefore be required to return to lab on succeeding days to observe and record the results of their experiments. Recommended Course Background: AS.020.316	2.00	22	T 1:30-5:20PM
AS.020.340	02	N		**Genetics Laboratory**	2.00	23	W 1:30-5:20PM
AS.020.340	03	N		**Genetics Laboratory**	2.00	22	Th 1:30-5:20PM
AS.020.340	04	N		**Genetics Laboratory**	2.00	11	T 1:30-5:20PM
AS.020.340	05	N		**Genetics Laboratory**	2.00	14	W 1:30-5:20PM
AS.020.340	06	N		**Genetics Laboratory**	2.00	11	Th 1:30-5:20PM
AS.020.340	07	N		**Genetics Laboratory**	2.00	22	W 5:30-9:30PM
AS.020.350	01	N		**Introduction to Clinical Medicine** *Merritt, William T* Perm. Req'd. Post-Bac Students Only	2.00	35	T 6:30-8:50PM
AS.020.379	01	N		**Evolution** *Norris, Carolyn R* This course takes a broad look at the impact of natural selection and other evolutionary forces on evolution. Emphasis is placed on what we can learn from genome sequences about the history of life, as well as current evolutionary pressures. Recommended Course Background: AS.020.306, AS.020.330, or permission required	3.00	25	MW 12:00-1:20PM
AS.020.380	01	N		**Molecular Biology** *Beemon, Karen L*	3.00	50	TTh 1:30-2:45PM

Biology

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				The field of molecular biology is fundamental for those interested in modern biological research and medicine. In this course students examine DNA, RNA and protein synthesis (i.e., the "central dogma" of molecular biology) in molecular detail, as well as how these processes are regulated and interrelated. There is significant examination of molecular structure-function relationships, with particular emphasis on RNA synthesis and processing and chromosomal organization, nucleosome regulation and epigenetics. Modern and fundamental experimental techniques and concepts are explored in detail. Students will learn how to use some genome databases and bioinformatics tools available online to improve their molecular biology research skills and knowledge. Readings are both from scientific journals as well as a textbook that includes interactive online content.			
AS.020.401	01	N		**Advanced Seminar: Molecular and Cellular Biology** *Tifft, Kathryn Elizabeth* This is a weekly seminar designed for graduate students enrolled in the B.A./M.S. and Ph.D. programs. The seminar involves student presentations of research and discussion of topics of current interest in the field. BA/MS candidates only.	3.00	20	Th 5:00-8:00PM
AS.020.420	01	N		**Build-a-Genome** *Bader, Joel S* In this combination lecture/laboratory "Synthetic Biology" course students will learn how to make DNA building blocks used in an international project to build the world's first synthetic eukaryotic genome, Saccharomyces cerevisiae v. 2.0. Please study the wiki www.syntheticyeast.org for more details about the project. Following a biotechnology boot-camp, students will have 24/7 access to computational and wet-lab resources and will be expected to spend 15-20 hours per week on this course. Advanced students will be expected to contribute to the computational and biotech infrastructure. Co-listed with EN.580.420, AS.020.451 and EN.540.420. Successful completion of this course provides 3 credit hours toward the supervised research requirement for Molecular and Cellular Biology majors, or 2 credit hours toward the upper level elective requirement for Biology or Molecular and Cellular Biology majors. Must understand fundamentals of DNA structure, DNA electrophoresis, and analysis, Polymerase Chain Reaction (PCR), and must be either a) Experienced with molecular biology lab work or b) Adept at programming with a biological twist.	4.00	10	MWF 8:30-9:50AM
AS.020.441	01	N		**Mentoring in Biology** *Pearlman, Rebecca Shari*	1.00	22	F 1:10-1:20PM

Biology

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				To become a mentor, students must have successfully completed AS.020.151/152, must apply using the form on the Biology Dept. Website, and must be accepted by the instructors. The deadline to apply is April 1st. This course provides students who have taken General Biology I & II the opportunity to mentor new students in General Biology I & II. Mentors collaborate with faculty on how to lead effective sessions, help student teams complete team assignments, and generally help students understand difficult concepts and principles in biology. Mentors must have a firm command of the topics covered in biology and must meet with both faculty and students through the course of the semester. S/U only. Perm. Req'd			
AS.020.441	02	N		**Mentoring in Biology**	1.00	12	F 1:30-1:40PM
AS.080.305	01	N		**The Nervous System I** *Hendry, Stewart H* The Nervous System is a fully integrated, two-semester course that surveys the cellular and molecular biology of neurons as well as the structure and function of the nervous system. Cross-listed with Biology. No Freshmen.	3.00	196	TTh 1:30-2:45PM
AS.250.351	01	N		**Reproductive Physiology** *Zirkin, Barry R* Focuses on reproductive physiology and biochemical and molecular regulation of the female and male reproductive tracts. Topics include the hypothalamus and pituitary, peptide and steroid hormone action, epididymis and male accessory sex organs, female reproductive tract, menstrual cycle, ovulation and gamete transport, fertilization and fertility enhancement, sexually transmitted diseases, and male and female contraceptive methods. Introductory lectures on each topic followed by research-oriented lectures and readings from current literature.	2.00	100	W 3:00-4:45PM

Biophysics

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.250.205	01	N		**Introduction to Computing** *Damjanovic, Ana* An introductory course to computing with applications in many disciplines (natural and social sciences, humanities, and engineering). Students will obtain basic computing skills and tools, including familiarity with UNIX, with the use of complex UNIX commands (e.g grep, awk, sed) and shell scripts, with the Python programming language, with graphing software and with a package for numerical and statistical computing, such as Mathematica or Matlab. At the end of the semester students will complete a project coupling all components of the semester together. Brief lectures followed by extensive hands-on computer laboratories with examples from many fields. No prerequisites. Course offered every semester.	3.00	36	MWF 12:00-12:50PM
AS.250.205	02	N		**Introduction to Computing**	3.00	36	MWF 11:00-11:50AM
AS.250.205	03	N		**Introduction to Computing**	3.00	36	MWF 3:30-4:20PM
AS.250.205	04	N		**Introduction to Computing**	3.00	36	TTh 9:00-10:15AM
AS.250.253	01	N		**Protein Engineering and Biochemistry Lab** *Fitch, Carolyn A* Entry-level project laboratory. Protein engineering and biotechnology techniques used to modify proteins to give them new structural or physical properties. Students introduced to standard biochemistry laboratory practice and protein science; perform experiments in site-directed mutagenesis, protein purification and structural and physical characterization of biological macromolecules. No prerequisites. Preference given to freshmen and sophomores.	3.00	24	M 1:30-5:30PM
AS.250.253	02	N		**Protein Engineering and Biochemistry Lab**	3.00	24	T 1:30-5:30PM
AS.250.253	03	N		**Protein Engineering and Biochemistry Lab**	3.00	24	F 1:30-5:30PM
AS.250.313	01			**Molecular and Cellular System Biology** *Roberts, Elijah* This course covers the principles of biological networks, with an emphasis on computational analysis. Networks ranging from simple biochemical pathways to genome-scale metabolic, regulatory, and signaling networks will be studied. Topics include dynamic modeling of biochemical pathways, steady-state analysis of cellular metabolic networks, inference of gene regulatory networks using –omics data, and systems biology approaches to studying signal transduction. Recommended Course Background: Calculus (AS.110.106 and AS.110.107), Biochemistry (AS.250.315 or AS.020.305 or equivalent). Computational Biology (AS.250.353) or Introduction to Bioinformatics (AS.250.265) or prior exposure to programming.	4.00	35	TTh 1:30-2:45PM; M 2:00-3:00PM
AS.250.315	01	N		**Biochemistry I** *Fleming, Patrick*	4.00	36	MW 12:00-12:50PM; TTh 12:00-12:50PM

Biophysics

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Foundation for advanced classes in Biophysics and other quantitative biological disciplines. Lecture and computer laboratory. This class is the first semester of a two semester course in biochemistry. Topics in Biochemistry I include chemical and physical properties of biomolecules and energetic principles of catabolic pathways. Computer labs include extensive use of molecular graphics and modelling of reaction kinetics and pathway flux. Co-listed with AS.030.315			
AS.250.345	01	N		**Cellular and Molecular Physiology** *Cone, Richard A* How cells and molecules function as parts of whole organisms. Topics include speeds of diffusion, motor proteins, and animal motility; bacterial size, shape, and chemotaxis; sensory and neuronal mechanisms; osmosis; mucosal protective mechanisms; cellular and organismic circulation and respiration. Discussion section to be arranged 1 hour per week.	3.00	60	MWF 11:00-11:50AM
AS.250.351	01	N		**Reproductive Physiology** *Zirkin, Barry R* Focuses on reproductive physiology and biochemical and molecular regulation of the female and male reproductive tracts. Topics include the hypothalamus and pituitary, peptide and steroid hormone action, epididymis and male accessory sex organs, female reproductive tract, menstrual cycle, ovulation and gamete transport, fertilization and fertility enhancement, sexually transmitted diseases, and male and female contraceptive methods. Introductory lectures on each topic followed by research-oriented lectures and readings from current literature.	2.00	100	W 3:00-4:45PM
AS.250.353	01	N		**Computational Biology** *Fleming, Patrick* This course introduces several computational approaches to the study of biological macromolecules. Students will learn to use computational tools to carry out and analyze molecular simulations and how to work in a UNIX networked environment. A major goal is to understand molecular systems as ensembles. No programming experience is required. A previous biochemistry course is strongly recommended.	3.00	36	TTh 10:30-11:45AM

Biophysics

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.250.372	01	N		**Biophysical Chemistry** *Barrick, Doug* Course provides working understanding of physical chemistry of the cell, emphasizing problem solving. Topics include classical and statistical thermodynamics, thermodynamics of proteins and nucleic acids, protein folding, calorimetry, ligand binding thermodynamics, linkage, cooperativity and anticooperativity, allosteric models, lattice statistics, helix-coil transition, and polymer theory. When appropriate, students visit the laboratory to set up data collection and learn to analyze the resulting data computationally, using nonlinear least-squares methods. Recommended Course Background: Calculus, Organic Chemistry, and Introductory Physics	4.00	35	MWF 10:00-10:50AM; TBA
AS.250.372	02	N		**Biophysical Chemistry**	4.00	35	MWF 10:00-10:50AM; W 2:00-2:50PM
AS.250.383	01		W	**Molecular Biophysics Laboratory** *Fitch, Carolyn A* An advanced inquiry based laboratory course covering experimental biophysical techniques to introduce fundamental physical principles governing the structure/function relationship of biological macromolecules. Students will investigate a “model protein”, staphylococcal nuclease, the “hydrogen atom” of biophysics. Using a vast library of variants, the effect of small changes in protein sequence will be explored. A variety of techniques will be used to probe the equilibrium thermodynamics and kinetics of this system; chromatography, spectroscopy (UV-Vis, fluorescence, circular dichroism, nuclear magnetic resonance), calorimetry, analytical centrifugation, X-ray crystallography and computational methods as needed for analysis. These methods coupled with perturbations to the molecular environment (ligands, co-solvents, and temperature) will help to elucidate protein function.	3.00	6	Th 1:30-5:30PM
AS.250.401	01	N	W	**Advanced Seminar in Structural and Physical Virology** *Garcia-Moreno, Bertrand* Illustrated fundamental contributions from biophysics and quantitative and physico-chemical approaches to study of complex biological systems. Focus on the physical and structural basis of viral infectivity, emphasizing replication cycles and evolution and structural biology of human pathogens such as HIV and influenza. AS.250.372 - Introduction to Biophysical Chemistry useful.	3.00	20	W 2:30-5:00PM

Center for Africana Studies

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.100.109	01	HS	W	**Making America: Slavery, Violence, and the Coming of the Civil War** *Walters, Ronald* An examination of violence - primarily racial and political - in the decades between the American Revolution and Civil War (1789 to 1861).	3.00	20	MW 12:00-12:50PM; F 11:00-11:50AM
AS.100.109	02	HS	W	**Making America: Slavery, Violence, and the Coming of the Civil War**	3.00	20	MW 12:00-12:50PM; F 11:00-11:50AM
AS.100.109	03	HS	W	**Making America: Slavery, Violence, and the Coming of the Civil War**	3.00	20	MW 12:00-12:50PM; F 12:00-12:50PM
AS.100.109	04	HS	W	**Making America: Slavery, Violence, and the Coming of the Civil War**	3.00	20	MW 12:00-12:50PM; F 12:00-12:50PM
AS.100.255	01	HS	W	**The Haitian Revolution in World History** *Marvin, Nathan Elliot* This introductory seminar examines the revolution that transformed the slave colony of Saint-Domingue into the first black republic and second independent nation in the Americas, and its repercussions around the world. Non-Majors welcome.	3.00	18	TTh 9:00-10:15AM
AS.100.435	01	HS	W	**Jewish and Black Diasporas in History and Social Theory, 1890-1945** *Connolly, Nathan D* The formation of minority peoplehoods in the age of global racialism, mass migration, and nationalism's ascendancy as a political principle. Focuses on social thinkers who grappled with this issue (Weber, Du Bois, Arendt); on making sense of the global structures of race, imperial rule, nationhood, and intellectual exchange that framed peoplehood 1890-1945; and on the particular history of African American and East European Jewish negotiations with peoplehood between choice and violent imposition. Permission of instructors.	3.00	15	T 2:00-4:30PM
AS.130.203	01	H		**Archaeology of Africa: From Human Origins to the Emergence of Civilizations** *Harrower, Michael James* This course examines Africa’s ancient past from the emergence of biologically modern humans, ancient hunter-gatherers, the earliest animal herding and farming populations, to cities and civilizations. While Egypt plays an undeniably central role in world history, this course concentrates in particular on ancient geographies other than Egypt.	3.00	17	TTh 9:00-10:15AM
AS.150.141	01	H		**Freshman Seminar: African Philosophy** *Koll, Sandy Gillian* This course surveys some distinctively Sub-Saharan African contributions to major areas of philosophical inquiry, including metaphysics, epistemology, ethics and political philosophy.	3.00	18	T 3:00-5:30PM
AS.180.355	01	S		**Economics of Poverty/Inequality** *Moffitt, Robert A*	3.00	25	TTh 10:30-11:45AM

Center for Africana Studies

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course focuses on the economics of poverty and inequality. It covers the measurement of poverty and inequality, facts and trends over time, the causes of poverty and inequality with a focus on those related to earnings and the labor market, and public policy toward poverty and inequality, covering both taxation and government expenditure and programs. By the nature of the material, the course is fairly statistical and quantitative. Students should have an intermediate understanding of microeconomic concepts. Basic knowledge of regression analysis is also helpful.			
AS.210.391	01	H	W	**Advanced Portuguese Language & Literature** *De Azeredo Cerqueira, Flavia Christina* This third-year course focuses on reading, writing, and oral expression. Under the supervision of the instructor, students will read one or two complete works by major Brazilian, Portuguese, and/or Afro-Portuguese writers each semester, followed by intense writing and oral discussion on the topics covered. Grammar will be reviewed as necessary. Lab work is required. All classes are conducted in Portuguese.	3.00	10	MWF 9:00-9:50AM
AS.211.319	01	H		**¡Salsa! The Afro-Antillean song** *Ramos, Maria Del Rosario* ¡Salsa! The Afro-Antillean song surveys Caribbean music in an international Spanish-speaking context. As a language course, it reviews grammar and instils vocabulary acquisition through the close analysis of the biggest hits of salsa from the past one hundred years. On completion of this course the student will have developed the ability to read and critically discuss music and its history in the Spanish-speaking Caribbean and will have examined cultural roots, market dominance, and media crossovers in the musical universe of the Spanish-speaking archipelago of the Antilles. In completing the course's final project students will apply, synthesize, and reflect on what has been covered in the class by creating a professional dossier individualized to their own personal musical interests. Concepts learned in this course will be directly applicable to careers linked to intercultural and international relations while also apply to multiple careers in media, music industry and dance. May not be taken satisfactory/unsatisfactory. Not open to native speakers of Spanish. No new enrollments permitted after the third class session.	3.00	10	MW 12:00-1:15PM
AS.211.394	01	H	W	**Brazilian Culture & Civilization** *De Azeredo Cerqueira, Flavia Christina*	3.00	26	WF 3:00-4:15PM

Center for Africana Studies

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course is intended as an introduction to the culture and civilization of Brazil. It is designed to provide students with basic information about Brazilian history, art, literature, popular culture, theater, cinema, and music. The course will focus on how indigenous Asian, African, and European cultural influences have interacted to create the new and unique civilization that is Brazil today. The course is taught in English, but ONE extra credit will be given to students who wish to do the course work in Portuguese. Those wishing to do the course work in English for 3 credits should register for section 01. Those wishing to earn 4 credits by doing the course work in Portuguese should register for section 02. The sections will be taught simultaneously. Section 01: 3 credits Section 02: 4 credits (instructor's permission required)			
AS.211.394	02	H	W	**Brazilian Culture & Civilization**	4.00	4	WF 3:00-4:15PM
AS.215.458	01	H		**Cuba and its Culture Since the Revolution** *Gonzalez, Eduardo* We will study the visual and textual arts, cinema, political culture, and blogosphere; reaching back to the first phases in the building of the revolutionary state apparatus and its sovereign mandate. Taught in Spanish.	3.00	30	TTh 10:30-11:45AM
AS.230.205	01	QS		**Intro Social Statistics** *Pasciuti, Daniel Steven* This course will introduce students to the application of statistical techniques commonly used in sociological analysis. Topics include measures of central tendency and dispersion, probability theory, confidence intervals, chi-square, anova, and regression analysis. Hands-on computer experience with statistical software and analysis of data from various fields of social research. Special Note: Required for IS GSCD track students.	4.00	15	F 10:00-10:50AM; MW 3:00-4:15PM
AS.230.205	02	QS		**Intro Social Statistics**	4.00	15	F 11:00-11:50AM; MW 3:00-4:15PM
AS.230.265	01	QS		**Research Tools and Technologies for the Social Sciences** *Upadhyay, Smriti* This course will introduce students to a range of digital technologies that are critical for conducting social scientific research in the 21st century, using examples from ongoing social science faculty research projects at Johns Hopkins on global inequality and international development and on the 2010-2012 global wave of social protest. Students will develop competency in the use of computer programs for statistical analysis, database management, the creation of maps and timelines, and the presentation of research reports. Special Note: Required for IS GSCD track students.	3.00	15	MW 1:30-2:45PM
AS.230.313	01	S	W	**Space, Place, Poverty & Race: Sociological Perspectives on Neighborhoods & Public Housing** *Deluca, Stefanie*	3.00	30	T 3:00-5:30PM

Center for Africana Studies

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Is a neighborhood just a grouping of individuals living in the same place, or do neighborhoods have collective meanings and impacts on children and families? We will capitalize on research methodologies used to define and describe neighborhoods and their effects on economic and educational outcomes. These include case studies, census data, surveys, quasi/experimental data. Focus is on how research measures neighborhood effects and incorporates community level processes into models of social causation (e.g., social capital/control, community efficacy, civic engagement). Also examined: patterns in residential mobility, segregation, and preferences within black and white populations; development of housing policy in the U.S.; programs to determine how neighborhoods affect issues of social importance. Statistics and public policy background is helpful but not required.			
AS.230.316	01	S		**African American Family** *McDonald, Katrina Bell* This course is an examination of sociological theories and studies of African-American families and an overview of the major issues confronting African-American family life. The contemporary conditions of black families are explored, as well as the historical events that have influenced the family patterns we currently observe. Special attention will be given to social policies that have evolved as a result of the prominence of any one perspective at a given point in time.	3.00	15	TTh 1:30-2:45PM
AS.362.111	01	HS	W	**Introduction to African American Studies** *Spence, Lester* This course is an introduction to the origins and emergence of African American Studies as an academic discipline in the American academy. The course is centered on the social realities of people of African descent living in the United States.	3.00	25	M 1:30-3:50PM
AS.362.122	01	HS		**History of Africa (since 1880)** *Gallon, Kim* An introduction to the African past since 1880.	3.00	20	W 1:30-4:00PM
AS.362.180	01		W	**History of Black Americans** *Connolly, Nathan D* This survey course addresses the making and historical experiences of African Americans from the emancipation of slaves in the later nineteenth century to the conclusion of the twentieth century.	3.00	15	TTh 9:00-10:15AM
AS.362.223	01	HS		**Survey of African-American Literature** *Mott, Shani* A survey of African-American Literature.	3.00	20	MWF 11:00-11:50AM
AS.362.270	01			**The Public Health Crisis in Africa** *Furr-Holden, Carolyn*	3.00	20	MW 3:00-4:15PM

Center for Africana Studies

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course examines the historical and current public heath crises in Africa. Topics covered include infectious diseases and viral outbreaks, water and food access, sanitation, education, behavioral health, gender equality, health care and health care access, as well as the link between culture, economics and health. Introduction to Epidemiology is recommended but not required.			
AS.362.450	01		W	**Critical Thinking in Africana Studies** *Hayes, Floyd, III.* This seminar examines various ideas, theories, and practices of thinkers, writers, and activists whose work and practices have constitued an Africana Studies intellectual tradition. The purpose of this seminar is to teach stdents to read, think, and write critically about questions relative to the formation and history of Africana thought and its intellectual tradition, in particular, and the genealogy of thought and intellectual traditions, in general. We will also think about vrious fields of knowledge that have shaped Africana Studies. The seminar therefore will work through the different meanings of intellectual work and critical thought and theory in Africana Studies.	3.00	15	T 1:30-3:50PM

Center for Language Education

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.373.111	01			**First Year Heritage Chinese** *Zhao, Nan* This course is designed for students who were raised in an environment in which Chinese is spoken by parents or guardians at home and for those who are familiar with the language and possess native-like abilities in comprehension and speaking. The course therefore focuses on reading and writing (including the correct use of grammar). Cross-listed with East Asian Studies	3.00	16	MWF 10:00-10:50AM
AS.373.111	02			**First Year Heritage Chinese**	3.00	16	MWF 3:00-3:50PM
AS.373.115	01			**First Year Chinese** *Chen, Jing-Yun* This course is designed primarily for students who have no prior exposure to Chinese. The objective of the course is to help students build a solid foundation of the four basic skills-- -listening, speaking, reading, and writing in an interactive and communicative learning environment. The emphasis is on correct pronunciation, accurate tones and mastery of basic grammatical structures. Note: Students with existing demonstrable skills in spoken Chinese should take AS.373.111-112. No Satisfactory/ Unsatisfactory. Students may choose to attend either lecture at 9am or 3pm on TTh. Cross-listed with East Asian Studies	4.50	16	MWF 9:00-9:50AM; TTh 12:00-12:50PM
AS.373.115	02			**First Year Chinese**	4.50	16	MWF 11:00-11:50AM; TTh 3:00-3:50PM
AS.373.115	03			**First Year Chinese**	4.50	16	TTh 3:00-3:50PM; MWF 12:00-12:50PM
AS.373.115	04			**First Year Chinese**	4.50	16	MWF 3:00-3:50PM; TTh 3:00-3:50PM
AS.373.211	01	H		**Second Year Heritage Chinese** *Chen, Aiguo* This course is designed for students who finished AS.373.112 with C+ and above (or equivalent). Students in this course possess native-like abilities in comprehension and speaking. The course focuses on reading and writing. Cross-listed with East Asian Studies	3.00	16	MWF 11:00-11:50AM
AS.373.215	01	H		**Second Year Chinese** *Chen, Yanfei* Consolidation of the foundation that students have laid in their first year of study and continued drill and practice in the spoken language, with continued expansion of reading and writing vocabulary and sentence patterns. Students will work with both simplified and traditional characters. Note: Students who have native-like abilities in comprehension and speaking should take AS.373.211-212. Cross-listed with East Asian Studies	4.50	16	MWF 9:00-9:50AM; TTh 12:00-12:50PM
AS.373.215	02	H		**Second Year Chinese**	4.50	16	MWF 11:00-11:50AM; TTh 3:00-3:50PM
AS.373.215	03	H		**Second Year Chinese**	4.50	16	MWF 12:00-12:50PM; TTh 3:00-3:50PM
AS.373.313	01	H		**Third Year Heritage Chinese** *Chen, Yanfei*	3.00	16	MWF 3:00-3:50PM

Center for Language Education

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course is designed for those who have already taken AS.373.212 or equivalent. Students need to have native-level fluency in speaking and understanding Chinese. The course focuses on reading and writing. In addition to the textbooks, downloaded articles on current affairs may also be introduced on a regular basis. Cross-listed with East Asian Studies			
AS.373.315	01	H		**Third Year Chinese** *Chen, Aiguo* This two-semester course consolidates and further expands students' knowledge of grammar and vocabulary and further develops reading ability through work with textbook material and selected modern essays and short stories. Class discussions will be in Chinese insofar as feasible and written assignments will be given. Cross-listed with East Asian Studies	3.00	16	MWF 3:00-3:50PM
AS.373.315	02	H		**Third Year Chinese**	3.00	16	MWF 12:00-12:50PM
AS.373.415	01	H		**Fourth Year Chinese** *Zhao, Nan* This course is designed for students who finished AS.373.316 with a C+ or above (or equivalent). Readings in modern Chinese prose, including outstanding examples of literature, newspaper articles, etc. Students are supposed to be able to understand most of the readings with the aid of a dictionary, so that class discussion is not focused primarily on detailed explanation of grammar. Discussion, to be conducted in Chinese, will concentrate on the cultural significance of the readings' content. Cross-listed with East Asian Studies	3.00	16	MWF 9:00-9:50AM
AS.373.491	01			**5th Year Chinese** *Zhao, Nan* Fifth Year Chinese is designed for students who finished fourth year regular or third year heritage Chinese course at JHU or its equivalent and wish to achieve a higher advanced proficiency level in Chinese. The goal of the course is to help students further develop their listening, speaking, reading and writing skills cohesively and to enhance students' understanding of Chinese culture and society through language learning.	3.00	16	TTh 10:30-11:45AM
AS.375.115	01			**First Year Arabic** *Rajab, Baraa* Introductory course in speaking, listening, reading, and writing Modern Standard Arabic. Presents basic grammatical structures and a basic vocabulary. Through oral-aural drill in classroom, tapes in Language Laboratory, and reading/writing exercises, students attain a basic level of competence on which they can build in subsequent years of study. No Satisfactory/ Unsatisfactory	4.50	16	MTWThF 9:00-9:50AM
AS.375.115	02			**First Year Arabic**	4.50	16	MTWThF 10:00-10:50AM
AS.375.215	01	H		**Second Year Arabic** *Jafire, Sana*	4.00	16	MW 11:00-11:50AM; TTh 10:30-11:20AM

Center for Language Education

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Designed to bring students up to competency level required for third/fourth year Arabic. Students will consolidate and expand their mastery of the four basic skills acquired in AS.375.115-116. More authentic material--written, audio, and visual--will be used, and culture will be further expanded on as a fifth skill. Recommended Course Background: AS.375.115-116 or equivalent.			
AS.375.215	02	H		**Second Year Arabic**	4.00	16	MTWTh 12:00-12:50PM
AS.375.301	01	H		**Third Year Arabic** *Rajab, Baraa* Designed to enhance students' ability to read, discuss, and write about various topics covered in traditional and contemporary Arabic texts. Recommended Course Background: AS.375.216 or equivalent.	3.00	16	MWF 12:00-12:50PM
AS.375.401	01	H		**Fourth Year Arabic** *Jafire, Sana* This is an introductory course to different periods of the Arabic literature. Selections of famous Arabic poetry and short prose works are the substance of the course.	3.00	16	TTh 1:30-2:45PM
AS.377.131	01			**Elements of Russian I** *Samilenko, Olya* Designed to give student a firm foundation in the language, with special emphasis on the development of vocabulary, basic reading, and conversational skills. (Section 02 taught at Goucher College)	4.00	16	MTWF 9:00-9:50AM
AS.377.131	02			**Elements of Russian I** *Czeczulin, Annalisa*	4.00	16	MWF 8:30-9:40AM
AS.377.208	01	H		**Intensive Intermediate Russian** *Czeczulin, Annalisa* Intensive oral work; continued emphasis on grammar and reading comprehension. Section 02 taught at Goucher College.	4.00	16	MTWF 11:00-11:50AM
AS.377.208	02	H		**Intensive Intermediate Russian**	4.00	16	MWF 12:30-1:40PM
AS.377.211	01	H		**Introduction to Russian Literature I** *Samilenko, Olya* This first intensive reading course of the literary sequence focuses on a survey of major writers, genres, and literary movements of mid-nineteenth century Russia including select works of Pushkin, Gogol, Lermontov, Turgenev, Tolstoy and Dostoevsky adapted to the intermediate level. Taught in Russian	3.00	16	MWF 10:00-10:50AM
AS.377.270	01	H		**Out of the Shadows: Women in Russia** *Czeczulin, Annalisa*	3.00	16	TBA

Center for Language Education

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course will explore the role of Russian women in the world by carefully examining the significance of contributions by these women. Diverse perspectives will be explored (Russian and Russian National). Students will examine and analyze texts written by and about women struggling with questions regarding patriarchal and male-based society. The fact that these women have remained hidden from Russia and the world at large will also be addressed, using feminist methodologies. This course will provide students with the opportunity to pursue their own questions in dialogue. Rus 270 is available as a traditional or hybrid class. Offered Fall 2015 and every fall. Taught at Goucher College.			
AS.377.395	01	H		**Senior Seminar I: Folklore in Russian Literature** *Samilenko, Olya* Folkloric Elements in the works of Pushkin, Gogol, Lermontov, and Leskov.	3.00	16	MWF 11:00-11:50AM
AS.378.115	01			**First Year Japanese** *Nakao, Makiko Pennington* This course is designed for students who have no background or previous knowledge in Japanese. The course consists of lectures on Tuesday/Thursday and conversation classes on Monday/Wednesdays/Fridays. The goal of the course is the simultaneous progression of four skills (speaking, listening, writing, and reading) as well as familiarity with aspects of Japanese culture. By the end of the year, students will have basic speaking and listening comprehension skills, a solid grasp of basic grammar items, reading and writing skills, and a recognition and production of approximately 150 kanji in context. Knowledge of grammar will be expanded significantly in AS.373.215. No Satisfactory/ Unsatisfactory. Student may choose to attend either lecture at 10:30 am or 12 pm on TTh. Cross-listed with East Asian Studies	4.50	20	MWF 10:00-10:50AM; TTh 12:00-1:15PM
AS.378.115	02			**First Year Japanese** *Katagiri, Satoko*	4.50	20	TTh 12:00-1:15PM; MWF 11:00-11:50AM
AS.378.215	01	H		**Second Year Japanese** *Nakao, Makiko Pennington* Training in spoken and written language, increasing their knowledge of more complex patterns. At completion, students will have a working knowledge of about 250 Kanji. Recommended Course Background: AS.378.115 and AS.378.116 or equivalent.	4.50	16	MWF 11:00-11:50AM; TTh 10:30-11:20AM
AS.378.215	02	H		**Second Year Japanese**	4.50	16	MTWThF 12:00-12:50PM

Center for Language Education

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.378.315	01	H		**Third Year Japanese** *Nakao, Makiko Pennington* Emphasis shifts toward reading, while development of oral-aural skills also continues apace. The course presents graded readings in expository prose and requires students to expand their knowledge of Kanji, grammar, and both spoken and written vocabulary. Cross-listed with East Asian Studies	3.00	16	MWF 9:00-9:50AM
AS.378.396	01	H		**Fundamentals of Japanese Grammar** *Johnson, Mayumi Yuki* This course is designed for students who have already studied 1st-year Japanese grammar and wish to develop a thorough knowledge of Japanese grammar in order to advance all aspects of language skills to a higher level. It is also appropriate for graduate students who need to be able to read materials written in Japanese. Recommended Course Background: AS.378.115-116 or equivalent.	2.00	16	T 2:00-4:00PM
AS.378.415	01	H		**Fourth Year Japanese** *Katagiri, Satoko* By using four skills in participatory activities (reading, writing, presentation, and discussion), students will develop reading skills in modern Japanese and deepen and enhance their knowledge on Kanji and Japanese culture. Recommended Course Background: AS.378.315 and AS.378.316 or equivalent.	3.00	16	TTh 9:00-10:15AM
AS.378.415	01	H		**Fourth Year Japanese** *Nakao, Makiko Pennington*	3.00	16	TTh 9:00-10:15AM
AS.380.101	01			**First Year Korean** *Song, Jayoung* Introduces the Korean alphabet, hangeul. Covers basic elements of the Korean language, high-frequency words and phrases, including cultural aspects. Focuses on oral fluency reaching Limited Proficiency where one can handle simple daily conversations. No Satisfactory/ Unsatisfactory. Cross-listed with East Asian Studies	4.50	20	MTWThF 9:00-9:50AM
AS.380.201	01	H		**Second Year Korean** *Song, Jayoung* Aims for improving oral proficiency and confident control of grammar with vocabulary building and correct spelling intended. Reading materials of Korean people, places, and societies will enhance cultural understanding and awareness. Project due on Korean cities. Existing demonstrable skills in spoken Korean preferred.	4.00	16	MTThF 10:00-10:50AM
AS.380.301	01	H		**Third Year Korean** *Song, Jayoung* Emphasizes reading literacy in classic and modern Korean prose, from easy essays to difficult short stories. Vocabulary refinement and native-like grasp of grammar explored. Project due on Korean culture. Cross-listed with East Asian Studies	3.00	16	MWF 1:00-1:50PM
AS.381.101	01			**First Year Hindi I** *Saini, Uma*	3.00	16	TTh 10:30-11:45AM

Center for Language Education

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Course focuses on acquisition of additional vocabulary and grammatical structures in culturally authentic contexts, listening, speaking, reading, and writing comprehension. No Satisfactory/ Unsatisfactory Lab Req'd.			
AS.381.101	02			**First Year Hindi I**	3.00	16	TTh 3:00-4:20PM
AS.381.201	01	H		**Second Year Hindi I** *Saini, Uma* Course provides refinement of basic language skills in cultural context. Emphasis will be on expansion of vocabulary and grammatical structures and further development of communicative skills. Recommended Course Background: AS.381.101, AS.382.102	3.00	16	TTh 12:00-1:15PM
AS.381.301	01	H	W	**Third Year Hindi I** *Saini, Uma* Promotes the active use of Hindi in culturally authentic contexts. Development of fluency in oral and written communication is emphasized.	3.00	16	M 4:30-7:15PM
AS.384.115	01			**First Year Hebrew** *Cohen, Zvi* Designed to provide reading and writing mastery, to provide a foundation in Hebrew grammar and to provide basic conversational skills. Cross-listed with Jewish Studies. Final day/time will be determined during the first week of classes based on students' schedules.	4.00	16	TBA
AS.384.215	01	H		**Second Year Hebrew** *Cohen, Zvi* Designed to enrich vocabulary and provide intensive grammatical review, and enhance fluency in reading, writing and comprehension. Cross-listed with Jewish Studies. Final day/time will be determined during the first week of classes based on students' schedules.	4.00	16	TBA
AS.384.315	01	H		**Third Year Hebrew** *Cohen, Zvi* Designed to maximize comprehension and the spoken language through literary and newspaper excerpts providing the student with the language of an educated Israeli. Cross-listed with Jewish Studies. Final day/time will be determined during the first week of classes based on students' schedules.	4.00	16	TBA

Chemistry

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.030.101	01	N		**Introductory Chemistry I** *Staff* An introduction to the fundamental principles of chemistry. The main topics to be covered are atomic and molecular structure at the level of dot structures and VSEPR geometries, the periodic table, stoichiometry and the balancing of chemical equations, the gas laws, the law of mass action and chemical equilibrium, acids and bases, and elementary chemical thermodynamics. Switching sectons requires instructor's approval. Corequisite: AS.030.105	3.00	320	MWF 9:00-9:50AM; M 1:30-5:00PM
AS.030.101	02	N		**Introductory Chemistry I**	3.00	320	MWF 10:00-10:50AM
AS.030.103	01	N		**Applied Chemical Equilibrium and Reactivity w/lab** *Greco, Jane* This course is designed for freshmen who have previously taken AP chemistry or have similar advanced chemistry experience. This course will review an advanced introductory chemistry sequence in a single semester. Chemical equilibrium, reactivity and bonding will be covered. These topics will be explored through the use of laboratory experiments and problem solving, and the use of these principles in current research areas will be discussed. Students may receive credit for AS.030.103 or EN.510.101, but not both.	4.00	28	MWF 9:00-9:50AM; M 1:30-5:00PM
AS.030.103	02	N		**Applied Chemical Equilibrium and Reactivity w/lab**	4.00	28	MWF 9:00-9:50AM; T 1:30-5:00PM
AS.030.103	03	N		**Applied Chemical Equilibrium and Reactivity w/lab**	4.00	28	MWF 9:00-9:50AM; Th 1:30-5:00PM
AS.030.105	01	N		**Introductory Chemistry Lab I** *Pasternack, Louise* Laboratory in the fundamental methods of chemistry with related calculations.	1.00	100	M 1:30-4:20PM
AS.030.105	02	N		**Introductory Chemistry Lab I**	1.00	100	T 1:30-4:20PM
AS.030.105	03	N		**Introductory Chemistry Lab I**	1.00	100	W 1:30-4:20PM
AS.030.105	04	N		**Introductory Chemistry Lab I**	1.00	100	Th 1:30-4:20PM
AS.030.105	05	N		**Introductory Chemistry Lab I**	1.00	100	F 1:30-4:20PM
AS.030.105	06	N		**Introductory Chemistry Lab I**	1.00	100	Th 9:00-11:50AM
AS.030.112	01			**Chemistry with Problem Solving I** *Hill, Eric Anthony* This course is for students who have had moderate or limited exposure to the subject. Special emphasis is placed on scientific problem-solving skills. There are two discussion sections per week, including one devoted exclusively to interactive quantitative problem solving. A typical student may have taken a year of descriptive chemistry as a high school sophomore, but has not been exposed to the problem-solving mathematical approach used in university-level science courses. Taken concurrently with AS.030.101 and AS.030.102.		25	MW 7:30-8:30PM
AS.030.205	01	N		**Organic Chemistry I** *Staff*	4.00	300	MWF 9:00-9:50AM; Th 9:00-10:20AM

Chemistry

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				The fundamental chemistry of the compounds of carbon. Methods of structure determination and synthesis. The mechanisms of typical organic reactions and the relations between physical and chemical properties and structures.			
AS.030.205	02	N		**Organic Chemistry I**	4.00	300	MWF 10:00-10:50AM; Th 9:00-10:20AM
AS.030.205	03	N		**Organic Chemistry I**	4.00	130	MWF 9:00-9:50AM; Th 9:00-10:20AM
AS.030.225	01	N		**Introductory Organic Chemistry Lab** *D'Souza, Larissa N* Techniques for the organic chemistry laboratory including methods of purification, isolation, synthesis, and analysis. Chemistry majors should take this course in the fall semester. Course lecture meets at 9:00 am. Freshman are not eligible to register. Students may not simultaneously enroll in AS.030.225 and AS.030.227.	3.00	60	M 12:30-5:30PM; T 9:00-10:20AM
AS.030.225	02	N		**Introductory Organic Chemistry Lab**	3.00	55	T 12:30-5:30PM; T 9:00-10:20AM
AS.030.225	03	N		**Introductory Organic Chemistry Lab**	3.00	55	W 12:30-5:30PM; T 9:00-10:20AM
AS.030.225	04	N		**Introductory Organic Chemistry Lab**	3.00	55	Th 12:30-5:30PM; T 9:00-10:20AM
AS.030.225	05	N		**Introductory Organic Chemistry Lab**	3.00	55	F 12:30-5:30PM; T 9:00-10:20AM
AS.030.227	01	N		**Chemical Chirality: An Introduction in Organic Chem. Lab, Techniques** *Hill, Eric Anthony* This is a project lab designed for Chemistry Majors who are concurrently enrolled in AS.030.205. Techniques for the organic chemistry laboratory including methods of purification, isolation, synthesis, and analysis will be explored through a project focused on chemical chirality. Students may not simultaneously enroll for AS.030.225 and AS.030.227.	3.00	16	T 9:00-10:20AM; W 1:30-6:30PM
AS.030.227	02	N		**Chemical Chirality: An Introduction in Organic Chem. Lab, Techniques**	3.00	16	T 9:00-10:20AM; F 1:30-6:30PM
AS.030.270	01	N		**Metals & Their Impact on Industry, Drug Development & Society** *Joslin, Evan* This is a seminar-based course that is broken up into three modules. The beginning of the course will focus on a basic introduction to the periodic table, in particular the transition metals. After a basic knowledge is formed the first theme will focus on the use of metals in the medical field, for example as MRI imaging agents or heavy metal poisoning. The second portion of the course will move away from the body and focus on how metals have impacted society. For example, we will look at the influence of metals in cars, the production of plastics and household chemicals. The final section will focus on how metals have influenced world power such as the invention of the atomic bomb. This course is designed to provide an overall understand of how chemistry and metals influence our lives every day.	3.00	19	TTh 10:30-11:45AM
AS.030.305	01	N	W	**Physical Chemistry Instrumentation Laboratory I** *Bragg, Arthur E*	3.00	12	M 1:30-2:20PM; M 2:30-6:30PM

Chemistry

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course is designed to illustrate the principles of physical chemistry and to introduce the student to techniques and instruments used in modern chemical research. Chemistry majors are expected to take this sequence of courses, rather than AS.030.307. Chemistry majors only.			
AS.030.305	02	N	W	**Physical Chemistry Instrumentation Laboratory I**	3.00	12	M 1:30-2:20PM; W 2:30-6:30PM
AS.030.307	01	N		**Physical Chemistry Instrumentation Laboratory III** *Fairbrother, D Howard* This is a one-semester course which selects experiments that are most relevant to chemical engineering. Chemical Engineering majors only. Recommended Course Background: AS.030.301-AS.030.302 or equivalent.	3.00	20	T 1:30-2:20PM; T 2:30-6:30PM
AS.030.307	02	N		**Physical Chemistry Instrumentation Laboratory III**	3.00	20	Th 1:30-2:20PM; Th 2:30-6:30PM
AS.030.315	01	N		**Biochemistry I** *Fleming, Patrick* Foundation for advanced classes in Biophysics and other quantitative biological disciplines. Lecture and computer laboratory. This class is the first semester of a two semester course in biochemistry. Topics in Biochemistry I include chemical and physical properties of biomolecules and energetic principles of catabolic pathways. Computer labs include extensive use of molecular graphics and modelling of reaction kinetics and pathway flux. Co-listed with AS.250.315	4.00	10	MW 12:00-12:50PM; TTh 12:00-12:50PM
AS.030.356	01	N		**Advanced Inorganic Lab** *Roth, Justine P* Laboratory designed to illustrate the principles and practice of inorganic chemistry through the synthesis and characterization of transition metal and organometallic compounds. Methods used include vacuum and inert atmosphere techniques. Instrumental approaches and modern spectroscopic techniques are applied to the characterization of compounds generated.	3.00	15	T 1:30-2:20PM; W 1:30-6:30PM
AS.030.356	02	N		**Advanced Inorganic Lab**	3.00	15	T 1:30-2:20PM; F 1:30-6:30PM
AS.030.370	01	N		**Physical Chemistry I with Biophysical Applications** *Barrick, Doug* Course provides working understanding of physical chemistry of the cell, emphasizing problem solving. Topics include classical and statistical thermodynamics, thermodynamics of proteins and nucleic acids, protein folding, calorimetry, ligand binding thermodynamics, linkage, cooperativity and anticooperativity, allosteric models, lattice statistics, helix-coil transition, and polymer theory. When appropriate, students visit the laboratory to set up data collection and learn to analyze the resulting data computationally, using nonlinear least-squares methods.	4.00	19	MWF 10:00-10:50AM; T 9:00-9:50AM
AS.030.370	02	N		**Physical Chemistry I with Biophysical Applications**	4.00	19	MWF 10:00-10:50AM; F 2:30-3:20PM

Chemistry

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.030.449	01	N		**Chemistry of Inorganic Compounds** *Roth, Justine P* Physical and chemical properties of inorganic, coordination and organometallic compounds are discussed in terms of molecular orbital, ligand field and crystal field theories. Emphasis on structure and reactivity of these inorganic compounds. Other topics: magnetic properties, electronic spectra, magnetic resonance spectra, reaction kinetics.	3.00	30	TTh 3:00-4:15PM
AS.030.453	01	N		**Intermediate Quantum Chemistry** *Silverstone, Harris* The principles of quantum mechanics are developed and applied to chemical problems.	3.00	20	MWF 11:00-11:50AM
AS.030.472	01	N		**Advanced Inorganic & Organometallic Reactions Mechanisms** *Joslin, Evan* The beginning of the course will focus on the basics of organometallic chemistry such as molecular orbital theory, agostic bonding, electronic structure and coordination geometries. These topics would then be followed with common reactions in organometallic chemistry such as ligand substitution, oxidation addition, and reductive elimination. The final set of topics will cover the basic “tools of the trade” which will encompass kinetics, dynamic NMR spectroscopy, kinetic isotope effects and mechanistic studies.	3.00	19	TTh 9:00-10:15AM

Classics

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.040.105	01			**Elementary Ancient Greek** *Staff* This course provides a comprehensive, intensive introduction to the study of ancient Greek. During the first semester, the focus will be on morphology and vocabulary. Credit is given only upon completion of a year's work. Cannot be taken Satisfactory/Unsatisfactory.	4.00	10	MWF 9:00-9:50AM; TTh 9:00-9:50AM
AS.040.107	02			**Elementary Latin** *Staff* This course provides a comprehensive, intensive introduction to the study of Latin for new students, as well as a systematic review for those students with a background in Latin. Emphasis during the first semester will be on morphology and vocabulary. Credit is given only upon completion of a year's work. Course may not be taken Satisfactory/Unsatisfactory.	3.50	15	MWF 10:00-10:50AM
AS.040.107	03			**Elementary Latin**	3.50	15	MWF 11:00-11:50AM
AS.040.111	01	H		**Ancient Greek Civilization: Society, Archaeology, Literature, Philosophy** *Staff* The course will introduce students to major aspects of the ancient Greek civilization, with special emphasis placed upon culture, society, archaeology, literature, and philosophy.	3.00	25	MWF 10:00-10:50AM
AS.040.121	01	H		**Ancient Greek Mythology: Art, Narratives, and Modern Mythmaking** *Yatromanolakis, Dimitrios* Focuses on major and often intricate myths and mythical patterns of thought as they are reflected in compelling ancient visual and textual narratives. Being one of the greatest treasure troves of the ancient world, these myths will further be considered in light of their rich reception in the medieval and modern world (including their reception in the modern fields of anthropology and philosophy).	3.00	25	MW 3:00-4:15PM
AS.040.205	01	H		**Intermediate Ancient Greek** *Staff* Reading ability in classical Greek is developed through a study of various authors.	3.00	15	TTh 12:00-1:15PM
AS.040.207	01	H		**Intermediate Latin** *Yatromanolakis, Dimitrios* Although emphasis is still placed on development of rapid comprehension, readings and discussions introduce student to study of Latin literature, principally through texts of various authors.	3.00	15	MW 1:30-2:45PM
AS.040.221	01	H		**Art and Archaeology of Early Greece** *Anderson, Emily S.K.* This course explores the origins and rise of Greek civilization from the Early Bronze Age to the Persian Wars (ca. 3100-480 B.C.), focusing on major archaeological sites, sanctuaries, material culture, and artistic production.	3.00	25	TTh 10:30-11:45AM

Classics

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.040.305	01	H		**Advanced Ancient Greek** *Montiglio, Silvia* Reading of prose or verse authors, depending on the needs of students. (Same as AS.040.705) Recommended Course Background: AS.040.205-AS.040.206 or equivalent.	3.00	8	MW 3:00-4:15PM
AS.040.308	01	H		**Advanced Latin Poetry** *Roller, Matthew* The aim of this course is to increase proficiency and improve comprehension of the Latin language. Intensive reading of Latin texts, with close attention to matters of grammar, idiom, and translation. (Same as AS.040.710)	3.00	8	TTh 1:30-2:45PM
AS.040.366	01	H	W	**The Archaeology of Ancient Cyprus: Investigating a Mediterranean Island World in the JHU Museum** *Anderson, Emily S.K.* This course explores the visual and material worlds of ancient Cyprus from the earliest human evidence through the Iron Age. Class involves regular analysis of artifacts based in the Archaeological Museum.	3.00	12	T 1:30-4:00PM
AS.040.370	01	H		**Ovid and the Consequences** *Staff* Beginning with close study of the poem itself, this course will examine the unequaled influence of Ovid's Metamorphoses on subsequent literature and art, including theater and film.	3.00	25	MW 12:00-1:15PM
AS.150.201	01	H		**Introduction to Greek Philosophy** *Bett, Richard* A survey of the earlier phase of Greek philosophy. Socrates, Plato, and Aristotle will be discussed, as well as two groups of thinkers who preceded them, usually known as the pre-Socratics and the Sophists.	3.00	25	F 10:00-10:50AM; MW 10:00-10:50AM
AS.150.201	02	H		**Introduction to Greek Philosophy**	3.00	15	MW 10:00-10:50AM; W 2:00-2:50PM
AS.150.201	03	H		**Introduction to Greek Philosophy**	3.00	25	F 10:00-10:50AM; MW 10:00-10:50AM
AS.150.201	04	H		**Introduction to Greek Philosophy**	3.00	15	MW 10:00-10:50AM; W 3:00-3:50PM
AS.214.347	01	H	W	**Petrarch and the Beginnings of the Renaissance** *Celenza, Christopher* This course will focus on the life, work, and thought of Francesco Petrarca, or "Petrarch." Though known today primarily as the author of Italian love poetry, Petrarch considered his Latin work more lasting. We will explore both sides of his work, the vernacular and Latin (in English translation) to come to an understanding of his place in medieval intellectual history, the history of philosophy, and the history of literature.	3.00	25	TTh 12:00-1:15PM
AS.214.477	01	H	W	**Magic, Marvel, and Monstrosity in the Renaissance** *Stephens, Walter E*	3.00	12	TTh 1:30-2:45PM

Classics

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Magic, Monstrosity,and Marvels or Wonders call into question what we see and experience: what is reality, what is illusion; what's natural and what's supernatural? What's human and what's more, or less, than human? During the Renaissance, ideas about the nature of reality were bound up with questions and issues very different from those of our time. With the exact sciences still being invented, the nature of the world was much less hard and fast for Renaissance people than it is for the modern educated person. The literary masterpieces of the Italian Renaissance provide vivid illustrations of the early modern sense of wonder. Foremost among these are the theatrical comedies which Italian authors revived in imitation of the ancients, and the romances, especially Ariosto's Orlando furioso (1532) and Tasso's Gerusalemme liberata (1581). These and other works influenced ideas about magical and marvelous phenomena across Europe for centuries to come. Works will be read and discussed in English. Italian majors and graduate students (who should enroll in section 2) will attend a weekly supplemental discussion in Italian and compose their written work in Italian.			
AS.214.477	02	H	W	**Magic, Marvel, and Monstrosity in the Renaissance**	4.00	8	TTh 1:30-2:45PM
AS.360.133	01	H	W	**Freshman Seminar: Great Books at Hopkins** *Patton, Elizabeth* Students attend lectures by an interdepartmental group of Hopkins faculty and meet for discussion in smaller seminar groups; each of these seminars is led by one of the course faculty. In lectures, panels, multimedia presentations, and curatorial sessions among the University's rare book holdings, we will explore some of the greatest works of the literary and philosophical traditions in Europe and the Americas. Close reading and intensive writing instruction are hallmarks of this course; authors for Fall 2014 include Homer, Plato, Boccaccio, Shakespeare, Madame de Lafayette, Flaubert, Dostoevsky, Chekhov, and Joyce.	3.00	15	TTh 10:30-11:45AM
AS.360.133	02	H	W	**Freshman Seminar: Great Books at Hopkins** *Achinstein, Sharon*	3.00	15	TTh 10:30-11:45AM
AS.360.133	03	H	W	**Freshman Seminar: Great Books at Hopkins** *Bett, Richard*	3.00	15	TTh 10:30-11:45AM
AS.360.133	04	H	W	**Freshman Seminar:Great Books at Hopkins** *Russo, Elena*	3.00	15	TTh 10:30-11:45AM
AS.360.133	05	H	W	**Freshman Seminar: Great Books at Hopkins** *Stephens, Walter E*	3.00	15	TTh 10:30-11:45AM

Cognitive Science

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.050.101	01	NS		**Cognition** *Wilson, Colin* Introductory course exploring the study of human mental processes within the field of cognitive science. Drawing upon cognitive psychology, cognitive neuropsychology, cognitive neuroscience, linguistics, and artificial intelligence, the course examines theory, methods, and major findings in work on vision, reasoning, and language.	3.00	150	TTh 12:00-1:15PM
AS.050.102	01	NS		**Language and Mind** *Omaki, Akira* Introductory course dealing with theory, methods, and current research topics in the study of language as a component of the mind. What it is to "know" a language: components of linguistic knowledge (phonetics, phonology, morphology, syntax, semantics) and the course of language acquisition. How linguistic knowledge is put to use: language and the brain and linguistic processing in various domains. This course is restricted to freshmen and sophomores. Juniors and seniors must seek instructor approvel to enroll. Cross-listed with Neuroscience and Psychology.	3.00	50	MW 12:00-1:15PM
AS.050.105	01	NS		**Intro to Cognitive Neuropsychology** *McCloskey, Michael E* When the brain is damaged or fails to develop normally, even the most basic cognitive abilities (such as the ability to understand words, or perceive objects) may be disrupted, often in remarkable ways. This course explores a wide range of cognitive deficits, focusing on what these deficits can tell us about how the normal brain works. Topics include brain anatomy and causes of brain damage, reading and spelling deficits, unilateral spatial neglect, hemispheric disconnection, cortical plasticity, and visual perception of location and orientation. Students read primary sources: journal articles that report deficits and discuss their implications. Cross-listed with Neuroscience.	3.00	125	TTh 1:30-2:45PM
AS.050.206	01	NS		**Bilingualism** *Yarmolinskaya, Julia S* Do children get confused when they grow up exposed to more than one language? Is it possible to forget one's native language? Are the first and second language processed in different areas of the brain? How does brain damage impact the different languages of a polyglot? Does knowing a second language affect non-linguistic cognitive processing? This course will address questions such as these through an exploration of mental and neural processes underlying bilingual and multilingual language processing.	3.00	35	T 5:30-8:00PM
AS.050.312	01	NS		**Cognitive Neuroimaging Methods in High-Level Vision** *Park, Soojin*	3.00	15	T 3:00-5:30PM

Cognitive Science

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course is an advanced seminar and research practicum course. It will provide the opportunity to learn about fMRI methods used in the field of vision science and for students to have hands-on experience to develop, design and analyze a research study on topics in the cognitive neuroscience field of high-level vision. In the first part of the course students will read recent fMRI journal papers and learn about common fMRI designs and analysis methods; in the second part of the course students will conduct a research study as a group to address a research question developed from readings. Students are expected to write a paper in a journal article format at the end of the course and to present their results in front of the class. Research topics will vary but with special focus on topics in object, scene and space recognition. Cross-listed with Neuroscience and Psychology. instructor's permission required.			
AS.050.317	01	NS		**Semantics I** *Rawlins, Kyle* This is an introduction to the study of meaning in natural language. We address the conceptual and empirical issues in semantic theory and introduce some formal machinery that has been developed to deal with such problems. After discussing foundational questions, we turn to formal semantics and pragmatics, as well as their interfaces with syntax and the lexicon. Specific topics include presupposition, type-driven composition, quantification, lexical aspect, argument structure, and lexical representations of meaning.	3.00	45	MW 3:00-4:15PM; F 3:00-3:50PM
AS.050.318	01	NS		**Community Based Learning - Practicum in Language Disorders** *Rapp, Brenda C* This course provides the opportunity to learn about adult aphasias, language disorders which are one of the most common consequences of stroke. You will receive training in supportive communication techniques and work as a communication partner with an individual with aphasia for two hours per week. Three class meetings for orientation and reading assignments will be held on campus; training and practicum will be conducted at a local aphasia support center. Transportation required. Junior or Senior status. Please see course and GPA prerequisites. Co-listed with Neuroscience (AS.080.400). Please see additional instructions on the Neuroscience Department website at: the Neuroscience Department Website	2.00	2	None
AS.050.332	01	NS		**Developmental Cognitive Neuroscience** *Landau, Barbara* In-depth examination of the current literature on cognitive development in the context of development cognitive neuroscience. Please see course prerequisites. Meets with AS.050.632.	3.00	20	MW 1:30-2:45PM

Cognitive Science

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.050.373	01	NQ		**Neural-Network Modeling of Learning, Language and Cognition** *Cho, Pyeong Whan* Connectionism is an approach to Artificial Intelligence computation inspired by how the brain, a network of neurons, works. A connectionist model (or artificial neural network) is a collection of simple processing units that are massively interconnected with each other, and that represents knowledge in its connection pattern. Each processing unit has highly limited computational power but the collection of units as a whole has great computational power (as strong as the Turing machine). Connectionist models have been used to study diverse aspects of human cognition: attention, pattern recognition, memory, categorization, language processing, learning, and decision making. In this seminar, students will learn important concepts, principles, algorithms, and practical skills in connectionist modeling by actually doing connectionist modeling. Students will first play with toy problems to learn various types of connectionist modeling techniques, and will then carry out a team research project. In addition to practical skills, students will learn to be explicit about their assumptions and reasoning when making their (conceptual or implemented) models and to make new observable predictions that can be tested in experiments.Recommended Course Background: Experience with some programming language. Exceptions can be made by seeking instructor's permission.	3.00	10	TTh 9:00-10:15AM
AS.050.373	02	NQ		**Neural-Network Modeling of Learning, Language and Cognition**	3.00	10	TTh 10:30-11:45AM
AS.376.371	01	NS		**Topics in Music Cognition I** *Lopez-Gonzalez, Monica* What underlies our aesthetic response to music? How and why are we able to identify certain sounds as music? To what extent are music and natural language similar? What is it about music that evokes such powerful emotions such as happiness and sadness? What is unique to musical creativity? Examining such questions from cognitive science, neuroscience, psychology, and philosophical perspectives, this course explores relevant research and theory in the emerging domain of music perception and cognition. Students will complete a final research paper on the topic of their choice that integrates the course material.	3.00	15	Th 4:30-6:50PM

Dean's Teaching Fellowship Courses

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.010.220	01		W	**Theft, Theory, and Telescopes: Rome and Naples in the Age of Caravaggio** *Friedman, Hannah Joy* This course will offer an overview of painting in Rome and Naples in both Caravaggio's generation and the one that followed it, exploring broad shifts in artistic theory and practice from the 1590s to the late 1630s.	3.00	18	TTh 3:00-4:15PM
AS.010.321	01			**Shopping for Status: Patronage & Collecting at the Early Modern European Court** *Teresi, Rebecca Quinn* At the early modern European princely court, wonders of art (ancient sculptures, priceless tapestries, masterpieces of oil on canvas) were displayed alongside wonders of religion, science, and nature (saintly relics, astronomical devices, unicorn horns). Through the study of courtly patronage and collecting practices, this seminar will examine the court as both a locus of power and a social organism. Students will explore the way players at court staged strategic and social exchange through the circulation, organization, display and concealment of art and artifacts to powerful ends.	3.00	12	W 1:30-4:00PM
AS.050.373	01	NQ		**Neural-Network Modeling of Learning, Language and Cognition** *Cho, Pyeong Whan* Connectionism is an approach to Artificial Intelligence computation inspired by how the brain, a network of neurons, works. A connectionist model (or artificial neural network) is a collection of simple processing units that are massively interconnected with each other, and that represents knowledge in its connection pattern. Each processing unit has highly limited computational power but the collection of units as a whole has great computational power (as strong as the Turing machine). Connectionist models have been used to study diverse aspects of human cognition: attention, pattern recognition, memory, categorization, language processing, learning, and decision making. In this seminar, students will learn important concepts, principles, algorithms, and practical skills in connectionist modeling by actually doing connectionist modeling. Students will first play with toy problems to learn various types of connectionist modeling techniques, and will then carry out a team research project. In addition to practical skills, students will learn to be explicit about their assumptions and reasoning when making their (conceptual or implemented) models and to make new observable predictions that can be tested in experiments.Recommended Course Background: Experience with some programming language. Exceptions can be made by seeking instructor's permission.	3.00	10	TTh 9:00-10:15AM
AS.050.373	02	NQ		**Neural-Network Modeling of Learning, Language and Cognition**	3.00	10	TTh 10:30-11:45AM
AS.060.123	01	H	W	**Freshman Seminar: Prophecy After Science** *Miller, William J*	3.00	18	M 4:00-7:00PM

Dean's Teaching Fellowship Courses

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course explores the history of prophecy from ancient Greek and Judaic sources to current intimations of technological singularity and ecological doom. We will focus on the influence of prophecy on the rise of science (and vice-versa). Readings will include texts by William Shakespeare, Francis Bacon, Mary Shelley, and Philip K. Dick.			
AS.060.149	01	H	W	**Freshman Seminar: Work and Worth in American Literature** *Tempesta, Erica N* "No man needs sympathy because he has to work, because he has a burden to carry," Theodore Roosevelt proclaimed in his "Square Deal" speech of 1903. "Far and away the best prize that life offers is the chance to work hard at work worth doing." Hard work is at the heart of the American dream, but with unemployment rates at historic highs and the global economy proceeding at a rapid clip, Roosevelt's words resurrect old questions in a new world: What work is worth doing? Who gets the chance to do it? And what happens when people find themselves doing work that isn't worth doing? In this course we will consider the meaning and consequences of work, from the heroic to the tragic, through a selection of American literature from the last days of slavery to the present. This course will consider work in all its forms, from the plantation to the boardroom, to help us develop the tools to interpret the varieties and values of labor in modern society.	3.00	18	T 4:00-7:00PM
AS.060.150	01	H	W	**Freshman Seminar: Milton's Paradise Lost: Contexts and Conversations** *Buckham, Rebecca Lynn*	3.00	15	T 1:30-4:30PM

Dean's Teaching Fellowship Courses

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course undertakes an in-depth study of what is arguably the greatest long poem in the English tradition, John Milton's Paradise Lost. The poem, first published in 1667, is Milton's take on the Judeo-Christian story of the Fall found in the Bible. Paradise Lost does not merely re-tell the biblical account, however. By expanding three chapters of Genesis into a twelve-book epic meant to rival its classical forbears—most importantly Virgil's Aeneid—Milton's poem makes room for new readings of an old story. This course encourages students to find their own new readings of the Genesis story by considering the historical contexts of the poem's production as well as the conversations Paradise Lost continues to provoke to this day. In addition to reading and discussing the poem, students will become familiar with ongoing sites of critical debate, such as the representations of Satan and of Eve. To help negotiate these conversations, students will complete a guided research project that makes use of the materials available through the library's Department of Special Collections, housed in Brody Learning Commons. In addition to early editions of Paradise Lost, this treasure trove of rare books offers a wide variety of materials which may deepen an encounter with Milton's poem, from biblical illustrations to gardening manuals to marriage advice. Students will use the collection to ask questions such as: "How does Milton's representation of Satan differ from earlier traditions of imagining the devil?" and "Does Milton's approach to Eve reinforce or revise conventional ideas about women?" Sufficient class time will be dedicated to introducing students to Special Collections so as to facilitate their individual work over the course of the semester.			
AS.060.322	01	H	W	**Indian Ocean** *Haley, Joseph Andrew* This course will explore the development of a cosmopolitan ethos in postwar fiction from the Indian Ocean region, with particular focus on South Africa, South Asia, and the Malay Archipelago. Authors will include Aravind Adiga, Pramoedya Ananta Toer, Lloyd Fernando, Tan Twan Eng, and J.M. Coetzee.	3.00	18	TTh 9:00-10:15AM
AS.100.220	01	HS		**Freshman Seminar: Politics, Information, and the State in Early Modern China and Japan** *Mokros, Emily Carr* This introductory seminar examines culture and politics in early modern East Asia (ca. 1500-1900) by looking at changing modes of communication and attitudes about state control of information and ideology. Freshmen Only.	3.00	18	TTh 3:00-4:15PM

Dean's Teaching Fellowship Courses

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.100.255	01	HS	W	**The Haitian Revolution in World History** *Marvin, Nathan Elliot* This introductory seminar examines the revolution that transformed the slave colony of Saint-Domingue into the first black republic and second independent nation in the Americas, and its repercussions around the world. Non-Majors welcome.	3.00	18	TTh 9:00-10:15AM
AS.100.337	01	HS	W	**Historical Perspectives on Humans and Animals in the Atlantic World and the Early United States, 1500-1860** *Gherini, Claire Elizabeth* Relationships between humans and animals offer a fascinating window into the American past. Readings, written assignments, and discussions will explore environmental, cultural, and scientific approaches to the history of hunting, the domestication of animals and animal ethics in the Atlantic world and the early United States.	3.00	18	TTh 12:00-1:15PM
AS.130.109	01	H		**Freshman Seminar: Ancient Homes and Houses** *Swerida, Jennifer Lee* What will your bedroom tell future archaeologists? What can ancient houses tell archaeologists of past societies? This course explores methods/theories of Household Archaeology in the Near East and beyond.	3.00	18	TTh 3:00-4:15PM
AS.130.116	01	H		**Freshman Seminar: Ritual and Magic in Ancient Egypt** *Fraser, Meredith Anne* This course will serve to introduce students to the study of religion, ritual and magic through the lens of a specific culture: ancient Egypt. Throughout the course students will be introduced to ancient Egyptian culture and will interact with Egyptian texts and artifacts, including those found in the collections of the Johns Hopkins Archaeological Museum, in order to illustrate key concepts.	3.00	15	MW 1:30-2:45PM
AS.130.122	01	H		**Freshman Seminar: The Archaeology of Death, Burial, and the Human Skeleton** *Brinker, Christopher Daniel* This course will introduce students to the archaeological investigation of past human populations through their mortuary and physical human remains. To this end, major theories and methodologies will be introduced, along with pertinent case studies for discussion.	3.00	18	MW 3:00-4:15PM
AS.130.335	01	H		**The Pharaohs: Power and Authority in Ancient Egypt** *Bryson, Karen Margaret* This course will introduce students to the triumphs and struggles of the men (and women) who ruled ancient Egypt, comparing Egyptian kingship to other ancient and modern systems of political power and authority.	3.00	15	MW 1:30-2:45PM
AS.140.163	01	HS		**Jungle Doctors: Medical Missions in Africa from David Livingston to Paul Farmer** *Cummiskey, Julia Ross*	3.00	18	TTh 9:00-10:15AM

Dean's Teaching Fellowship Courses

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Freshman seminar using a variety of primary and secondary sources, students will explore the motivations and activities of expatriates practicing medicine in Africa from the 19th century to the present.			
AS.140.165	01	HS	W	**Enlightenment Science Through Brilliant Books** *Richard, Jean-Olivier* Course explores the brilliant scientific and philosophic achievements of the 18th-century intellectual movement known as the Enlightenment through the reading of a selection of key authors (Voltaire, Franklin, the great Encyclopedists...). Includes introduction to research method and writing in the humanities.	3.00	15	MW 3:00-4:15PM
AS.140.343	01	HS		**What it Means to be Human: Perspectives in the History of Anthropology, 1860-1995** *Link, Adrianna Halina* This course explores the changing scientific, social, and cultural ideas that shaped how anthropologists and other scholars approached the study of human beings from the mid-nineteenth through the twentieth centuries.	3.00	15	MW 1:30-2:45PM
AS.140.345	01	HS		**Animal Minds: Beyond the Black Box** *Nash, Richard Stephen* How do migratory birds and fish find their way home? Do honeybees communicate using a “dance language”? Do chimpanzees have mental lives akin to those of human beings? How do scientists attempt to answer such questions, and why was the “animal mind” a taboo for over 50 years in American science? Focusing on ethology and psychology from Darwin to the present, this course examines the history of the study of animal cognition and behavior. A major emphasis throughout the course will be on the question of animal consciousness from the late-19th through the 20th century.	3.00	12	W 3:00-5:20PM

Dean's Teaching Fellowship Courses

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.150.106	01	H		**The Epicurians, the Stoics, & the Skeptics on How to Live** *Stojanovic, Pavle* The question “How to live?” is eternal. The Epicureans said that pleasure is the goal of life that is to be pursued, thus paving the way to modern Utilitarianism. The Stoics argued that the goal of life is virtue, which consists in living in agreement with nature; in this, they anticipated contemporary virtue ethics. Both schools thought that although we live in a material and causally determined universe, our moral actions and characters are nevertheless “up to us” and that we have moral freedom and responsibility. The Skeptics, on the other hand, tried to demonstrate that no moral principles have sufficient rational justification and that, because of this, the only option is some kind of moral relativism and the pursuit of freedom from emotional disturbance. In this, they anticipated moral relativism and moral nihilism. By examining of the arguments of the Epicureans, the Stoics, and the Skeptics in this course, you will not only learn about them, but also have an opportunity to do philosophy yourself, and perhaps clarify how you should live your own life.	3.00	18	TTh 10:30-11:45AM
AS.150.114	01	H		**Philosophy of Human Rights** *Wilk, Thomas Michael* From domestic debates about abortion and health care to international dialogue about women’s rights, genital mutilation and genocide, human rights claims have become increasingly common, and we've come to rely on the discourse of human rights to assess the way human beings are treated by one another and by states. But what are human rights? How are human rights claims justified? Are human rights really objective and universal or are they contingent and relative to particular cultures? Where did the human rights culture begin, and how has it become so important? This course aims to explore these questions by examining foundational human rights documents, historical works on human rights and contemporary philosophical inquiry into their foundations (or lack thereof).	3.00	18	TTh 10:30-11:45AM
AS.150.141	01	H		**Freshman Seminar: African Philosophy** *Koll, Sandy Gillian* This course surveys some distinctively Sub-Saharan African contributions to major areas of philosophical inquiry, including metaphysics, epistemology, ethics and political philosophy.	3.00	18	T 3:00-5:30PM
AS.180.308	01	S		**Financial Regulations in the US** *Nguyen, Hai Xuan*	3.00	19	MW 1:30-2:45PM

Dean's Teaching Fellowship Courses

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course begins with the time of the great Framers and adopts a historical approach to U.S. financial regulations. By examining all major crises and the respective policy responses, the course will provide a narrative on the evolution of the regulatory landscape in America. Students will also be exposed to influential academic papers that address the essentiality (and even the redundancies and failures) of key aspects of financial regulations, including deposit insurance, bank capital and liquidity requirements, and supervisory rules. Dean's Teaching Fellowship course. Recommended courses: AS.180.261 and AS.180.266			
AS.191.113	01	S		**Diet, Politics and Identity: Are We What We Eat?** *Rebrovick, Arthur Joseph* Tracing the history of the idea that "you are what you eat," this course explores the relationships between diets, bodies, selves, and politics. Readings will be both historical and contemporary and cover a variety of fields including philosophy, political theory, anthropology, and the history of science and medicine. Dean's Prize Teaching Fellowship. Freshman Only.	3.00	12	TTh 10:30-11:45AM
AS.191.203	01	S	W	**Energy and Global Politics** *Daggett, Cara Leigh New* The purpose of this course will be to explore with students how energy has affected global politics, both historically and in contemporary and future politics. A key premise of the course will be that energy as an object of politics is a relatively recent phenomenon, as energy only emerged in physics in the nineteenth century, while in politics, a 'Department of Energy' or something called 'energy policy' only emerged after the 1970s oil crisis. Following energy will therefore involve thinking about energy as not only a scientific unit, but also as a historical and political term, a shifting political apparatus that involves different fuels, supply chains, architectures and institutions over time. In order to 'follow' energy in this way, this course will also introduce students to literature that thinks about how things in the material world – whether geography, mapping, natural resources, climate, ships or technology – intersect with global politics.	3.00	18	TTh 4:30-5:45PM
AS.191.338	01	S		**Diaspora in World Politics** *Abramson, Yehonatan* This course examines the politics of diaspora communities in international perspective. Its main focus is on the impact of diaspora communities on national security and foreign policies of "host-countries" and "homelands." In addition, the course tries to unpack the political meanings and uses of the term diaspora.	3.00	18	TTh 10:30-11:45AM

Dean's Teaching Fellowship Courses

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.191.356	01		W	**The Politics and Philosophy of Laughter** *Giamario, Patrick T* What is the political significance of laughter? How does laughter undermine, strengthen, or disrupt political life? We read philosophical, social scientific, and literary texts to explore these questions.	3.00	15	T 3:00-5:30PM
AS.211.358	01	H		**Writing the Great War: French Literature and World War I** *Benaglia, Cecilia* This course examines literary texts engaging with WWI and related topics such as class struggle, gender conflicts, and colonialism. Authors studied include H. Barbusse, J. Cocteau, L.F. Celine, A. Malraux. Course taught in French.	3.00	5	MW 1:30-2:45PM
AS.212.358	01	H		**Writing the Great War: French Literature and World War I** *Benaglia, Cecilia* This course examines literary texts engaging with WWI and related topics such as class struggle, gender conflicts, and colonialism. Authors studied include H. Barbusse, J. Cocteau, L.F. Celine, A. Malraux. Course taught in French.	3.00	10	MW 1:30-2:45PM
AS.212.365	01	H		**Twisted Roots: Writing "Creole" in the French Caribbean** *Loescher, Rebecca Lynn* This course examines rootedness and hybridity in contemporary literary and critical works from the French Caribbean, exploring the act of writing "Creole" as illustrative of innovative thought-constructs. French students will read and write in French and should register for section 02; other students will read translations and should register for section 01. Discussions will be conducted in English.	3.00	6	TTh 12:00-1:15PM
AS.212.365	02	H		**Twisted Roots: Writing "Creole" in the French Caribbean**	3.00	6	TTh 12:00-1:15PM
AS.213.369	01	H		**Dada's Ideologies: Literature, Art, & Politics** *Pelcher, James Brandon* This course will examine the literary and political theories implied in, and encountered by, Dadaist works and praxes. Particular attention will be paid to Dadaist confrontations with the growth of modern mass media, the politics of World War I, and consumerist capitalism in the wake of Taylorism and Fordism. Readings include major Dadaists as well as Althusser, Benjamin, Debord, Gramsci, Irigaray, Lukács, Marx, Saussure, among others.	3.00	18	MW 3:00-4:15PM
AS.214.376	01	H		**Warrior Women from Ancient Times to Game of Thrones** *Gomez, Janet Elizabeth* This course will trace the origins of the warrior woman from ancient times through today's pop culture and reflect on the multiplicity of its social, cultural, and political ramifications.	3.00	18	MW 12:00-1:15PM
AS.215.388	01	H	W	**Narrating Mexico: Novel and History** *Ray, Christopher M*	3.00	18	TTh 1:30-2:45PM

Dean's Teaching Fellowship Courses

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				The 200 years since the eruption of Mexican Independence present a panorama of struggle, strife, and literary creation. This course explores how Mexican literature formulates, contests and conditions portrayals of the national reality of Mexico. Taught in Spansh. Recommended Course Background: Advanced Spanish I or another Spanish survey course.			
AS.215.411	01	H	W	**Folly & Insanity in Spanish Culture: Origins of Modern Madness in the Literature of Spain** *Ponce, Gabrielle Piedad* What is human madness? Taking into account Foucault's famous dictum, "There can be no madness without society," this course returns to the earliest constructions of madness in the early modern period and moves forward into modernity through a close reading of literary, philosophical and scientific texts published in Spain. Readings include: Cervnates, Leon Hebreo, Huarte de San Juan, Lope de Vega, Calderon, Galdos, Freud, and others. Earlier representations of mental disquiet will be compared with the latest advances in psychology and nueroscience published in the JHU Gazette and the HUB. Recommended Course Background: AS.210.312	3.00	13	MW 4:30-6:00PM
AS.300.305	01	H	W	**Islamic Philosophy** *Ferhat, Loumia Rafika* This course is an introduction to key concepts and seminal texts of Islamic Philosophy in the classical period, running from the 7th to the 13th century. Although instrumental to the transmission of Greek philosophy and to the rise of modern philosophy in the western world. Islamic philosophy is not merely a conduit of transmission. Philosophers on Islamic lands, offered original philosophical solution to both old problems, and new problems that arose with monotheism. We will begin our examination of the specificity of Islamic Philosophy by situating it in its historical and political context. We will have to tackle fundamental questions: How did philosophers who wrote in Arabic translate and transmit Greek philosophical texts? What does it mean to do philosophy within an Islamic context? Is it not an oxymoron to talk about philosophy within a religious context? The course is divided into three sections that treat of three general fields: politics, metaphysics and psychology and discusses the major Philosophers of the classical period, with particular attention paid to the work of Alfarabi, Avicenna and Averroes.	3.00	15	Th 1:30-4:00PM
AS.300.333	01	H		**Melancholy in Science, Literature, and Film** *Fabietti, Elena*	3.00	12	Th 1:30-4:00PM

Dean's Teaching Fellowship Courses

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time

This course explores the manifold nature of melancholy from an interdisciplinary perspective that combines sciences, history of medicine, and the arts. Defined by Greek medicine as the excess of black bile, melancholy, in its long history, has been seen as disease of the soul, state of intellectual grace, or psychological condition. The course will examine chronologically the development and variety of the meanings of melancholy between medical texts, visual representations, poetry, psychoanalytic theory, and films. The works analyzed will include, among others, those by Galen, Robert Burton, Albrecht Dürer, Shakespeare, Cervantes, Baudelaire, Freud, Lars von Trier.

Earth & Planetary Sciences

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.171.321	01	EN		**Introduction to Space, Science, and Technology** *McCandliss, Stephan R* Topics include space astronomy, remote observing of the earth, space physics, planetary exploration, human space flight, space environment, orbits, propulsion, spacecraft design, attitude control and communication. Crosslisted by Departments of Earth and Planetary Sciences, Materials Science and Engineering and Mechanical Engineering. Recommended Course Background: AS.171.101-AS.171.102 or similar; AS.110.108 -AS.110.109.	3.00	36	TTh 12:00-1:15PM
AS.270.103	01	N		**Introduction to Global Environmental Change** *Waugh, Darryn* A broad survey of the Earth as a planet, with emphasis on the processes that control global changes. Topics include: the structure, formation, and evolution of the Earth, the atmosphere, oceans, continents, and biosphere. Special attention is given to present-day issues, such as global climate change, natural hazards, air pollution, resource depletion, human population growth, habitat destruction, and loss of biodiversity. Open to all undergraduates.	3.00	110	MWF 11:00-11:50AM
AS.270.205	01	EN		**Introduction to Geographic Information Systems and Geospatial Analysis** *Chen, Xin* The course provides a broad introduction to the principles and practice of Geographic Information Systems (GIS) and related tools of Geospatial Analysis. Topics will include history of GIS, GIS data structures, data acquisition and merging, database management, spatial analysis, and GIS applications. In addition, students will get hands-on experience working with GIS software.	3.00	25	M 1:30-4:00PM
AS.270.220	01	N		**The Dynamic Earth: An Introduction to Geology** *Passey, Benjamin H* Basic concepts in geology, including plate tectonics; Earth's internal structure; geologic time; minerals; formation of igneous, sedimentary, and metamorphic rocks; development of faults, folds and earthquakes; geomagnetism. Corequisite (for EPS Majors): AS.270.221; optional for others.	3.00	30	MWF 11:00-11:50AM
AS.270.221	01	N		**The Dynamic Earth Laboratory** *Passey, Benjamin H* This course is a hands-on learning experience for introductory geological concepts and techniques using geological tools, such as mineral/rock samples, microscopes, and maps. Field trips are its essential part.	2.00	15	W 1:30-4:00PM
AS.270.305	01	N		**Energy Resources in the Modern World** *Burgess, Jerry*	3.00	50	MWF 9:00-9:50AM

Earth & Planetary Sciences

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This in-depth survey will inform students on the non-renewable and renewable energy resources of the world and the future prospects. Topics include petroleum, natural gas, coal, nuclear, hydroelectric, geothermal, solar, wind, biomass, and ocean energy. Global production, distribution, usage, and impacts of these resources will be discussed.			
AS.270.308	01	N		**Population/Community Ecology** *Szlavecz, Katalin* This course explores the distribution and abundance of organisms and their interactions. Topics include dynamics and regulation of populations, population interactions (competition, predation, mutualism, parasitism, herbivory), biodiversity, organization of equilibrium and non-equilibrium communities, energy flow, and nutrient cycles in ecosystems. Field trip included. Permission of instructor.	3.00	30	TTh 10:30-11:45AM
AS.270.335	01	N		**Planets, Life and the Universe** *Diruggiero, Jocelyne* This multidisciplinary course explores the origins of life, planets' formation, Earth's evolution, extrasolar planets, habitable zones, life in extreme environments, the search for life in the Universe, space missions, and planetary protection.	3.00	15	MWF 11:00-11:50AM
AS.270.350	01	N		**Sedimentary Geology** *Levin, Naomi E* Introduction to sedimentary processes and sedimentary rocks. Focus is placed on linking physical observations to earth surface processes. Fundamental tools for interpreting the sedimentary rock record, such as depositional models, geochronology, and chemostratigraphy are reviewed. Weekend field trips. Graduate and advanced undergraduate level. Recommended Course Background: AS.270.220 or instructor permission.	4.00		TTh 3:00-5:00PM
AS.270.369	01	N		**Geochem Earth/Environmen** *Sverjensky, Dimitri* An introduction to all aspects of Geochemistry: theoretical, experimental, and observational, including the application of geochemistry to issues such as the migration of toxic metals and nuclear waste.	3.00	20	MW 3:00-5:00PM
AS.270.378	01	N		**Present & Future Climate** *Zaitchik, Benjamin* Intended for majors who are interested in the science that underlies the current debate on global warming, the focus is on recent observations one can glean from model simulations. Meets with AS.270.641. Recommended Course Background: AS.110.108-AS.110.109 and AS.171.101 -AS.171.102	3.00	20	TTh 10:30-11:45AM
AS.270.410	01	N		**Planetary Surface Processes** *Lewis, Kevin*	3.00	25	TTh 10:30-11:45AM

Earth & Planetary Sciences

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course explores processes that influence the evolution of planetary surfaces, including impact cratering, tectonics, volcanism, weathering, and sediment transport. These processes manifest themselves as structural deformation of planetary crusts due to loading by volcanoes, formation of craters by asteroid impacts, modification of surfaces by flowing landslides, rivers and glaciers, and the accumulation and transport of sand in dune fields on various planets. Emphasis is on the relationship to similar Earth processes, and the integrated geologic histories of the terrestrial planets, satellites, and asteroids. The focus will be on developing a physical understanding of these processes to interpret the surface characteristics and evolution of planets, satellites, asteroids, and comets from both qualitative assessments and quantitative measurements obtained from spacecraft data. A key component of the class will be the interpretation of these observations from recent and current planetary missions to the Moon, Mars, and other terrestrial bodies. Recommended Course Background: A sound knowledge of Calculus and Introductory Physics, and some prior knowledge of Earth and/or Planetary Science.			
AS.270.425	01	N		**Earth & Planetary Fluids** *Olson, Peter Lee* An introductory course on the properties, flow, and transport characteristics of fluids throughout the Earth and planets. Topics covered include: constitutive relationships, fluid rheology, hydrostatics, dimensional analysis, low Reynolds number flow, porous media, waves, stratified and rotating fluids, plus heat, mass, and tracer transport. Illustrative examples and problems are drawn from the atmosphere, ocean, crust, mantle, and core of the Earth and other Planets. Open to graduate and advanced undergraduate students. Recommended Course Background: Basic Physics, Calculus, and familiarity with ordinary differential equations.	3.00	20	MW 4:00-5:15PM
AS.270.495	01	N	W	**Senior Thesis** *Staff* Preparation of a substantial thesis based upon independent student research, supervised by at least one faculty member in Earth and Planetary Sciences. Open to Sr. departmental majors only. Required for department honors.	3.00		TBA
AS.270.495	02	N	W	**Senior Thesis** *Passey, Benjamin H*	4.00		TBA
AS.271.301	03	S		**Climate Change Adaptation in the Developing World** *Parker, Cindy L*	3.00	20	M 2:00-4:45PM

Earth & Planetary Sciences

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course considers the way in which people and their livelihoods are adapting to climate change in sensitive regions of the developing world. The course will include an overview of climate systems and climate change science, although it will emphasize vulnerability assessment from an ecosystem and livelihood perspective. Using a case-study approach, the focus will be on key economic sectors of agriculture, water resources, forest systems and tourism. A focus of the course is how to develop an informed approach to climate change adaptation that can drive both national policy and international development and donor efforts to create sustainable responses that serve both the local country and global needs. Students will consider adaptive capacity in specific countries, evaluating the feasibility and sustainability of current adaptation strategies, differentiate national and international efforts and effects of adaptation; learn key tools for climate change assessment, review and critique climate data sources for developing countries, and compare climate change adaptation to the developed world. GECS Majors Only. Prerequisites: Intro to Sustainability, Intro to Global Environmental Change, or Climate Change: Science and Policy.			
AS.280.335	01	N		**The Environment and Your Health** *Trush, Michael A* This course surveys the basic concepts underlying environmental health sciences (toxicology, exposure assessment, risk assessment), current public health issues (hazardous waste, water- and food-borne diseases), and emerging global health threats (global warming, built environment, ozone depletion, sustainability). Public Health Studies, Global Environmental Change and Stability, and Earth and Planetary Science majors have 1st priority for enrollment. Your enrollment may be withdrawn at the discretion of the instructor if you are not a GECS, PHS, or EPS major.	3.00	250	TTh 4:30-5:45PM
AS.280.335	02	N		**The Environment and Your Health** *Bressler, Joseph P.*	3.00	250	TTh 3:00-4:15PM
EN.570.147	01	HS	W	**Adam Smith & Karl Marx** *Schoenberger, Erica* Smith and Marx are iconic figures in the history of political economic thought, often cited, rarely read. They are positioned as polar opposites in highly consequential debates about how society should be ordered. In this class, we will read and discuss their work, closely and carefully. We concentrate on the two iconic texts – The Wealth of Nations and Capital, Vol. 1 – but also explore some of their less well-known writings. Freshmen Only.	3.00	25	W 4:00-7:00PM

East Asian Studies

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.100.208	01	HS		**China: Neolithic to Song** *Meyer-Fong, Tobie* This class offers a broad overview of changes in China from Neolithic times through the Song Dynasty (roughly from 5000 BCE through the 13th century CE) and will include discussion of art, material culture, and literature as well as politics and society. Close readings of primary sources in discussion sections and extensive use of visual material in lectures will help students gain firsthand perspective on the materials covered. Cross listed with East Asian Studies	3.00	20	MW 11:00-11:50AM; F 10:00-10:50AM
AS.100.208	02	HS		**China: Neolithic to Song**	3.00	20	MW 11:00-11:50AM; F 10:00-10:50AM
AS.100.220	01	HS		**Freshman Seminar: Politics, Information, and the State in Early Modern China and Japan** *Mokros, Emily Carr* This introductory seminar examines culture and politics in early modern East Asia (ca. 1500-1900) by looking at changing modes of communication and attitudes about state control of information and ideology. Freshmen Only.	3.00	18	TTh 3:00-4:15PM
AS.100.348	01	HS	W	**20th-Century China** *Rowe, William T* The history of China from the last years of the Qing Empire to the post-Mao reforms.	3.00	70	TTh 10:30-11:45AM
AS.140.346	01	HS		**History of Chinese Medicine** *Hanson, Marta* Students will study the most recent anthropological, philosophical, and historical scholarship on medicine in traditional and modern Chinese society. They will approach the topic from several angles including medical pluralism, the range of healers, domestic and literate medicine, gender, emergence of new disciplines, public health and the history of disease. The course relies on secondary sources and primary sources in English translation. Cross-listed with East Asian Studies.	3.00	20	MWF 9:00-9:50AM
AS.140.398	01	HS	W	**Godzilla and Fukushima: Japanese Environment in History and Films** *Frumer, Yulia* Juxtaposing Japanese environmental history and its reflection in popular media, the course will explore the intersection between technology, environment, and culture. The course will be accompanied by relevant movie screenings.	3.00	18	T 3:00-5:20PM
AS.190.442	01		W	**Civil Society** *Chung, Erin*	3.00	15	W 3:00-5:50PM

East Asian Studies

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course explores classic and contemporary debates on the concept of civil society and critically examines its analytical value in light of recent developments. Topics include the relationship between civil society, the state, and markets, the role of civil society in development and democratization, social capital, and global civil society. This course is open to graduate students from any discipline. Advanced undergraduate students must obtain permission from the instructor and are expected to keep up with graduate students during class discussions.			
AS.230.175	01	S	W	**Chinese Revolutions** *Kuo, Huei-Ying* This course introduces the origins, operation and impacts of five major revolutions in modern China between 1850 and 1950. These include the Taiping Rebellion, the republican revolutions, federalist and southern automatic movements, labor strikes as well as peasant rebellions. It draws on the existing historiography that examines China's transition from an empire to a republic, impacts of western and Japanese influences to China, as well as the continuity and change of Chinese social organizations. Cross list with International Studies and East Asian Studies. Fulfills IS History requirement.	3.00	20	TTh 1:30-2:45PM
AS.230.377	01	S		**Colonialism and Anti-Colonialism** *Kuo, Huei-Ying* This seminar examines the theories and historiography of colonialism and anti-colonial movements. It focuses on the establishment of the colonial division of labor, comparative colonialism, identity formation, and nationalism as well as anti-colonial movement.	3.00	20	TTh 10:30-11:45AM
AS.310.115	01	H		**Ghost Tales from China and Japan, 14th-19th Centuries** *Joo, Fumiko* We cannot express our own experience of death – only imagine life after death. How did people in the past conceptualize the world of the dead? Ghost tales will teach us what we imagine as the experience of dead and life after death. This course aims to introduce students to a variety of ghost stories in Late Imperial China and Tokugawa Japan and connect their literary imagination of the dead to the cultural, socio-historical, and religious context of each society as well as to the broad East Asian tradition of supernatural narratives. While we also touch upon earlier traditions on narrating the dead, most of the stories in class readings are from the Ming (1368-1644) and Qing (1644-1911) dynasties of China, and the Tokugawa period (1600-1868) of Japan. Key issues include family, gender, sexuality, body, medicine and many more. Although we will also take a look at visual and theatrical representations of the dead, we will primarily focus on literary texts about ghostly phenomena. Film screenings required. All readings are in English.	3.00	25	MW 3:00-4:15PM
AS.310.118	01	H		**Japanese Popular Culture** *Joo, Fumiko*	3.00	25	MW 12:00-1:15PM

East Asian Studies

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course will examine Japanese popular culture as a way to discuss contemporary Japanese society. We will investigate a wide range of cultural products – from literature, anime and manga to theater, music, fashion and food – and question how these items are created, circulated, and consumed in Japanese society as well as by individuals. Since many Japanese cultural products also quickly move beyond the national borders in the age of globalization, we will also discuss the global consumption of Japanese popular culture. Topics include gender, sexuality, family, fan community, global capitalism, mass media, race and power. Film screenings and group projects are required. Reading materials are all in English.			
AS.310.305	01	S		**Southeast Asia and US Security** *Ott, Marvin C* This survey course is designed to introduce students to Southeast Asia -- the ten member countries of the Association of Southeast Asian Nations (ASEAN) plus Australia and New Zealand. Southeast Asia is an integral part of the broader region of East Asia and a geographic bridge to the Indian subcontinent (South Asia). Southeast Asia has been one of the great success stories in the saga of modernization and development of post-colonial Afro-Asia over the last six decades. Its resulting economic importance is matched by its strategic significance given the presence of imbedded jihadist networks and the emergence of China as a regional great power and aspirant superpower. Nevertheless, the region has been largely overlooked by senior foreign policy and defense officials in Washington. This course will equip students to fill that void by examining the region from the perspective of national security strategy -- broadly understood in its multiple dimensions. Students will be challenged to formulate some element of a viable U.S. national security strategy for the region.	3.00	20	T 1:30-4:00PM
AS.310.431	01	HS	W	**Senior Thesis Seminar: East Asian Studies** *Chung, Erin* Students may earn honors in the East Asian Studies major by maintaining a 3.7 average in the major and completing a senior thesis by taking the year-long AS.310.431 & AS.310.432 Senior Thesis Seminar: East Asian Studies. Students are required to secure the mentorship of an adviser among the EAS faculty before asking for permission to enroll in the course.	3.00	10	TBA
AS.373.111	01			**First Year Heritage Chinese** *Zhao, Nan* This course is designed for students who were raised in an environment in which Chinese is spoken by parents or guardians at home and for those who are familiar with the language and possess native-like abilities in comprehension and speaking. The course therefore focuses on reading and writing (including the correct use of grammar). Cross-listed with East Asian Studies	3.00	16	MWF 10:00-10:50AM
AS.373.111	02			**First Year Heritage Chinese**	3.00	16	MWF 3:00-3:50PM

East Asian Studies

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.373.115	01			**First Year Chinese** *Chen, Jing-Yun* This course is designed primarily for students who have no prior exposure to Chinese. The objective of the course is to help students build a solid foundation of the four basic skills---listening, speaking, reading, and writing in an interactive and communicative learning environment. The emphasis is on correct pronunciation, accurate tones and mastery of basic grammatical structures. Note: Students with existing demonstrable skills in spoken Chinese should take AS.373.111-112. No Satisfactory/ Unsatisfactory. Students may choose to attend either lecture at 9am or 3pm on TTh. Cross-listed with East Asian Studies	4.50	16	MWF 9:00-9:50AM; TTh 12:00-12:50PM
AS.373.115	02			**First Year Chinese**	4.50	16	MWF 11:00-11:50AM; TTh 3:00-3:50PM
AS.373.115	03			**First Year Chinese**	4.50	16	TTh 3:00-3:50PM; MWF 12:00-12:50PM
AS.373.115	04			**First Year Chinese**	4.50	16	MWF 3:00-3:50PM; TTh 3:00-3:50PM
AS.373.211	01	H		**Second Year Heritage Chinese** *Chen, Aiguo* This course is designed for students who finished AS.373.112 with C+ and above (or equivalent). Students in this course possess native-like abilities in comprehension and speaking. The course focuses on reading and writing. Cross-listed with East Asian Studies	3.00	16	MWF 11:00-11:50AM
AS.373.215	01	H		**Second Year Chinese** *Chen, Yanfei* Consolidation of the foundation that students have laid in their first year of study and continued drill and practice in the spoken language, with continued expansion of reading and writing vocabulary and sentence patterns. Students will work with both simplified and traditional characters. Note: Students who have native-like abilities in comprehension and speaking should take AS.373.211-212. Cross-listed with East Asian Studies	4.50	16	MWF 9:00-9:50AM; TTh 12:00-12:50PM
AS.373.215	02	H		**Second Year Chinese**	4.50	16	MWF 11:00-11:50AM; TTh 3:00-3:50PM
AS.373.215	03	H		**Second Year Chinese**	4.50	16	MWF 12:00-12:50PM; TTh 3:00-3:50PM
AS.373.313	01	H		**Third Year Heritage Chinese** *Chen, Yanfei* This course is designed for those who have already taken AS.373.212 or equivalent. Students need to have native-level fluency in speaking and understanding Chinese. The course focuses on reading and writing. In addition to the textbooks, downloaded articles on current affairs may also be introduced on a regular basis. Cross-listed with East Asian Studies	3.00	16	MWF 3:00-3:50PM
AS.373.315	01	H		**Third Year Chinese** *Chen, Aiguo*	3.00	16	MWF 3:00-3:50PM

East Asian Studies

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This two-semester course consolidates and further expands students' knowledge of grammar and vocabulary and further develops reading ability through work with textbook material and selected modern essays and short stories. Class discussions will be in Chinese insofar as feasible and written assignments will be given. Cross-listed with East Asian Studies			
AS.373.315	02	H		**Third Year Chinese**	3.00	16	MWF 12:00-12:50PM
AS.373.415	01	H		**Fourth Year Chinese** *Zhao, Nan* This course is designed for students who finished AS.373.316 with a C+ or above (or equivalent). Readings in modern Chinese prose, including outstanding examples of literature, newspaper articles, etc. Students are supposed to be able to understand most of the readings with the aid of a dictionary, so that class discussion is not focused primarily on detailed explanation of grammar. Discussion, to be conducted in Chinese, will concentrate on the cultural significance of the readings' content. Cross-listed with East Asian Studies	3.00	16	MWF 9:00-9:50AM
AS.373.491	01			**5th Year Chinese** *Zhao, Nan* Fifth Year Chinese is designed for students who finished fourth year regular or third year heritage Chinese course at JHU or its equivalent and wish to achieve a higher advanced proficiency level in Chinese. The goal of the course is to help students further develop their listening, speaking, reading and writing skills cohesively and to enhance students' understanding of Chinese culture and society through language learning.	3.00	16	TTh 10:30-11:45AM
AS.378.115	01			**First Year Japanese** *Nakao, Makiko Pennington* This course is designed for students who have no background or previous knowledge in Japanese. The course consists of lectures on Tuesday/Thursday and conversation classes on Monday/Wednesdays/Fridays. The goal of the course is the simultaneous progression of four skills (speaking, listening, writing, and reading) as well as familiarity with aspects of Japanese culture. By the end of the year, students will have basic speaking and listening comprehension skills, a solid grasp of basic grammar items, reading and writing skills, and a recognition and production of approximately 150 kanji in context. Knowledge of grammar will be expanded significantly in AS.373.215. No Satisfactory/ Unsatisfactory. Student may choose to attend either lecture at 10:30 am or 12 pm on TTh. Cross-listed with East Asian Studies	4.50	20	MWF 10:00-10:50AM; TTh 12:00-1:15PM
AS.378.115	02			**First Year Japanese** *Katagiri, Satoko*	4.50	20	TTh 12:00-1:15PM; MWF 11:00-11:50AM
AS.378.215	01	H		**Second Year Japanese** *Nakao, Makiko Pennington*	4.50	16	MWF 11:00-11:50AM; TTh 10:30-11:20AM

East Asian Studies

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Training in spoken and written language, increasing their knowledge of more complex patterns. At completion, students will have a working knowledge of about 250 Kanji. Recommended Course Background: AS.378.115 and AS.378.116 or equivalent.			
AS.378.215	02	H		**Second Year Japanese**	4.50	16	MTWThF 12:00-12:50PM
AS.378.315	01	H		**Third Year Japanese** *Nakao, Makiko Pennington* Emphasis shifts toward reading, while development of oral-aural skills also continues apace. The course presents graded readings in expository prose and requires students to expand their knowledge of Kanji, grammar, and both spoken and written vocabulary. Cross-listed with East Asian Studies	3.00	16	MWF 9:00-9:50AM
AS.378.396	01	H		**Fundamentals of Japanese Grammar** *Johnson, Mayumi Yuki* This course is designed for students who have already studied 1st-year Japanese grammar and wish to develop a thorough knowledge of Japanese grammar in order to advance all aspects of language skills to a higher level. It is also appropriate for graduate students who need to be able to read materials written in Japanese. Recommended Course Background: AS.378.115-116 or equivalent.	2.00	16	T 2:00-4:00PM
AS.378.415	01	H		**Fourth Year Japanese** *Katagiri, Satoko* By using four skills in participatory activities (reading, writing, presentation, and discussion), students will develop reading skills in modern Japanese and deepen and enhance their knowledge on Kanji and Japanese culture. Recommended Course Background: AS.378.315 and AS.378.316 or equivalent.	3.00	16	TTh 9:00-10:15AM
AS.378.415	01	H		**Fourth Year Japanese** *Nakao, Makiko Pennington*	3.00	16	TTh 9:00-10:15AM
AS.380.101	01			**First Year Korean** *Song, Jayoung* Introduces the Korean alphabet, hangeul. Covers basic elements of the Korean language, high-frequency words and phrases, including cultural aspects. Focuses on oral fluency reaching Limited Proficiency where one can handle simple daily conversations. No Satisfactory/ Unsatisfactory. Cross-listed with East Asian Studies	4.50	20	MTWThF 9:00-9:50AM
AS.380.201	01	H		**Second Year Korean** *Song, Jayoung* Aims for improving oral proficiency and confident control of grammar with vocabulary building and correct spelling intended. Reading materials of Korean people, places, and societies will enhance cultural understanding and awareness. Project due on Korean cities. Existing demonstrable skills in spoken Korean preferred.	4.00	16	MTThF 10:00-10:50AM
AS.380.301	01	H		**Third Year Korean** *Song, Jayoung*	3.00	16	MWF 1:00-1:50PM

East Asian Studies

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Emphasizes reading literacy in classic and modern Korean prose, from easy essays to difficult short stories. Vocabulary refinement and native-like grasp of grammar explored. Project due on Korean culture. Cross-listed with East Asian Studies			

Economics

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.180.101	01	S		**Elements of Macroeconomics** *Barbera, Robert* An introduction to the economic system and economic analysis, with emphasis on total national income and output, employment, the price level and inflation, money, the government budget, the national debt, and interest rates. The role of public policy. Applications of economic analysis to government and personal decisions. Students should have basic facility with graphs and algebra.	3.00	18	M 9:00-9:50AM; WF 9:00-9:50AM
AS.180.101	02	S		**Elements of Macroeconomics**	3.00	18	M 9:00-9:50AM; WF 9:00-9:50AM
AS.180.101	03	S		**Elements of Macroeconomics**	3.00	18	WF 9:00-9:50AM; M 12:00-12:50PM
AS.180.101	04	S		**Elements of Macroeconomics**	3.00	18	WF 9:00-9:50AM; M 10:00-10:50AM
AS.180.101	05	S		**Elements of Macroeconomics**	3.00	18	WF 9:00-9:50AM; M 10:00-10:50AM
AS.180.101	06	S		**Elements of Macroeconomics**	3.00	18	WF 9:00-9:50AM; M 10:00-10:50AM
AS.180.101	07	S		**Elements of Macroeconomics**	3.00	18	WF 9:00-9:50AM; T 10:30-11:20AM
AS.180.101	08	S		**Elements of Macroeconomics**	3.00	18	WF 9:00-9:50AM; T 10:30-11:20AM
AS.180.101	09	S		**Elements of Macroeconomics**	3.00	18	WF 9:00-9:50AM; T 10:30-11:20AM
AS.180.101	10	S		**Elements of Macroeconomics**	3.00	18	WF 9:00-9:50AM; T 10:30-11:20AM
AS.180.101	11	S		**Elements of Macroeconomics**	3.00	18	WF 9:00-9:50AM; T 10:30-11:20AM
AS.180.101	12	S		**Elements of Macroeconomics**	3.00	18	WF 9:00-9:50AM; T 10:30-11:20AM
AS.180.101	13	S		**Elements of Macroeconomics**	3.00	18	WF 9:00-9:50AM; T 10:30-11:20AM
AS.180.101	14	S		**Elements of Macroeconomics**	3.00	18	WF 9:00-9:50AM; M 12:00-12:50PM
AS.180.101	15	S		**Elements of Macroeconomics**	3.00	18	WF 9:00-9:50AM; M 12:00-12:50PM
AS.180.101	16	S		**Elements of Macroeconomics**	3.00	18	WF 9:00-9:50AM; M 12:00-12:50PM
AS.180.101	17	S		**Elements of Macroeconomics**	3.00	18	WF 9:00-9:50AM; M 12:00-12:50PM
AS.180.101	18	S		**Elements of Macroeconomics**	3.00	18	WF 9:00-9:50AM; M 12:00-12:50PM
AS.180.101	19	S		**Elements of Macroeconomics**	3.00	18	WF 9:00-9:50AM; M 12:00-12:50PM
AS.180.101	20	S		**Elements of Macroeconomics**	3.00	18	WF 9:00-9:50AM; M 12:00-12:50PM
AS.180.101	21	S		**Elements of Macroeconomics**	3.00	18	WF 9:00-9:50AM; T 1:30-2:20PM
AS.180.101	22	S		**Elements of Macroeconomics**	3.00	18	WF 9:00-9:50AM; T 1:30-2:20PM
AS.180.101	23	S		**Elements of Macroeconomics**	3.00	18	WF 9:00-9:50AM; M 9:00-9:50AM
AS.180.101	24	S		**Elements of Macroeconomics**	3.00	18	WF 9:00-9:50AM; M 9:00-9:50AM
AS.180.241	01	S		**International Trade** *Bertrand, Trent* Theory of comparative advantage and the international division of labor: the determinants and pattern of trade, factor price equalization, factor mobility, gains from trade and distribution of income, and theory and practice or tariffs and other trade restrictions.	3.00	120	TTh 12:00-1:15PM
AS.180.261	01	S		**Monetary Analysis** *Ball, Laurence M* This course analyzes the financial and monetary system of the U.S. economy and the design and implementation of U.S. monetary policy. Among other topics, we will examine the role of banks in the economy, the term structure of interest rates, the stock market, the supply of money, the role of the Federal Reserve in the economy, the objectives of monetary policy in the United States and current monetary policy practice.	3.00	125	TTh 1:30-2:45PM
AS.180.289	01	S		**Economics of Health** *Bishai, David M*	3.00	100	M 3:30-5:50PM

Economics

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Application of economic concepts and analysis to the health services system. Review of empirical studies of demand for health services, behavior of providers, and relationship of health services to population health levels. Discussion of current policy issues relating to financing and and resource allocation.			
AS.180.301	01	S		**Microeconomic Theory** *Trujillo, Antonio Jose* An introduction to the modern theory of allocation of resources, starting with the theories of the individual consumer and producer, and proceeding to analysis of systems of interacting individuals, first in the theory of exchange, then to systems which include production as well.	4.50	45	TTh 1:30-2:45PM; Th 4:30-5:20PM
AS.180.301	02	S		**Microeconomic Theory**	4.50	45	TTh 1:30-2:45PM; F 10:00-10:50AM
AS.180.301	03	S		**Microeconomic Theory**	4.50	45	TTh 1:30-2:45PM; F 11:00-11:50AM
AS.180.301	04	S		**Microeconomic Theory**	4.50	45	TTh 1:30-2:45PM; F 1:30-2:20PM
AS.180.303	01	S		**Topics in International Macroeconomics and Finance** *Jeanne, Olivier* The course will review selected topics in international macroeconomics and finance. The topics for the Fall of 2015 include: financial globalization; international portfolio diversification; the problems posed by “sudden stops” in capital flows to emerging markets; global imbalances and global demand rebalancing; how different exchange rate regimes have fared in the global financial crisis; sovereign default in the light of the Argentine experience; and the ongoing Russian currency and financial crisis. The course involves mathematical modeling as well as data analysis.	3.00	30	TTh 12:00-1:15PM
AS.180.308	01	S		**Financial Regulations in the US** *Nguyen, Hai Xuan* This course begins with the time of the great Framers and adopts a historical approach to U.S. financial regulations. By examining all major crises and the respective policy responses, the course will provide a narrative on the evolution of the regulatory landscape in America. Students will also be exposed to influential academic papers that address the essentiality (and even the redundancies and failures) of key aspects of financial regulations, including deposit insurance, bank capital and liquidity requirements, and supervisory rules. Dean’s Teaching Fellowship course. Recommended courses: AS.180.261 and AS.180.266	3.00	19	MW 1:30-2:45PM
AS.180.310	01	S	W	**Economics of Antitrust** *Hamilton, Bruce W* This course explores the economic rationale for, and consequence of, antitrust laws. In addition to economic analysis we will study landmark antitrust cases.	3.00	20	Th 1:30-3:50PM
AS.180.334	01	QS		**Econometrics** *Balat, Jorge F*	3.00	30	F 10:00-10:50AM; TTh 9:00-10:15AM

Economics

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Introduction to the methods of estimation in economic research. The first part of the course develops the primary method employed in economic research, the method of least squares. This is followed by an investigation of the performance of the method in a variety of important situations. The development of a way to handle many of the situations in which ordinary least squares is not useful, the method of instrumental variables, concludes the course.			
AS.180.334	02	QS		**Econometrics**	3.00	37	TTh 9:00-10:15AM; Th 3:00-3:50PM
AS.180.354	01	S		**Econometrics of Unobservables** *Hu, Yingyao* Empirical data may not contain all the variables suggested by economic theories. This course introduces methodologies to identify and estimate economic models containing unobservables. Recommended Course Background: AS.180.301 and AS.180.334.	3.00	10	MW 1:30-2:45PM
AS.180.355	01	S		**Economics of Poverty/Inequality** *Moffitt, Robert A* This course focuses on the economics of poverty and inequality. It covers the measurement of poverty and inequality, facts and trends over time, the causes of poverty and inequality with a focus on those related to earnings and the labor market, and public policy toward poverty and inequality, covering both taxation and government expenditure and programs. By the nature of the material, the course is fairly statistical and quantitative. Students should have an intermediate understanding of microeconomic concepts. Basic knowledge of regression analysis is also helpful.	3.00	25	TTh 10:30-11:45AM
AS.180.363	01	S		**Sex, Drugs and Dynamic Optimization: The Economics of Risky Behavior** *Papageorge, Nick W* We apply the tools of economic analysis to understand behaviors that are enjoyable today, but may have negative consequences in the future.	3.00	10	MW 10:30-11:45AM
AS.180.368	01	S		**Managerial Economic and Business Strategies** *Knapp, J. Barclay* Seminar on quantitative concepts, decision-making, and strategy in business organizations. Overall context is 'value' – how it is measured and maximized long term. Microeconomic theory of the firm, competitive analysis, corporate finance.	3.00	28	M 1:30-4:00PM
AS.360.247	01	S	W	**Introduction to Social Policy: Baltimore and Beyond** *Edin, Kathryn*	3.00	75	TTh 12:00-1:15PM

Economics

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Thsi course will introduce students to basic concepts in economics, political science and sociology relevant to the study of social problems and the programs designed to remedy them. It will address the many inequalities in access to education and health car, unequal treatment in the criminal justice system, disparities in income and wealth, and differential access to political power. The focus will be on designing effective policies at the national and local level to address these pressing issues. This courseis open to all students, but will be required for the new Social Policy Minor. The course is also recommended for students who are interested in law school, medical school, programs in public health, and gradaute school in related social science fields. Cross list with Sociology, Economics and Political Science. Freshman, Sophomore and Juniors only.			
EN.570.428	01	QS	W	**Problems in Applied Economics** *Hanke, Steve H* This course brings the principles of economic theory to bear upon particular problems in the fields of economics, finance and public policy. Micro, macro and international problems, from both the private and public sectors, are addressed. A heavy emphasis is placed on research and writing. Students learn how to properly conduct substantive economic research, utilizing statistical techniques and lessons from economic history. Findings are presented in the form of either memoranda or working papers. Exceptional work may be suitable for publication through the Johns Hopkins Institute for Applied Economics, Global Health, and the Study of Business Enterprise.	3.00	19	TBA
EN.570.470	01	QS	W	**Applied Econ & Finance** *Hanke, Steve H* This course focuses on company valuations, using the proprietary Hanke-Guttridge Discounted Free Cash Flow Model. Students use the model and data from financial statements filed with the Securities and Exchange Commission to calculate the value of publicaly-traded companies. Using Monte Carlo simulations, students also generate forecast scenarios, project likely share-price ranges and assess potential gains/losses. Stress is placed on using these simulations to diagnose the subjective market expectations contained in current objective market prices, and the robustness of these expectations. During the weekly seminar, students' company valuations are reviewed and critiqued.	3.00	11	F 1:30-4:30PM

Economics

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
EN.570.487	01	QS	W	**Financial Market Research** *Hanke, Steve H* This course investigates the workings of financial, foreign exchange, and commodity futures markets. Research is focused on price behavior, speculation, and hedging in these markets. Extensive research and writing is required. Exceptional work may be suitable for publication through the Johns Hopkins Institute for Applied Economics, Global Health, and the Study of Business Enterprise.	3.00	10	TBA

English

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.060.100	01	H	W	**Introduction to Expository Writing** *Kain, Patricia* Introduction to “Expos” is designed to introduce less experienced writers to the elements of academic argument. Students learn to recognize the paradigm of academic argument as they learn to read and summarize academic essays, and then they apply the paradigm in academic essays of their own. Classes are small, no more than 10 students, and are organized around three major writing assignments. Each course guides students’ practice through pre-writing, drafting, and revising, and includes discussions, workshops, and tutorials with the instructor. In addition to its central focus on the elements of academic argument, each “Intro” course teaches students to avoid plagiarism and document sources correctly. “Intro” courses do not specialize in a particular topic or theme and are available to freshmen only.	3.00	10	MW 12:00-1:15PM
AS.060.100	02	H	W	**Introduction to Expository Writing** *Evans, William*	3.00	10	MW 1:30-2:45PM
AS.060.100	03	H	W	**Introduction to Expository Writing**	3.00	10	MW 3:00-4:15PM
AS.060.100	04	H	W	**Introduction to Expository Writing** *Brodsky, Anne-Elizabeth Murdy*	3.00	10	TTh 9:00-10:15AM
AS.060.100	05	H	W	**Introduction to Expository Writing**	3.00	10	TTh 10:30-11:45AM
AS.060.100	06	H	W	**Introduction to Expository Writing** *O'Connor, Marie T*	3.00	10	TTh 12:00-1:15PM
AS.060.100	07	H	W	**Introduction to Expository Writing**	3.00	10	TTh 1:30-2:45PM
AS.060.100	08	H	W	**Introduction to Expository Writing**	3.00	10	TTh 12:00-1:15PM
AS.060.100	09	H	W	**Introduction to Expository Writing**	3.00	10	TTh 1:30-2:45PM
AS.060.107	01	H	W	**Introduction to Literary Study** *Thompson, Mark C* See section descriptions.	3.00	20	TTh 10:30-11:45AM
AS.060.107	02	H	W	**Introduction to Literary Study** *Hickman, Jared W*	3.00	20	MW 3:00-4:15PM
AS.060.108	01	H	W	**Time Travel** *Rosenthal, Jesse Karl* Why is time travel such a consistent and perplexing them in literature and film over the last 150 years? Why is modernity so concerned with peeking backwards or forwards? This course will examine the history of time-travel fiction, from its beginning in utopian fiction through its box-office dominance in the 1980s, and into today. Writers will likely include Mark Twain, Edward Bellamy, Harold Steele Mackay, Ray Bradbury, Robert Heinlein, and Philip K. Dick. Movies will include *The Terminator*, *Back to the Future*, and *Primer*.	3.00	18	TTh 10:30-11:45AM
AS.060.113	01	H	W	**Expository Writing: Freedom of Will in Neuroscience & Philosophy** *Brandau, John Alexander*	3.00	15	MWF 9:00-9:50AM

English

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				"Expos" is designed to introduce more confident student writers to the elements of academic argument. Students learn to apply the paradigm of academic argument in academic essays of their own. Classes are capped at 15 students and organized around four major writing assignments. Each course guides students' practice through pre-writing, drafting, and revising, and includes discussions, workshops, and tutorials with the instructor. In addition to its central focus on the elements of academic argument, each "Expos" course teaches students to document sources correctly and provides its own topic or theme to engage students' writing and thinking. Please note: Each course has a different topic. To check individual course descriptions, go to the EWP web site. "Expos" courses are available to freshmen, sophomores, and juniors, and to seniors by special permission.			
AS.060.113	02	H	W	**Expository Writing: Dissent and the Power of Persuasion** *Day, Robert D.*	3.00	15	MWF 10:00-10:50AM
AS.060.113	03	H	W	**Expository Writing: Balancing Freedom and Security** *Webber, Robert Paul*	3.00	15	MWF 10:00-10:50AM
AS.060.113	04	H	W	**Expository Writing: Roman Gladiators** *Campbell, Elisabeth*	3.00	15	MWF 11:00-11:50AM
AS.060.113	05	H	W	**Expository Writing: Self-Interest and Common Good** *Wedekind, Kara*	3.00	15	MWF 11:00-11:50AM
AS.060.113	06	H	W	**Expository Writing:** *Staff*	3.00	15	MWF 11:00-11:50AM
AS.060.113	07	H	W	**Expository Writing: Life, the Cosmos, and Intelligent Design** *Stojanovic, Pavle*	3.00	15	MW 12:00-1:15PM
AS.060.113	08	H	W	**Expository Writing: Hitchcock** *Sisson, Andrew Reynolds*	3.00	15	MW 12:00-1:15PM
AS.060.113	09	H	W	**Expository Writing: Hitchcock**	3.00	15	MW 1:30-2:45PM
AS.060.113	10	H	W	**Expository Writing: Detective Stories** *Tye, Douglas Allen*	3.00	15	MW 1:30-2:45PM
AS.060.113	11	H	W	**Expository Writing: Better Than Human** *Haley, Joseph Andrew*	3.00	15	MW 3:00-4:15PM
AS.060.113	12	H	W	**Expository Writing: Shakespeare's God** *Chilton, Jacob Israel*	3.00	15	TTh 9:00-10:15AM
AS.060.113	13	H	W	**Expository Writing:** *Staff*	3.00	15	TTh 9:00-10:15AM
AS.060.113	14	H	W	**Expository Writing: The Body as Art** *Libina, Maria*	3.00	15	TTh 10:30-11:45AM
AS.060.113	15	H	W	**Expository Writing: Living Other Lives in American Short Stories** *Berger, Donald W*	3.00	15	TTh 10:30-11:45AM
AS.060.113	16	H	W	**Expository Writing: Western Movies** *Schade, Johannes*	3.00	15	TTh 10:30-11:45AM
AS.060.113	17	H	W	**Expository Writing: Visions of War** *Hoffmann, John*	3.00	15	TTh 12:00-1:15PM
AS.060.113	18	H	W	**Expository Writing: American Gothic** *Zecca, Amanda Elizabeth*	3.00	15	TTh 12:00-1:15PM
AS.060.113	19	H	W	**Expository Writing: Family Matters** *Watters, Aliza*	3.00	15	TTh 12:00-1:15PM

English

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.060.113	20	H	W	**Expository Writing: Family Matters**	3.00	15	TTh 1:30-2:45PM
AS.060.113	21	H	W	**Expository Writing: The Power and Perils of Irony** *Maioli dos Santos, Roger*	3.00	15	TTh 1:30-2:45PM
AS.060.113	22	H	W	**Expository Writing: The Celebrity of Jane Austen** *Bujak, Nicholas*	3.00	15	TTh 1:30-2:45PM
AS.060.113	23	H	W	**Expository Writing: The Celebrity of Jane Austen**	3.00	15	TTh 3:00-4:15PM
AS.060.113	24	H	W	**Expository Writing: Ghost Stories** *Hann, Jennie Kay*	3.00	15	MW 3:00-4:15PM
AS.060.123	01	H	W	**Freshman Seminar: Prophecy After Science** *Miller, William J* This course explores the history of prophecy from ancient Greek and Judaic sources to current intimations of technological singularity and ecological doom. We will focus on the influence of prophecy on the rise of science (and vice-versa). Readings will include texts by William Shakespeare, Francis Bacon, Mary Shelley, and Philip K. Dick.	3.00	18	M 4:00-7:00PM
AS.060.127	01	H	W	**Muslim Science Fiction** *Hashem, Noor* This course will explore the wondrous and mysterious world of Islamic Sci-Fi. Writers of Muslim Sci-Fi have asserted a long tradition of speculative fiction and fantasy dating back to the 13th century. We will look into this literary history, beginning with earlier texts like The Arabian Nights, al-Qizwini's alien story Awaj bin Anfaq and Roquia Hussain's Sultana's Dream all the way through to modern texts like G. Willow Wilson's Alif the Unseen and Saladin Ahmed's Throne of the Crescent Moon. We will ask how this genre, as opposed to realism, might enable these writers to productively tackle themes of history, science, belief, and the politics of belonging and difference. We will pair our Muslim readings with more canonical science fiction works, such as Mary Shelley's Frankenstein, H.G. Wells' The Time Machine, and more recently, Kazuo Ishiguro's Never Let Me Go, to think through the relationship of the SF writer to a particular cultural moment. We will also look at writers of afrofuturism and magical realism, like Octavia Butler and Gabriel García Márquez, to think about how other writers of color have employed fantasy and the fantastical, and to what ends.	3.00	18	TTh 9:00-10:15AM
AS.060.149	01	H	W	**Freshman Seminar: Work and Worth in American Literature** *Tempesta, Erica N*	3.00	18	T 4:00-7:00PM

English

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				"No man needs sympathy because he has to work, because he has a burden to carry," Theodore Roosevelt proclaimed in his "Square Deal" speech of 1903. "Far and away the best prize that life offers is the chance to work hard at work worth doing." Hard work is at the heart of the American dream, but with unemployment rates at historic highs and the global economy proceeding at a rapid clip, Roosevelt's words resurrect old questions in a new world: What work is worth doing? Who gets the chance to do it? And what happens when people find themselves doing work that isn't worth doing? In this course we will consider the meaning and consequences of work, from the heroic to the tragic, through a selection of American literature from the last days of slavery to the present. This course will consider work in all its forms, from the plantation to the boardroom, to help us develop the tools to interpret the varieties and values of labor in modern society.			
AS.060.150	01	H	W	**Freshman Seminar: Milton's Paradise Lost: Contexts and Conversations** *Buckham, Rebecca Lynn* This course undertakes an in-depth study of what is arguably the greatest long poem in the English tradition, John Milton's Paradise Lost. The poem, first published in 1667, is Milton's take on the Judeo-Christian story of the Fall found in the Bible. Paradise Lost does not merely re-tell the biblical account, however. By expanding three chapters of Genesis into a twelve-book epic meant to rival its classical forbears—most importantly Virgil's Aeneid—Milton's poem makes room for new readings of an old story. This course encourages students to find their own new readings of the Genesis story by considering the historical contexts of the poem's production as well as the conversations Paradise Lost continues to provoke to this day. In addition to reading and discussing the poem, students will become familiar with ongoing sites of critical debate, such as the representations of Satan and of Eve. To help negotiate these conversations, students will complete a guided research project that makes use of the materials available through the library's Department of Special Collections, housed in Brody Learning Commons. In addition to early editions of Paradise Lost, this treasure trove of rare books offers a wide variety of materials which may deepen an encounter with Milton's poem, from biblical illustrations to gardening manuals to marriage advice. Students will use the collection to ask questions such as: "How does Milton's representation of Satan differ from earlier traditions of imagining the devil?" and "Does Milton's approach to Eve reinforce or revise conventional ideas about women?" Sufficient class time will be dedicated to introducing students to Special Collections so as to facilitate their individual work over the course of the semester.	3.00	15	T 1:30-4:30PM
AS.060.213	03	H		**The Novel and Globalization** *Jackson, Jeanne-Marie*	3.00	20	MWF 10:00-10:50AM

English

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Novels have long been classified by the national origin of their author, and, for the most part, the great works of the nineteenth and twentieth centuries take place primarily in one country. In the postcolonial era of the 1980s and 90s, many prominent writers explored the process of diasporic movement from one country to another. Recently, though, there has been a lot of talk about a new kind of “rootless” novel that jumps between many locales around the globe. This course reads some of the prime examples of this genre in relation to its immigrant predecessors, identifying its key formal and thematic attributes (such as perspectival and geographical range, multi-stranded plots, and an acute consciousness of linguistic and generic hybridization). We will discuss the trade-offs inherent in developing many places rather than one in terms of style and character development, as well as the political and even ethical implications of abandoning the concept of “home.” Primary works by Abdulrazak Gurnah, Caryl Phillips, David Mitchell, Taiye Selasi, Chimamanda Adichie, and Imraan Coovadia.			
AS.060.231	03	H		**Novels Into Film** *Staff* What does it take to turn a novel into film? How different are the demands and possibilities of these two forms? Why do some novels repeatedly attract filmmakers? And how should we evaluate films that adapt novels? Beginning with the novel Frankenstein and its various film progeny, we will look at a series of pairings between novels and films. These may include Austen’s Pride and Prejudice, Dickens’ Great Expectations, Tarkington’s The Magnificent Ambersons, Stoker’s Dracula and McEwan’s Atonement along with various critical readings about the genre of the novel and the medium of film.	3.00	20	MWF 9:00-9:50AM
AS.060.301	01	H	W	**Words and Images** *Daniel, Andrew*	3.00	18	M 1:30-3:50PM

English

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				From the picture-books of childhood to the Facebook pages and tumblrs of the present, visual literacy and textual literacy go together, with these distinct mediums alternately competing and reinforcing each other. Yet the academic study of literature tends to sideline or bracket visual images, insisting (often for very good reasons) upon an encounter with texts alone. This course reads works that combine media in order to pose and perhaps answer some basic questions: which aspects of our ingrained critical habits of reading and interpreting literature have to change in order to read images and texts together? How do these distinct representational media complicate or critique each other? How has this relationship changed over time? From Renaissance emblem books to graphic novels and beyond, this transhistorical course will assess the relationship between images and texts through a series of close encounters with works that combine image and text in ways that are alternately funny and scary, intuitive and experimental, old fashioned and cutting edge. Possible texts/authors include: Geoffrey Whitney & Andrea Alciati, “A Choice of Emblems”; William Blake, “Songs of Innocence” and “Songs of Experience”; Marshall Mcluhan & Quentin Fiore, “The Medium is the Massage: An Inventory of Effects”; W.G. Sebald, “The Rings of Saturn”; Claudia Rankine, “Don’t Let Me Be Lonely” and “Citizen”; Xu Bing, “The Book From the Ground”.			
AS.060.313	01	H	W	**Edmund Spenser** *Daniel, Andrew* After a diagnostic introduction to his early poetry, this reading intensive seminar will concentrate upon Edmund Spenser’s masterpiece, The Faerie Queene (1590/1596), which we will read in its entirety. Over the course of its sprawling Six Books and its concluding Mutability Cantos, The Faerie Queene marshals an enormous cast of characters (knights, ladies, magicians, giants, monsters) in order to allegorically represent the virtues of Holiness, Temperance, Chastity, Friendship, Justice and Courtesy. Through this framework, his text models the ethical regulation of the body, the aesthetic construction of gender, the politics of national myth-making, and the ongoing processes of colonial violence in which Spenser was himself complicit. But across its vast yet incomplete expanse, Spenser’s text is always centrally concerned with the task of reading. Accordingly, students should emerge from their encounter with this demanding but rewarding poem with a deeper understanding of the task of interpretation itself. As a group we will collectively traverse the surface of the text, and work together to construct a functional account of allegory’s effects. You will be asked to respond to the challenge of Spenser’s work in class discussion, weekly short responses, and three analytic papers.	3.00	18	Th 1:30-3:50PM
AS.060.316	01	H	W	**Mapping the Global Metropolis** *Jackson, Jeanne-Marie*	3.00	18	M 1:30-3:50PM

English

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Cities have long taken on a central role in literature, but much of our reading about urban space is confined to a few Western hubs. And while the city has traditionally been a space for fictional characters to develop into national subjects, much of the most innovative contemporary writing sees the city as a character of its own. This course will address the representational challenges of globalization through fiction and genre-bending memoir about contemporary metropolises that act as its microcosm: Johannesburg, Lagos, Delhi, London, and New York. We will read primary works by Ivan Vladislavic, Chris Abani, Aravind Adiga, Zadie Smith, and Teju Cole, as well as supplementary excerpts from books including Capital, by Rana Dasgupta, Mike Davis' Planet of Slums, Ato Quayson's Oxford Street, Accra, and Loren Kruger's Imagining the Edgy City. Finally, the course will include theoretical readings about globality and representation, such as Fredric Jameson's essay on "Cognitive Mapping" and Arjun Appadurai's seminal book Modernity at Large.			
AS.060.320	01	H	W	**Icons of Feminism** *Staff* This course looks at four crucial figures who have haunted feminist thought and responses to feminism over the centuries. Sappho, known as the first female poet, remains an enigmatic icon of feminine desire and creativity; Antigone, the daughter of Oedipus and the heroine of Sophocles's play Antigone, still inspires feminist analyses of women's relationship to law, the state and civil society; and Joan of Arc, the militant maid of Orleans, troubles thinking about women and violence as well as women, religion and spirituality. The last figure is Mary Wollstonecraft, often cited as the first modern feminist. The course will examine literary works written about these iconic figures, as well as contemporary feminist writing about their influence and viability as models for the future of feminism.	3.00	18	MW 3:00-4:15PM
AS.060.322	01	H	W	**Indian Ocean** *Haley, Joseph Andrew* This course will explore the development of a cosmopolitan ethos in postwar fiction from the Indian Ocean region, with particular focus on South Africa, South Asia, and the Malay Archipelago. Authors will include Aravind Adiga, Pramoedya Ananta Toer, Lloyd Fernando, Tan Twan Eng, and J.M. Coetzee.	3.00	18	TTh 9:00-10:15AM

English

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.060.336	01	H	W	**Victorian Modernity** *Staff* This course will study the idea of modernity, a term that has been of continuing use in trying to understand ourselves and our society. We will focus on the major works of prose and poetry that attempted to come to terms with modernity in Victorian Britain. Texts are likely to include non-fiction prose by Mill, Arnold, Darwin, Nightingale, and Pater; Eliot's novel Middlemarch; and poetry by Elizabeth Barrett and Robert Browning, Tennyson, Emily Bronte, Christina Rosetti, Hopkins, and Hardy.	3.00	18	TTh 10:30-11:45PM
AS.060.342	01	H	W	**Yeats and His Ages** *Mao, Douglas* This past June marked the one hundred fiftieth anniversary of the birth of William Butler Yeats, perhaps the most naturally gifted poet ever to write in English. In recognition of this event, this course will consider the breadth of Yeats's poetry, prose writing, and drama in the contexts of Irish history and folklore, decadence and modernism in the arts, the project of the Abbey Theatre, and poetic innovation in the twentieth century. "Ages," in the title, recalls that more than most figures, Yeats reached across literary eras—and highlights as well this poet's profound interest in the drama of growing older. Writers in addition to Yeats who will be studied may include Oscar Wilde, Helena Blavatsky, Douglas Hyde, Augusta Gregory, J. M. Synge, and T. S. Eliot.	3.00	18	Th 1:30-3:50PM
AS.060.351	01	H	W	**Theory of the Novel** *Rosenthal, Jesse Karl* We all know a novel when we see one, but it's surprisingly hard to say just what one is. This seminar will introduce the theory of the novel by reading a number of novels along with the works of central thinkers about the novel. We will look at the connection of the rise of the novel form with historical and cultural changes and investigate key stylistic elements. Novelists will likely include Miguel de Cervantes, Johann Wolfgang von Goethe, Jane Austen, Gustave Flaubert, and Virginia Woolf.	3.00	18	T 1:30-3:50PM
AS.060.362	01	H	W	**Art and the Arab Spring** *Hashem, Noor*	3.00	18	T 3:00-5:20PM

English

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Much has been made of the political ramifications of the Arab Spring: the potential move towards democratic representation, the realization of minority and gender rights, the economic liberalization of markets, the jockeying by world powers to assert influence in the region, and the revitalization of dissident movements. This course will turn its attention to the role of artistic representation in the Arab Spring in order to complicate these political discussions. We will explore widely, considering works of prose, poetry, film, music, performance art, and visual art, from photography to graffiti. We will think through how these mediums are used and to what end, whether as evidence of atrocities, as inspiration and mobilization of dissent, as satirical commentary, or to revitalize appreciation for artistic expression. We will also think about the impact of social media on distribution possibilities and implied audience and track how certain art forms invoke and are invoked by liberal or conservative discourses in complex ways.			
AS.060.365	01	H	W	**Literature and Modern Philosophy** *Staff* Does literature have moral value? How might we begin to answer such a question? This course will survey major attempts by both writers and philosophers to understand the relation between morality and literature, especially fiction. Course will be taught by incoming professor Andrew Miller.	3.00	18	W 1:30-3:50PM

English

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.060.391	01	H	W	**Early American Literature** *Hickman, Jared W* This course is an introduction to literatures drawn from across the Americas, although primarily the British North American colonies that would eventually become the United States, from first contact in 1492 up through the American wars of independence. Our readings are roughly organized according to chronology and genre. We will think about the adapted and emergent generic forms through which "the New World" was ongoingly invented, including genres like the Indian captivity narrative and the slave narrative that arguably make their debut in world literary history in the Americas during this time frame. We will conclude by attending to the rather late emergence of the novel in American literary history, reading four novels that appeared in the early US national period. The objective of the course is simply to contextualize and analyze a wide array of texts, each of which richly rewards the engaged reader, in order to trace the origins of American literatures. Course texts may include contact narratives (Columbus, Caminha, Smith, Hennepin); conquest narratives (Mather, Las Casas, Poma de Ayala); Indian captivity narratives (Cabeza de Vaca, Rowlandson, Staden); slave narratives (Gronniosaw, Jea, Cugoano); revolutionary polemics (Paine, Bolívar); and the earliest American novels: William Hill Brown, The Power of Sympathy; Hannah Webster Foster, The Coquette; Leonora Sansay, Secret History or, the Horrors of Santo Domingo; Charles Brockden Brown, Arthur Mervyn. Fulfills the pre-1800 requirement.	3.00	18	Th 2:30-4:50PM
AS.193.304	01	S		**Poetry of Ordinary People: Jewish Poetic Expression in Ghettos and Camps** *Trinh, Miriam* The course aims to encourage knowledge of a relatively unknown mass phenomenon - poetic creativity by Jews under Nazi Rule, in the Ghettos and Camps. The study of multi-lingual texts, written by non-professional writers, will enable to better understand the complexity of immediate Jewish reaction to Holocaust reality, in its multi-cultural contexts. Texts from selected ghettos and camps, originally written in Yiddish, Polish, German and Hebrew will be read in English translation and analyzed. Emphasis will be put on the differences and similarities between Eastern and Western European Jewry.	3.00	15	W 5:30-7:50PM
AS.214.477	01	H	W	**Magic, Marvel, and Monstrosity in the Renaissance** *Stephens, Walter E*	3.00	12	TTh 1:30-2:45PM

English

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Magic, Monstrosity,and Marvels or Wonders call into question what we see and experience: what is reality, what is illusion; what's natural and what's supernatural? What's human and what's more, or less, than human? During the Renaissance, ideas about the nature of reality were bound up with questions and issues very different from those of our time. With the exact sciences still being invented, the nature of the world was much less hard and fast for Renaissance people than it is for the modern educated person. The literary masterpieces of the Italian Renaissance provide vivid illustrations of the early modern sense of wonder. Foremost among these are the theatrical comedies which Italian authors revived in imitation of the ancients, and the romances, especially Ariosto's Orlando furioso (1532) and Tasso's Gerusalemme liberata (1581). These and other works influenced ideas about magical and marvelous phenomena across Europe for centuries to come. Works will be read and discussed in English. Italian majors and graduate students (who should enroll in section 2) will attend a weekly supplemental discussion in Italian and compose their written work in Italian.			
AS.214.477	02	H	W	**Magic, Marvel, and Monstrosity in the Renaissance**	4.00	8	TTh 1:30-2:45PM
AS.300.371	01	H		**The Modernist Novel: James, Woolf, and Joyce** *Ong, Yi-Ping* The purpose of this course is to survey works by three of the greatest, most relentless innovators of the twentieth century – Henry James, Virginia Woolf, and James Joyce -- who explored and exploded narrative techniques for depicting what Woolf called the "luminous halo" of life. Selected works include: "The Beast in the Jungle," The Portrait of a Lady, Jacob's Room, Mrs. Dalloway, To the Lighthouse, A Portrait of the Artist as a Young Man, and Ulysses.	3.00	20	MW 12:00-1:15PM
AS.360.133	01	H	W	**Freshman Seminar: Great Books at Hopkins** *Patton, Elizabeth* Students attend lectures by an interdepartmental group of Hopkins faculty and meet for discussion in smaller seminar groups; each of these seminars is led by one of the course faculty. In lectures, panels, multimedia presentations, and curatorial sessions among the University's rare book holdings, we will explore some of the greatest works of the literary and philosophical traditions in Europe and the Americas. Close reading and intensive writing instruction are hallmarks of this course; authors for Fall 2014 include Homer, Plato, Boccaccio, Shakespeare, Madame de Lafayette, Flaubert, Dostoevsky, Chekhov, and Joyce.	3.00	15	TTh 10:30-11:45AM
AS.360.133	02	H	W	**Freshman Seminar: Great Books at Hopkins** *Achinstein, Sharon*	3.00	15	TTh 10:30-11:45AM
AS.360.133	03	H	W	**Freshman Seminar: Great Books at Hopkins** *Bett, Richard*	3.00	15	TTh 10:30-11:45AM

English

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.360.133	04	H	W	**Freshman Seminar:Great Books at Hopkins** *Russo, Elena*	3.00	15	TTh 10:30-11:45AM
AS.360.133	05	H	W	**Freshman Seminar: Great Books at Hopkins** *Stephens, Walter E*	3.00	15	TTh 10:30-11:45AM
AS.363.264	01	H	W	**Capitalism and Gender** *Westcott, Christopher John* This course explores a range of critical work relating capitalism to gender, sex, and sexuality: from theoretical accounts of witchcraft, marriage, and prostitution at the birth of capitalist social relations, to classic feminist debates around housework and reproduction, to contemporary thought on affect, finance, and the global dimensions of women's labor. As a centerpiece to the course we will read sections from Capital, interrogating the place of gender in Marx's text while developing a grasp of its arguments and influence.	3.00	15	TTh 1:30-2:45PM

Film and Media Studies

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.061.140	01	H		**Introduction to Cinema, 1892-1941** *Ward, Meredith C* This course teaches students the fundamentals of film analysis and leads them through the first half of our first century of movies. We will focus on the basic elements of film form, as well as their manipulation and use in films across the globe from the turn of the century until the start of World War II. Movements discussed include the silent comedy of Charles Chaplin and Buster Keaton, German Expressionism, Surrealism, Soviet Montage, French poetic realism, Pre-Production Code cinema, and, of course, classical Hollywood. Screenings are required for this course. Lab fee: $40	3.00	50	MW 12:00-1:15PM; F 12:00-2:20PM
AS.061.145	01	H		**Introduction to Visual Language** *Yasinsky, Karen* This course is a study of the visual language used to create a moving picture. Through screenings and discussion of films, videos, and related readings, students will develop a visual critical facility and will demonstrate this facility in weekly response papers to screenings and a final independent video project. The course will focus on image construction, including composition, framing, movement inside the frame and use of light. Students will learn to be attentive to rhythm and tempo in picture editing and sound. In-class video assignments included, which students will work on in small groups of three. Lab fee: $40	3.00	12	M 3:00-5:20PM; W 7:30-10:00PM
AS.061.148	01		W	**Storytelling for Film and Fiction** *Bucknell, Lucy* Through the analysis of narrative films, short fiction, myths, fairy tales, and ghost stories, and through the workshopping of their own creative writing, students will explore the art and science of "a good story well told." This course is an essential primer for upper-level screenwriting.	3.00	12	W 1:30-3:50PM; M 7:30-10:00PM
AS.061.150	01	H		**Introduction to Film Production: Rediscovering Early Cinema** *Porterfield, Matthew* This course introduces students to basic considerations of shooting 16mm film. Through lectures and practice, the course approaches the basics of light meter readings, basic camera operations and shot composition. The course also highlights specific readings from classical film theory to augment weekly shooting exercises. Each week students, working in groups, shoot film exercises, providing a general overview of film production. For the final project, each group shoots and edits (physical edits) a short (3-5 minutes) film on 16mm black and white reversal film stock. Lab fee: $125	3.00	12	T 12:00-2:20PM
AS.061.152	01	H		**Introduction to Digital Film** *Roche, Jimmy*	3.00	10	W 3:00-5:20PM

Film and Media Studies

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course introduces students to the world of digital filmmaking. Through screenings, production assignments, and in-class labs, students will develop proficiency in digital cameras, sound recording devices, and software. Students will work individually and in groups to produce several video projects. For their final projects students will pitch an idea and develop a more complex film. Class taught at Homewood with trips to the computer lab at the JHU/MICA Film Centre. Lab fee: $100			
AS.061.165	01			**Lights, Camera, Action: Horror** *Bucknell, Lucy* An introduction to the basics of film analysis through a sampling of classic horror. In-class screenings and short written assignments. Emphasis on discussion over lecture. No prior experience in film studies required. This 1-credit course will meet September 16, 23, 30, & October 7, and be graded pass/fail. Perfect attendance is required.	1.00	45	W 4:30-7:30PM
AS.061.202	01	H		**Intermediate Film Production: Personal Essay Film** *Mann, John* In this course students will consider variations of the personal essay film, wherein filmmakers explore their own experiences, both real and imagined. These films constitute dialogues between filmmaker and world using subjective approaches, including but not limited to first person narration. Students will make a short (4-6 minutes) 16mm film from original and possibly archival footage; their own filmic essays based upon personal experiences. We will look at the works of several essay filmmakers including Ross McElwee, Jean Luc Godard, Chris Marker, and Su Friedrich.	3.00	7	W 12:00-2:20PM
AS.061.205	01	H	W	**Introduction to Dramatic Writing: Film** *Buso-garcia, Roberto* In this course we will explore the basic principles of visual storytelling in narrative film as they apply to the design and execution of a screenplay. During the course of the semester, each student will work on different writing exercises while they search for their specific story and the best way to approach it. We will study different narrative tools and methods of screenwriting by analyzing films to ascertain how they work or fail to do so at script level. Through in-class critiques, group discussions and one-on-one sessions, students will apply these techniques to their own work as they undergo the process of designing, breaking down, outlining and writing a screenplay for a short film. In-class analysis and debate on the strengths and challenges posed by the students' work will help shape the thematic emphasis of the second half of the course.	3.00	15	T 1:30-3:50PM
AS.061.226	01	H	W	**Special Topics: Writing About Film** *Mason, Laura*	3.00	10	T 3:00-5:20PM; M 7:30-10:00PM

Film and Media Studies

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				A workshop that focuses on writing critical and analytical essays about movies recent and classic. Students will write progressively longer and more complex essays– submitting working drafts and making revisions– and participate in critiques and discussions of one another's writings. Fulfills Film and Media Studies expository writing requirement.			
AS.061.231	01			**In Others' Words** *Mann, John* "In Others Words" explores an enigmatic relationship between images and words. Each student creates a short, 16mm film incorporating their filmed images with texts written by others (fiction and non-fiction). Guided by the notion of collage, these films become a new form of documentary, bringing together seemingly disparate elements to reconfigure our ways of seeing. Drawing from the photo-text works of Wright Morris and C.D.Wright's poetry, the course adheres to Paul Virilio's suggestion: "sometimes the best way to see better is to look differently." This is not about B roll. $125 lab fee.	3.00	7	M 12:00-2:20PM
AS.061.244	01	H		**Film Genres** *Bucknell, Lucy* A survey of American genres: the Western, the Gangster Film, Science Fiction, Horror, Comedy, Melodrama, and others. Twice-weekly screenings. A short film response, a final essay, and an oral presentation. $40 lab fee	3.00	15	Th 7:30-10:00PM; M 3:00-5:30PM; S 7:00-9:30PM
AS.061.249	01			**Film History: Sound and Scores** *Dolby, Thomas* This course will explore the history of film sound from the silent film era to the present day, examining the narrative and aesthetic purpose as well as the functionality of film music. The course will trace the history and development of film music and the process of film scoring through reading, lecture, and film viewing to explore how music and its relationship to film has changed over the last century. Class includes discussion and evaluation of different compositional styles and their purposes. $40 lab fee.	3.00	20	W 3:00-5:20PM; W 7:30-10:00PM
AS.061.358	01	H		**Directing Actors** *Porterfield, Matthew* This class, intended for students of film, will explore the theory, practice, and ethics of directing actors for the screen. Texts, screenings, production, and performance exercises will be combined over the course of the semester. The goal of this workshop is to inspire young directors and enhance their ability to communicate with their cast with confidence and empathy.	3.00	10	M 4:00-6:20PM
AS.061.364	01	H	W	**The Films of Alfred Hitchcock** *DeLibero, Linda* Close examinations of Hitchcock's films from the Lodger to Frenzy. $40 lab fee.	3.00	12	T 10:30AM-12:50PM; Th 7:30-10:00PM
AS.061.372	01			**French Crime Films, Thrillers, and Noirs** *Roos, Suzanne*	3.00	15	T 7:30-10:00PM; F 1:30-3:50PM

Film and Media Studies

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				An exploration of French films about crime with a particular focus on the reciprocal relations between French and American cinema: how did the French tradition of poetic realism influence the American film noir--and why is our name for the genre one invented by French critics? How did French directors respond to American genre movies, and to the films of Hitchcock? Screenings will include films by Melville, Godard, Clément, Clouzot, Chabrol, Dassin, and Haneke. $40 lab fee.			
AS.061.373	01	H	W	**Intermediate Dramatic Writing: Film** *Buso-garcia, Roberto* This course will explore different approaches towards understanding the fabric of story as it pertains to film. Students will be exposed to key challenges in conceiving, structuring and executing a compelling, memorable and vibrant feature-length screenplay. By studying key examples, we will discuss possible solutions to these issues. In every class, students will share their work in progress and will help each other find approaches or solutions to their specific challenges and issues. We will analyze films with screenplays that effectively play with the form to create lasting, thought-provoking and affecting stories. Through in-class critiques, group discussions and one-on- one sessions, students will apply new tools and approaches to their own work as they undergo the process of designing, breaking down, outlining and writing a full step outline, a beat sheet and the first ten pages of a feature length screenplay. As the semester progresses, in-class analysis and debate on the strengths and challenges posed by the students' work will shape the thematic emphasis of each class.	3.00	13	T 10:30AM-12:50PM
AS.061.378	01			**Automatic Animation** *Yasinsky, Karen* A hand-made, 2-D animation course based on ideas of automatism. Students will create their own animated movie during the semester. Readings will included Dada and Surrealist texts, poetry and theory of poetics including Eisenstein, Breton, Desnos, P. Adams Sitney and Lyn Hejinian. Weekly film screenings will include Robert Breer, Luther Price, etc. Sounds ideas will be discussed and pursued related to the ideas explored throughout the semester. $125 lab fee.	3.00	7	T 1:30-3:50PM; Th 7:30-10:00PM
AS.061.379	01			**Audio for Video** *Dolby, Thomas*	3.00	7	F 3:00-5:20PM

Film and Media Studies

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This 3-credit, 300-level class covers all creative and technical aspects of working in Logic X and ProTools to create professional soundtracks for film, video, commercials and games. It will enable filmmakers, composers and recording arts students to learn how to import and synchronize QuickTime video; 'spot' a clip; create tempo maps and click tracks, and blend the three key elements of film sound ie dialog, music and effects. Classes will be mainly taught with students at individual workstations, though some classes will be held on the soundstage (for miking and live recording techniques) as well as in the recording studio (dubbing and mixing.) Prerequisites: at least one production course (Intro to Film/Video Production, or Recording Arts); plus fluency in either Logic, ProTools, Final Cut or Premier.			
AS.061.391	01	H		**Love and Film** *Ward, Meredith C* In this course, we explore different understandings of "love" and the way that film has dealt with the concept as a medium. We explore a variety of approaches to the question of "love" - from the agapic to the familial to the romantic - through a series of interdisciplinary readings ranging from philosophy to anthropology. We will also equally explore the question of how film has engaged with the question of love as a concept, and what depictions of human affection - from the general to the personal - it has offered us. Screenings are required for this course. $40 Lab fee.	3.00	15	T 1:30-3:50PM; W 7:30-10:00PM
AS.061.397	01	H	W	**French Masculinities** *Mason, Laura* Examines changing ideals of masculinity in French film from 1930 to today, rooting the work of iconic stars and directors in their cultural, political and historical contexts. $40 lab fee.	3.00	15	Th 3:00-5:20PM; M 7:30-10:00PM
AS.061.440	01	H		**Sr Project-Film** *Mann, John* Perm. Req'd. Senior students develop and complete a short 16mm film.	3.00	15	TBA
AS.061.440	02	H		**Sr Project-Film** *Porterfield, Matthew*	3.00	15	TBA
AS.070.132	01	HS		**Invitation to Anthropology** *Han, Clara* The screen that brings you last night's Instagrams and celebrity gossip also flashes glimpses of melting icecaps and burning rubble. These are complex times for human beings, both exhilarating and deeply unsettling. This course introduces anthropology as a way of reflecting on the challenges of contemporary life around the globe, focusing on themes such as faith, war, technology, money and ecology.	3.00	60	TTh 10:30-11:45AM

Film and Media Studies

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.100.499	01	HS	W	**Film and Propaganda in Nazi Germany** *Balz, Hanno* By examining a range of cinematic works—from explicitly ideological pseudo-documentaries to entertainment films—this course will explore the transmission of propaganda into the everyday culture of Nazi Germany.	3.00	15	Th 1:30-3:50PM; W 6:00-9:00PM
AS.300.324	01	H		**Cinema of the 1930s: Communist and Capitalist Fantasies** *Eakin Moss, Anne* Comedy and musical comedy film flourished in the USA during the Great Depression as well as in the USSR during the Stalinist Great Terror. This course will compare films of the era in a variety of genres (musical, epic, Western, drama), examining the intersections between politics and aesthetics as well as the lasting implications of the films themselves in light of theoretical works on film as a medium, ethics and gender.	3.00	12	TTh 10:30-11:45AM
MI.061.200	01			**Moving Image I** *Roche, Jimmy* Through in-class workshops, students will learn each stage of the filmmaking process, from concept development to exhibition. Students will develop basic skills in digital video production and editing. Screenings and readings will demonstrate the diverse ways moving images are used in fine arts and the cinema. Assignments explore the various ways moving images are used for individual expression, entertainment and social & intellectual inquiry.	3.00	2	M 4:00-8:00PM
MI.061.200	02			**Moving Image I** *Staff*	3.00	2	T 4:00-8:00PM
MI.061.200	03			**Moving Image I**	3.00	2	W 9:00AM-1:00PM
MI.061.307	01			**Video Art** *Staff* Artists have been using video since 1965 when Sony released its first portable video camera. Artists have used video as sculpture, produced single-channel works, and integrated it into their performances. This course explores video as a fine arts medium. Students produce a number of works that explore video's rich possibilities.	3.00	2	W 4:00-10:00PM
MI.061.320	01			**Special Effects** *Staff* Personal computers have provided a low-cost method for previously high-cost video post-production. Through invention and with patience one can develop unique visual effects. This class will explore 2-D animation, matting, keying and visual effects utilizing Adobe AfterEffects.	3.00	2	F 9:00AM-3:00PM
MI.061.364	01			**Cinematography and Lighting** *Staff*	3.00	2	M 4:00-10:00PM

Film and Media Studies

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				A comprehensive, hands-on studio course, exploring the technical and theoretical dimensions of motion picture cinematography and lighting, using both 16mm film and mini-DV videotape as creative formats. The course will not only cover the practical aspects of camera and lighting techniques as applied to a variety of genres (documentary, narrative and experimental), but will also screen and analyze a wide range of film and video material as examples of creative cinematography. Students will be expected to complete several shooting exercises for presentation in class.			
MI.061.399	01			**A Sense of Place: Cinematic Explorations** *Moore, Allen* This Moving Image production course will immerse students in the process of creating live action visual material in order to poetically interpret several physical locations in and around Maryland. The class will begin with a survey of a wide range of artistic interpretations of landscape, from early American landscape painters like Thomas Cole, Frederic Church and Albert Bierstadt to natural landscape photographers like Paul Strand, Ansel Adams, Robert Glenn Ketchum and Joel Meyerowitz. Where painting and photography have been bound primarily to the individual, static frame, video and film have the added dynamic of movement, the passage of time and sound. Students will pursue a variety of exercises experimenting with all the dimensions of video and film, as they learn to better see the light in the exterior world around them. Through this course, students will be inspired to find their own personal approach to interpreting natural light in both man-made and natural contemporary exterior landscapes. Students outside the Video and Film Arts Department are welcome in this class.	3.00	2	M 9:00AM-3:00PM
MI.061.453	01			**Alternative Narrative** *Staff* Jean-Luc Godard said he likes "a film to have a beginning, a middle and an end, but not necessarily in that order." This course will look at the ways that contemporary art, including Film has taken Mr. Godard at his word. Students can expect to look at a wide range of Video Art, Installation, Sculpture and Film which tell a story outside more traditional filmic methods. Students will produce projects in a variety of narrative forms. Students working outside of Film and Video are encouraged to take the course.	3.00	2	Th 9:00AM-3:00PM

Foreign Literature and Culture

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.211.319	01	H		**¡Salsa! The Afro-Antillean song** *Ramos, Maria Del Rosario* ¡Salsa! The Afro-Antillean song surveys Caribbean music in an international Spanish-speaking context. As a language course, it reviews grammar and instils vocabulary acquisition through the close analysis of the biggest hits of salsa from the past one hundred years. On completion of this course the student will have developed the ability to read and critically discuss music and its history in the Spanish-speaking Caribbean and will have examined cultural roots, market dominance, and media crossovers in the musical universe of the Spanish-speaking archipelago of the Antilles. In completing the course's final project students will apply, synthesize, and reflect on what has been covered in the class by creating a professional dossier individualized to their own personal musical interests. Concepts learned in this course will be directly applicable to careers linked to intercultural and international relations while also apply to multiple careers in media, music industry and dance. May not be taken satisfactory/unsatisfactory. Not open to native speakers of Spanish. No new enrollments permitted after the third class session.	3.00	10	MW 12:00-1:15PM
AS.211.394	01	H	W	**Brazilian Culture & Civilization** *De Azeredo Cerqueira, Flavia Christina* This course is intended as an introduction to the culture and civilization of Brazil. It is designed to provide students with basic information about Brazilian history, art, literature, popular culture, theater, cinema, and music. The course will focus on how indigenous Asian, African, and European cultural influences have interacted to create the new and unique civilization that is Brazil today. The course is taught in English, but ONE extra credit will be given to students who wish to do the course work in Portuguese. Those wishing to do the course work in English for 3 credits should register for section 01. Those wishing to earn 4 credits by doing the course work in Portuguese should register for section 02. The sections will be taught simultaneously. Section 01: 3 credits Section 02: 4 credits (instructor's permission required)	3.00	26	WF 3:00-4:15PM
AS.211.394	02	H	W	**Brazilian Culture & Civilization**	4.00	4	WF 3:00-4:15PM
AS.212.429	01	H		**Thesis Prep** *Anderson, Wilda*	1.00	30	T 6:30-7:30PM

Foreign Literature and Culture

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course will meet three times during the Fall semester to enable all French majors to prepare their thesis subject, thesis bibliography, and abstract prior to the writing of the Senior Thesis (AS.212.430) in the Spring semester of their senior year. This course is required of all French majors and must be taken during the Fall semester of their senior year. Schedule TBA upon consultation with the class list, as there are only three group meetings. The rest of the meetings are in individual appointments with the DUS or another chosen French professor. Prerequisites: AS.212.333-334 and either prior enrollment or concurrent enrollment in AS.210.417 Eloquent French			
AS.212.430	01	H	W	**Senior Seminar** *Anderson, Wilda* An in-depth and closely supervised initiation to research and thinking, oral and written expression, which leads to the composition of a senior thesis in French. Recommended Course Background: AS.212.429	3.00	30	TBA
AS.215.231	01	H		**Introduction to Literature in Spanish** *Staff* The main objective of this course is to examine and discuss specific authors and topics in literature in Spanish from the Middle Ages to the 20th century. The course is designed to cover a selection of Hispanic texts from Spain and Latin America. Literary genres to be studied will include narratives, poetry, and drama. The bulk of each class session will be dedicated to the discussion of the assigned readings. This course is taught in Spanish. This course is required for the major in Spanish.	3.00	17	TTh 3:00-4:15PM
AS.215.231	02	H		**Introduction to Literature in Spanish**	3.00	17	MW 12:00-1:15PM

Freshman Seminars

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.020.104	01	N		**Freshman Seminar: From Genes to DNA and Back** *Moudrianakis, E N* Students must obtain permission from Dr. Moudrianakis to register. A course consisting of introductory lectures followed by student presentations in the form of seminars. The issues analyzed will be: How did we arrive at the concept of the "gene"? Early experiments that gave substance to this concept. How did we arrive at the "one gene, one enzyme" dogma? What is the chemical nature of the gene? Is DNA enough for regulated gene expression? Is it "all in our genes"? What is genetic plasticity and epigenetics? What about genomics and proteomics? Freshmen Only.	1.50	22	W 3:00-4:20PM
AS.020.106	01	N		**Freshman Seminar: Tuberculosis** *Horner, Robert D* Mycobacterium tuberculosis is an extremely successful intracellular bacterial pathogen able to manipulate phagocytic cells and its own metabolism to survive within a host. The molecular mechanisms of this survival and resistance to antibiotics will be studied. Freshmen only.	1.00	12	T 3:00-3:50PM
AS.020.111	01	N		**Freshman Seminar: The 'Nobels" in Medicine and Chemistry** *Brand, Ludwig* Key events in our understanding of the life sciences will be traced with the aid of Nobel awards.	2.00	14	W 2:30-4:30PM
AS.060.123	01	H	W	**Freshman Seminar: Prophecy After Science** *Miller, William J* This course explores the history of prophecy from ancient Greek and Judaic sources to current intimations of technological singularity and ecological doom. We will focus on the influence of prophecy on the rise of science (and vice-versa). Readings will include texts by William Shakespeare, Francis Bacon, Mary Shelley, and Philip K. Dick.	3.00	18	M 4:00-7:00PM

Freshman Seminars

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.060.149	01	H	W	**Freshman Seminar: Work and Worth in American Literature** *Tempesta, Erica N* "No man needs sympathy because he has to work, because he has a burden to carry," Theodore Roosevelt proclaimed in his "Square Deal" speech of 1903. "Far and away the best prize that life offers is the chance to work hard at work worth doing." Hard work is at the heart of the American dream, but with unemployment rates at historic highs and the global economy proceeding at a rapid clip, Roosevelt's words resurrect old questions in a new world: What work is worth doing? Who gets the chance to do it? And what happens when people find themselves doing work that isn't worth doing? In this course we will consider the meaning and consequences of work, from the heroic to the tragic, through a selection of American literature from the last days of slavery to the present. This course will consider work in all its forms, from the plantation to the boardroom, to help us develop the tools to interpret the varieties and values of labor in modern society.	3.00	18	T 4:00-7:00PM
AS.060.150	01	H	W	**Freshman Seminar: Milton's Paradise Lost: Contexts and Conversations** *Buckham, Rebecca Lynn*	3.00	15	T 1:30-4:30PM

Freshman Seminars

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course undertakes an in-depth study of what is arguably the greatest long poem in the English tradition, John Milton's Paradise Lost. The poem, first published in 1667, is Milton's take on the Judeo-Christian story of the Fall found in the Bible. Paradise Lost does not merely re-tell the biblical account, however. By expanding three chapters of Genesis into a twelve-book epic meant to rival its classical forbears—most importantly Virgil's Aeneid—Milton's poem makes room for new readings of an old story. This course encourages students to find their own new readings of the Genesis story by considering the historical contexts of the poem's production as well as the conversations Paradise Lost continues to provoke to this day. In addition to reading and discussing the poem, students will become familiar with ongoing sites of critical debate, such as the representations of Satan and of Eve. To help negotiate these conversations, students will complete a guided research project that makes use of the materials available through the library's Department of Special Collections, housed in Brody Learning Commons. In addition to early editions of Paradise Lost, this treasure trove of rare books offers a wide variety of materials which may deepen an encounter with Milton's poem, from biblical illustrations to gardening manuals to marriage advice. Students will use the collection to ask questions such as: "How does Milton's representation of Satan differ from earlier traditions of imagining the devil?" and "Does Milton's approach to Eve reinforce or revise conventional ideas about women?" Sufficient class time will be dedicated to introducing students to Special Collections so as to facilitate their individual work over the course of the semester.			
AS.070.113	01	HS		**Freshman Seminar: Water and Collective Life** *Pandian, Anand* This course explores the place of water in human collective life, religious practice, cultural identity, and political aspiration. Students will learn basic ethnographic methodologies and writing strategies through both seminar discussions and class fieldtrips to water sources and sites in and around Baltimore. Some seminar discussions and fieldtrips will be carried out jointly with the freshman seminar in Political Science 090.199 ("Politics of Water")	3.00	18	W 1:30-3:50PM
AS.100.220	01	HS		**Freshman Seminar: Politics, Information, and the State in Early Modern China and Japan** *Mokros, Emily Carr* This introductory seminar examines culture and politics in early modern East Asia (ca. 1500-1900) by looking at changing modes of communication and attitudes about state control of information and ideology. Freshmen Only.	3.00	18	TTh 3:00-4:15PM
AS.130.109	01	H		**Freshman Seminar: Ancient Homes and Houses** *Swerida, Jennifer Lee*	3.00	18	TTh 3:00-4:15PM

Freshman Seminars

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				What will your bedroom tell future archaeologists? What can ancient houses tell archaeologists of past societies? This course explores methods/theories of Household Archaeology in the Near East and beyond.			
AS.130.116	01	H		**Freshman Seminar: Ritual and Magic in Ancient Egypt** *Fraser, Meredith Anne* This course will serve to introduce students to the study of religion, ritual and magic through the lens of a specific culture: ancient Egypt. Throughout the course students will be introduced to ancient Egyptian culture and will interact with Egyptian texts and artifacts, including those found in the collections of the Johns Hopkins Archaeological Museum, in order to illustrate key concepts.	3.00	15	MW 1:30-2:45PM
AS.130.122	01	H		**Freshman Seminar: The Archaeology of Death, Burial, and the Human Skeleton** *Brinker, Christopher Daniel* This course will introduce students to the archaeological investigation of past human populations through their mortuary and physical human remains. To this end, major theories and methodologies will be introduced, along with pertinent case studies for discussion.	3.00	18	MW 3:00-4:15PM
AS.140.115	01	HS	W	**Freshman Seminar: Artificial Humans** *Frumer, Yulia* Looking at the history of attempts to augment or construct human beings, the course will explore the role of technology in molding human existence and shaping the defination of humanity.	3.00	14	TTh 10:30-11:45AM
AS.140.163	01	HS		**Jungle Doctors: Medical Missions in Africa from David Livingston to Paul Farmer** *Cummiskey, Julia Ross* Freshman seminar using a variety of primary and secondary sources, students will explore the motivations and activities of expatriates practicing medicine in Africa from the 19th century to the present.	3.00	18	TTh 9:00-10:15AM
AS.140.165	01	HS	W	**Enlightenment Science Through Brilliant Books** *Richard, Jean-Olivier* Course explores the brilliant scientific and philosophic achievements of the 18th-century intellectual movement known as the Enlightenment through the reading of a selection of key authors (Voltaire, Franklin, the great Encyclopedists...). Includes introduction to research method and writing in the humanities.	3.00	15	MW 3:00-4:15PM
AS.150.141	01	H		**Freshman Seminar: African Philosophy** *Koll, Sandy Gillian* This course surveys some distinctively Sub-Saharan African contributions to major areas of philosophical inquiry, including metaphysics, epistemology, ethics and political philosophy.	3.00	18	T 3:00-5:30PM
AS.150.194	01	H		**Freshman Seminar: Skepticism Ancient and Modern** *Williams, Michael*	3.00	15	MW 1:30-2:45PM

Freshman Seminars

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Can we gain knowledge of reality, or is everything a matter of opinion? Does it matter? Why do we want (or need) knowledge anyway? Questions like this have been the stock in trade of philosophical skeptics throughout the entire history of our Western philosophical tradition. This class will involve close readings of some classic works on the topic of skepticism with a view to understanding some of the main arguments for (and against) skepticism: how they work and how they may have changed over time. Readings include selections from Sextus Empiricus, Descartes, Hume and Wittgenstein.			
AS.200.163	01	N	W	**Gamechangers: Conceptual Breakthroughs in Neuroscience** *Mysore, Shreesh Pranesh* Freshman Seminar; This introductory class will highlight some of the key findings in neuroscience over the past century and a half that have revolutionized our understanding of how the brain works. The goal is to convey both the essence of, and the excitement surrounding, neuroscience breakthroughs that caused paradigm-shifts. We will also look at recent neuroscience-related headlines in popular media and unpack them from a scientific perspective. Topics covered will include “Is the brain just one big lump of tissue?”, “Telephones in the brain?”, “The frog with upside-down vision”, “Brains vs. hard-drives”, “Monkey see=monkey do neurons”, Epigenetics, “Changing the brain’s wiring diagram”, “Do ants have GPS?”, The science behind the movie ‘Memento’, “Implanting false memories into brains”, “My brain sees you, but I don’t”, etc. For each big question, we will first examine the thinking that previously existed, and then explore the shift in thinking.	3.00	20	TTh 1:30-2:45PM
AS.214.125	01	H		**Freshman Seminar: Dangerous Liasons: Words and Music Through the Ages** *Refini, Eugenio* The seminar explores challenging questions with which men have been dealing for centuries: how do music and words interact? Do words have a priority on music or vice versa? Does music need words to be understood and interpreted? Are words filled with meaning by music? By addressing literary and philosophical writings, as well as musical examples from different periods and contexts, students will be led through a critical reconsideration of the topic. A variety of materials will be discussed, including genres as different as medieval songs, early modern madrigals, Romantic Lieder, opera, the American musical, and contemporary pop music. No musical skills required; strong doses of curiosity most welcome.	3.00	15	W 1:30-4:00PM
AS.230.109	01	S	W	**Freshman Seminar: Hot Topics in Education** *Burdick-Will, Julia* This course examines current school reform initiatives and the controversies surrounding them through a sociological lens. Freshmen Only	3.00	15	TTh 3:00-4:15PM

Freshman Seminars

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.300.290	01	H	W	**Freshman Seminar: Shakespeare and his "Goddess": real and imaginary lovers in the poetry and drama of early modern Europe** *Patton, Elizabeth* Shakespeare's description of his lover's eyes as 'nothing like the sun' is both an homage and a sendup of a 300-year-old poetic convention reaching back to the days of Petrarch and the early humanist poets. Incorporating music and drama, we will examine that sonnet tradition from the perspective of Shakespeare and his contemporaries, tracing both the historical roots of the Shakespearian sonnet form its influence on the music of the present day, and finishing the semester with Shakespeare's The Taming of the Shrew, a play that further illustrates and problematizes Shakespeare's 'goddess' reference. Readings will include poetic dialogues between male and female poets, such as those by the early Italian Petrarchans Vittoria Colonna, Michelangelo, Veronica Gambara, and Gaspara Stampa; their French counterparts, Maurice Scéve, Louis Labé, Joachim du Bellay and Pernette du Guillet; and later reflections on the sonnet by Shakespeare and his English contemporaries: Sir Philip Sidney; Sidney's niece, Mary Herbert, Lady Wroth; John Donne; Robert Southwell; and Katherine Phillips. All continental works will be read in translation.	3.00	15	TTh 3:00-4:15PM
AS.360.133	01	H	W	**Freshman Seminar: Great Books at Hopkins** *Patton, Elizabeth* Students attend lectures by an interdepartmental group of Hopkins faculty and meet for discussion in smaller seminar groups; each of these seminars is led by one of the course faculty. In lectures, panels, multimedia presentations, and curatorial sessions among the University's rare book holdings, we will explore some of the greatest works of the literary and philosophical traditions in Europe and the Americas. Close reading and intensive writing instruction are hallmarks of this course; authors for Fall 2014 include Homer, Plato, Boccaccio, Shakespeare, Madame de Lafayette, Flaubert, Dostoevsky, Chekhov, and Joyce.	3.00	15	TTh 10:30-11:45AM
AS.360.133	02	H	W	**Freshman Seminar: Great Books at Hopkins** *Achinstein, Sharon*	3.00	15	TTh 10:30-11:45AM
AS.360.133	03	H	W	**Freshman Seminar: Great Books at Hopkins** *Bett, Richard*	3.00	15	TTh 10:30-11:45AM
AS.360.133	04	H	W	**Freshman Seminar:Great Books at Hopkins** *Russo, Elena*	3.00	15	TTh 10:30-11:45AM
AS.360.133	05	H	W	**Freshman Seminar: Great Books at Hopkins** *Stephens, Walter E*	3.00	15	TTh 10:30-11:45AM
AS.360.147	01	HS	W	**Freshmen Seminar: Adam Smith and Karl Marx** *Jelavich, Peter* This freshmen seminar examines the ideas of Smith, the greatest proponent of the free market, and Marx, his most radical critic. Freshmen only.	3.00	20	W 1:30-3:50PM

Freshman Seminars

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.389.107	01	H		**Freshman Seminar: Technical Research on Archaeological Objects in the Johns Hopkins Archaeological Museum** *Balachandran, Sanchita* Freshmen will learn and apply analytical methods used in the technical study of archaeological objects by examining and researching ancient examples in the Johns Hopkins Archaeological Museum. Freshman Only.	3.00	14	M 1:30-3:50PM

German & Romance Languages & Literatures

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.145.101	01			**Death and Dying in Art, Literature, and Philosophy:Introduction to Medical Humanities** *Lisi, Leonardo* This team-taught course offers an introduction to the new concentration in medicine, science, and humanities by approaching the topic of death and dying from historical, anthropological, philosophical, theological, literary and art historical perspectives.	3.00	19	T 10:30-11:45AM; Th 10:30-11:45AM
AS.145.101	02			**Death and Dying in Art, Literature, and Philosophy:Introduction to Medical Humanities** *Strowick, Elisabeth*	3.00	19	T 10:30-11:45AM; Th 10:30-11:45AM
AS.145.101	03			**Death and Dying in Art, Literature, and Philosophy:Introduction to Medical Humanities** *Merback, Mitchell*	3.00	19	T 10:30-11:45AM; Th 10:30-11:45AM
AS.210.101	01			**French Elements I** *Staff* Provides a multi-faceted approach to teaching language and culture to the novice French student. The first semester emphasizes listening and speaking, while laying the foundation in grammar structures, reading, and writing. This course is designed for true beginners: Students with any previous background must take the placement test (http://www.advising.jhu.edu/placement_french.php) and receive below 30 (or below 200 on Webcape). Must complete both semesters successfully in order to receive credit. May not be taken on a Satisfactory/Unsatisfactory basis.	4.00	17	MWF 9:00-9:50AM; T 4:30-5:45PM
AS.210.101	02			**French Elements I**	4.00	17	MWF 10:00-10:50AM; T 4:30-5:45PM
AS.210.101	03			**French Elements I**	4.00	17	MWF 11:00-11:50AM; T 4:30-5:45PM
AS.210.101	04			**French Elements I**	4.00	17	MWF 11:00-11:50AM; T 4:30-5:45PM
AS.210.103	01			**Learner Managed French Elements I** *Cook-Gailloud, Kristin* This beginner course is specifically designed for students who have had some exposure to French. They must take the mandatory placement test: http://www.advising.jhu.edu/placement_french.php, and receive between 30 and 49. They will cover the first semester of French Elements at a pace suited for "false beginners" with major online components to supplement class instruction. Must complete the year with 210.102 or 210.104 to obtain credit. May not be taken on a Satisfactory/Unsatisfactory basis.	3.00	12	TTh 3:00-4:15PM
AS.210.111	01			**Spanish Elements I** *Staff*	4.00	17	MWF 9:00-9:50AM

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Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This is an introductory Spanish language course. On completion of this course, the students will have acquired the basic communication and grammatical skills necessary for speaking, writing, listening and reading in Spanish. Students will demonstrate these skills through their performance in class, and by completing several online assignments, in addition to three comprehensive exams which focus on the following thematic topics: Greetings, University Life, Family and Leisure. Students will also be introduced to the culture, history and geography of various Spanish and Latin American countries. The content covered in Spanish Elements 1 is the foundation for all consecutive Spanish courses. There are no prerequisites for this course. A placement exam is often required to ensure the appropriate level. Credit for Elements I is received only after completing Spanish Elements II with a passing grade. May not be taken satisfactory/unsatisfactory. No new enrollments permitted after September 13th.			
AS.210.111	02			**Spanish Elements I**	4.00	17	MWF 10:00-10:50AM
AS.210.111	03			**Spanish Elements I**	4.00	17	MWF 11:00-11:50AM
AS.210.111	04			**Spanish Elements I**	4.00	17	MWF 12:00-12:50PM
AS.210.112	01			**Spanish Elements II**	4.00	17	MWF 9:00-9:50AM
				Staff			
				This introductory Spanish language course is a continuation of the content covered in Spanish Elements I. On completion of this course, the students will have further developed the communication and grammatical skills necessary for speaking, writing, listening and reading in Spanish. Students will demonstrate these skills through their performance in class, and by completing several online assignments, in addition to three comprehensive exams which focus on the following thematic topics: Food, Sports, Shopping, Travel, and Health. Students will also be introduced to the culture, history and geography of various Spanish and Latin American countries. The content covered in Spanish Elements II prepares the students for Intermediate Spanish. May not be taken satisfactory/unsatisfactory. No new enrollments permitted after September 13th.			
AS.210.112	02			**Spanish Elements II**	4.00	17	MWF 10:00-10:50AM
AS.210.112	03			**Spanish Elements II**	4.00	17	MWF 11:00-11:50AM
AS.210.112	04			**Spanish Elements II**	4.00	17	MWF 12:00-12:50PM

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Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.210.151	01			**Italian Elements I** *Staff* This is a four-credit course, and Italian Elements II (AS.210.152) must be completed in the Spring 2014 to receive credit. The aim of the course is to provide students with basic listening, reading, writing, speaking and interactional skills in the language. All classes are conducted in Italian; oral participation is strongly encouraged from the beginning. Students wishing to retain credits for Italian Elements I must complete Italian Elements II with a passing grade. No Satisfactory/Unsatisfactory option.	4.00	17	MWF 10:00-10:50AM
AS.210.151	02			**Italian Elements I**	4.00	17	MWF 11:00-11:50AM
AS.210.151	03			**Italian Elements I**	4.00	17	MWF 12:00-12:50PM
AS.210.161	01			**German Elements I** *Staff* Four skills introduction to German language and culture. Develops proficiency in speaking, writing, reading, and listening skills through the use of basic texts, multi-media, and communicative language activities.Online tools required. Both semesters must be completed with passing grades to receive credit. May not be taken on a Satisfactory/Unsatisfactory basis. Tuesday section is a mandatory hour; choose your section based on the MWF time. Conflicts with Tuesday hour can be resolved after start of semester. Language Program Director: Deborah Mifflin. Students wishing to retain credits for German Elements I must complete German Elements II with a passing grade.	4.00	17	MWF 9:00-9:50AM; T 9:00-9:50AM
AS.210.161	02			**German Elements I**	4.00	17	T 10:30-11:20AM; MWF 10:00-10:50AM
AS.210.161	03			**German Elements I**	4.00	17	MWF 11:00-11:50AM; T 12:00-12:50PM
AS.210.161	04			**German Elements I**	4.00	17	MWF 12:00-12:50PM; T 12:00-12:50PM
AS.210.163	01			**Elementary Yiddish I** *Caplan, Beatrice* Year-long course. Includes the four language skills, reading,writing, listening, and speaking, and introduces students to Yiddish culture through text, song, and film. Emphasis is placed both on the acquisition of Yiddish as a tool for the study of Yiddish literature and Ashkenazic history and culture, and on the active use of the language in oral and written communication. Both semesters must be taken with a passing grade to receive credit. Students wishing to retain credits for Yiddish Elements I must complete Yiddish Elements II with a passing grade.	3.00	12	TTh 9:00-10:15AM
AS.210.171	01	H		**Italian Elements I for Advanced Spanish Speakers** *Zannirato, Alessandro*	4.00	17	MW 12:00-1:15PM

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Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Course draws on the many similarities between Spanish and Italian to help students develop basic listening, reading, writing, speaking, and interactional skills in Italian in an accelerated fashion. The content of the course is highly communicative, and students are constantly presented with real-life, task-based activities. Course is taught in Spanish and Italian. Students completing both semesters with a grade of A- or higher will be able to place into Advanced Italian I (AS.210.351)			
AS.210.177	01			**Portuguese Elements** *De Azeredo Cerqueira, Flavia Christina* This one-year course introduces students to the basic skills in reading, writing, and speaking the language. Emphasis is placed on oral communication with extensive training in written and listening skills. Class participation is encouraged from the very beginning. All classes are conducted in Portuguese. Extensive language lab is required. Students must complete both semesters with passing grades to receive credit. May not be taken on a Satisfactory/Unsatisfactory basis. No previous knowledge of Portuguese is required. Students wishing to retain credits for Portuguese Elements I must complete Portuguese Elements II with a passing grade.	4.00	25	MWF 11:00-11:50AM
AS.210.201	01	H		**Intermediate French I** *Staff* This course develops skills in speaking, listening comprehension, reading, and writing. Systematic review of language structures with strong focus on oral communication and acquisition of vocabulary; extensive practice in writing and speaking; readings and films from French-speaking countries. Recommended Course Background: AS.210.102 or AS.210.104 or score between 65 and 89 on Placement test I.	3.00	17	MWF 9:00-9:50AM
AS.210.201	02	H		**Intermediate French I**	3.00	17	MWF 10:00-10:50AM
AS.210.201	03	H		**Intermediate French I**	3.00	17	MWF 11:00-11:50AM
AS.210.201	04	H		**Intermediate French I**	3.00	17	MWF 11:00-11:50AM
AS.210.201	05	H		**Intermediate French I**	3.00	17	MWF 12:00-12:50PM
AS.210.201	06	H		**Intermediate French I**	3.00	17	MWF 12:00-12:50PM
AS.210.211	01	H		**Intermediate Spanish I** *Staff*	3.00	17	MWF 9:00-9:50AM

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Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Intermediate Spanish I is a comprehensive study of Spanish designed for students who have attained an advanced elementary level in the language. The course is organized around a thematic approach to topics relevant to contemporary Hispanic culture. Students will practice the four language skills in the classroom through guided grammatical and creative conversational activities and through the completion of three comprehensive exams. Outside of class, students will complete extensive online assignments and write three major compositions (as part of the three exams). In addition, students will broaden their knowledge of Hispanic culture by viewing a Spanish-language film and by reading several literary selections. Successful completion of Intermediate Spanish I will prepare students for the next level of Spanish (Intermediate Spanish II). May not be taken satisfactory/unsatisfactory. No new enrollments permitted after September 13th .			
AS.210.211	02	H		**Intermediate Spanish I**	3.00	17	MWF 10:00-10:50AM
AS.210.211	03	H		**Intermediate Spanish I**	3.00	17	MWF 10:00-10:50AM
AS.210.211	04	H		**Intermediate Spanish I**	3.00	17	MWF 11:00-11:50AM
AS.210.211	05	H		**Intermediate Spanish I**	3.00	17	MWF 12:00-12:50PM
AS.210.212	01	H		**Intermediate Spanish II** *Staff* Intermediate Spanish II is a comprehensive study of Spanish designed for students who have attained a mid-intermediate level in the language or who have completed Spanish 212. The course is organized around a thematic approach to topics relevant to contemporary Hispanic culture. Students will practice the four language skills in the classroom through guided grammatical and creative conversational activities and through the completion of three comprehensive exams. Outside of class, students will complete extensive online assignments and write three major compositions (as part of the three exams). In addition, students will broaden their knowledge of Hispanic culture by viewing a Spanish-language film and by reading several literary selections. Successful completion of Intermediate Spanish II will prepare students for the next level of Spanish (Advanced Spanish I). May not be taken satisfactory/unsatisfactory. No new enrollments permitted after September 13th	3.00	17	MWF 9:00-9:50AM
AS.210.212	02	H		**Intermediate Spanish II**	3.00	17	MWF 10:00-10:50AM
AS.210.212	03	H		**Intermediate Spanish II**	3.00	17	MWF 11:00-11:50AM
AS.210.212	04	H		**Intermediate Spanish II**	3.00	17	MWF 11:00-11:50AM
AS.210.212	05	H		**Intermediate Spanish II**	3.00	17	MWF 12:00-12:50PM
AS.210.251	01	H		**Intermediate Italian I** *Staff*	3.00	17	MWF 11:00-11:50AM

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Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Course continues building on the four essential skills for communication presented in Italian Elements courses. Improvement of reading and composition skills through the use of contemporary texts, reinforcement of the student's knowledge of the language through weekly oral and written presentations on predetermined subjects. Class participation is essential. All classes are conducted in Italian. Course adopts a continuous assessment system (no mid-term and no final). No Satisfactory/Unsatisfactory option. Language Program Director: Alessandro Zannirato			
AS.210.251	02	H		**Intermediate Italian I**	3.00	17	MWF 12:00-12:50PM
AS.210.261	01	H		**Intermediate German I** *Staff* Taught in German. This course continues the same four-skills approach (speaking, writing, reading, and listening) from the first-year sequence, introducing and practicing more advanced topics and structures. Expansion and extension through topical readings and discussion and multi-media materials. Online tools required. Language Program Director: Deborah Mifflin	3.00	17	MWF 9:00-9:50AM
AS.210.261	02	H		**Intermediate German I**	3.00	17	MWF 10:00-10:50AM
AS.210.261	03	H		**Intermediate German I**	3.00	17	MWF 11:00-11:50AM
AS.210.261	04	H		**Intermediate German I**	3.00	17	MWF 12:00-12:50PM
AS.210.277	01	H		**Intermediate/ Advanced Portuguese** *De Azeredo Cerqueira, Flavia Christina* More advanced training in the skills of the language with emphasis on vocabulary building, ease and fluency in the language through the use of a multifaceted approach. Materials used immerse students in the cultures of Brazil, Portugal, and Portuguese-speaking Africa, and reflect the mix of cultures at work in the contemporary Lusophone world. All classes are conducted in Portuguese. Extensive language lab is required. May not be taken on a Satisfactory/Unsatisfactory basis.	3.00	15	MWF 10:00-10:50AM
AS.210.288	01	H		**Portuguese: Conversation through Film & Music** *De Azeredo Cerqueira, Flavia Christina* This course is designed for highly motivated undergraduate and graduate students who want to SPEAK Portuguese. Conversation sessions provide intensive work on communication skills through discussion on issues raised in films, news media & music. Grammar will be reviewed as needed outside of class with tutors or TA, freeing class time for more communicative activities. May not be taken on a Satisfactory / Unsatisfactory basis. Recommended Course Background: one semester of Portuguese (AS.210.177), or Placement test.	3.00	12	WF 1:30-2:45PM
AS.210.301	01	H	W	**Advanced Writing and Speaking in French** *Staff*	3.00	15	MWF 9:00-9:50AM

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Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This very interactive third-year language course proposes, in the shape of animated class discussions, to 1) read fictional and non fictional texts through the French explication de textes approach 2) review and develop grammar and conjugation skills and 3) learn an array of new vocabulary as well as idiomatic expressions used in everyday speech. Focus will be placed on improving language skills through an individualized review of grammar and vocabulary. Language Program Director: Kristin Cook-Gailloud			
AS.210.301	02	H	W	**Advanced Writing and Speaking in French**	3.00	18	MWF 10:00-10:50AM
AS.210.301	03	H	W	**Advanced Writing and Speaking in French**	3.00	15	MWF 10:00-10:50AM
AS.210.301	04	H	W	**Advanced Writing and Speaking in French**	3.00	15	MWF 11:00-11:50AM
AS.210.301	05	H	W	**Advanced Writing and Speaking in French**	3.00	15	MWF 11:00-11:50AM
AS.210.301	06	H	W	**Advanced Writing and Speaking in French**	3.00	15	TTh 10:30-11:45AM
AS.210.301	07	H	W	**Advanced Writing and Speaking in French**	3.00	15	TTh 12:00-1:15PM
AS.210.309	01	H		**The Sounds of French** *Anderson, Bruce* This course introduces students to the sound system of French: its development over centuries, its standardized Parisian form versus regional and international dialects and accents, and the popularity of "word games" (abbreviations, acronyms, and verlan). The course will include extensive practice in perceiving, articulating, and transcribing sounds, words, and intonation groups through viewing film clips, listening to songs, and completing in-class lab assignments. Recorded speech samples obtained at the beginning, middle, and end of the semester will allow students to track their progress in moving toward more native pronunciation and intonation. Recommended Course Background: AS.340.101-AS.340.102 or equivalent; AS.210.301 (may be taken concurrently).	3.00	8	TTh 9:00-10:15AM
AS.210.311	01	H		**Advanced Spanish I** *Staff* This course is a comprehensive study of the Spanish language focused on the continuing development of students' communicative abilities and their knowledge of Hispanic cultures. Students will expand their use of basic structures of Spanish with a special emphasis on more difficult grammatical and vocabulary aspects, and further improve both their oral and written skills. Students will sharper their critical thinking skills and listening abilities utilizing movies and written texts. This course combines an extensive use of an online component with class participation and three exams. Upon successful completion of this course, students will have acquired extended complex language tools that facilitate proficiency in Spanish and its use in various professional contexts. May not be taken satisfactory/unsatisfactory. No new enrollments permitted after September 13th.	3.00	15	MWF 9:00-9:50AM
AS.210.311	02	H		**Advanced Spanish I**	3.00	15	MWF 10:00-10:50AM

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Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.210.311	03	H		**Advanced Spanish I**	3.00	15	MWF 11:00-11:50AM
AS.210.311	04	H		**Advanced Spanish I**	3.00	15	MWF 12:00-12:50PM
AS.210.312	01	H		**Advanced Spanish II** *Staff* This course is thorough review of the Spanish language focused on the development of students' communicative abilities and their knowledge of Hispanic cultures. Students will both expand their knowledge of the basic structures of Spanish, with special emphasis on more difficult grammatical and vocabulary aspects, and further improve on oral and written skills. Students will increase their critical thinking skills and listening abilities utilizing movies and written texts. This course combines an extensive use of an online component, class participation and three exams. Upon successful completion of this course, students will have acquired more complex language tools to become proficient in Spanish and its use in various professional contexts. May not be taken satisfactory/unsatisfactory. No new enrollments permitted after September 13th.	3.00	15	MWF 9:00-9:50AM
AS.210.312	02	H		**Advanced Spanish II**	3.00	15	MWF 10:00-10:50AM
AS.210.312	03	H		**Advanced Spanish II**	3.00	15	MWF 11:00-11:50AM
AS.210.312	04	H		**Advanced Spanish II**	3.00	15	MWF 12:00-12:50PM
AS.210.313	01	H		**Medical Spanish** *Staff* Medical Spanish is a comprehensive examination of vocabulary and grammar for students who either work or intend to work in medicine and health-related fields in Spanish-speaking environments. The student will be able to participate in conversations on topics such as contrasting health systems, body structures, disorders and conditions, consulting your doctor, physical and mental health, first-aid, hospitalization and surgery on completion of this course. In completing the course's final project students will apply, synthesize, and reflect on what has been learned in the class by creating a professional dossier individualized to their professional interests. May not be taken satisfactory/unsatisfactory. Not open to native speakers of Spanish. No new enrollments permitted after September 13th.	3.00	15	TTh 10:30-11:45AM
AS.210.313	02	H		**Medical Spanish**	3.00	15	TTh 12:00-1:15PM
AS.210.314	01	H		**Spanish for International Commerce** *Ramos, Maria Del Rosario*	3.00	12	TTh 10:30-11:45AM

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Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Students will increase their vocabulary and practice grammar structures closely related to trade and business practices in the public and private sectors. All language skills are equally emphasized. Highly recommended to students majoring in Business and International Relations. There will be an intensive online component. No Satisfactory/Unsatisfactory option.Students will increase their vocabulary and practice grammar structures closely related to trade and business practices in the public and private sectors. All language skills are equally emphasized. Highly recommended to students majoring in Business and International Relations. There will be an intensive online component. No Satisfactory/Unsatisfactory option. Language Program Director: Loreto Sanchez-Serrano			
AS.210.316	01	H		**Conversational Spanish** *Staff* Conversational Spanish surveys high-interest themes, discusses short films by contemporary Hispanic filmmakers and offers a thorough review of grammar. The student will be able to participate in conversations on topics such as personality traits, social media, political power, art and lifestyles on completion of this course. Conversational skills mastered during the course apply to all careers interconnected by Spanish. May not be taken satisfactory/unsatisfactory. Not open to native speakers of Spanish. No new enrollments permitted after September 13th.	3.00	15	TTh 10:30-11:45AM
AS.210.316	02	H		**Conversational Spanish**	3.00	15	TTh 12:00-1:15PM
AS.210.317	01	H	W	**Adv Spanish Composition** *Sanchez, Loreto* This third-year course is a hands-on and process-oriented introduction to discussion and compositional analysis. On completion of this course, students will have improved their Spanish writing skills in various types of compositions they might be expected to write in academic settings and in real-life formats such as film reviews, letters to the editor, cover letters, etc. The course also focuses on refinement of grammar and vocabulary use. May not be taken satisfactory/unsatisfactory. Not open to native speakers of Spanish. No new enrollments permitted after September 13th.	3.00	15	MW 12:00-1:15PM
AS.210.351	01	H	W	**Advanced Italian I** *Staff* Course presents a systematic introduction to a variety of complex cultural and historical topics related to present-day Italy, emphasizing intercultural comparisons and interdisciplinarity, and encouraging a personal exploration of such topics. Course adopts a continuous assessment system (no mid-term and no final), and is conducted entirely in Italian. Year course; must complete both semesters for credit. No Satisfactory/Unsatisfactory option. Language Program Director: Alessandro Zannirato	3.00	15	MWF 11:00-11:50AM

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Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.210.351	02	H	W	**Advanced Italian I**	3.00	15	MWF 12:00-12:50PM
AS.210.361	01	H	W	**Advanced German I: Cultural Topics of the Modern German-speaking World** *Staff* Taught in German. Topically, this course focuses on defining moments in cultural history in German speaking countries in the 2nd half of the 20th century. Films, texts and other media provide a basis for discussing events in post-war Germany from 1945 to 1989. A review and expansion of advanced grammatical concepts and vocabulary underlies the course. Focus on improving expression in writing and speaking. Language Program Director: Deborah Mifflin	3.00	15	MWF 10:00-10:50AM
AS.210.361	02	H	W	**Advanced German I: Cultural Topics of the Modern German-speaking World**	3.00	15	MWF 11:00-11:50AM
AS.210.361	03	H	W	**Advanced German I: Cultural Topics of the Modern German-speaking World**	3.00	15	MW 12:00-1:15PM
AS.210.366	01	H		**Readings in Yiddish Literature** *Caplan, Beatrice* This two semester course will offer students an overview of modern Yiddish literature from the Jewish Enlightenment to the present. Since all readings, discussions and written work will be in Yiddish, students will also have ample opportunity to continue developing their language skills. Students may take either or both semesters. Recommended Course Background: Advanced Yiddish II AS.210.368 or permission of instructor	3.00	12	TTh 12:00-1:15PM
AS.210.391	01	H	W	**Advanced Portuguese Language & Literature** *De Azeredo Cerqueira, Flavia Christina* This third-year course focuses on reading, writing, and oral expression. Under the supervision of the instructor, students will read one or two complete works by major Brazilian, Portuguese, and/or Afro-Portuguese writers each semester, followed by intense writing and oral discussion on the topics covered. Grammar will be reviewed as necessary. Lab work is required. All classes are conducted in Portuguese.	3.00	10	MWF 9:00-9:50AM
AS.210.411	01	H	W	**Translation for the Professions** *Ramos, Maria Del Rosario*	3.00	12	TTh 12:00-1:15PM

German & Romance Languages & Literatures

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Spanish Translation for the Professions surveys the field of contemporary translation theory and provides practice of translation from English to Spanish. Translation exercises may include comparing and contrasting texts of literature, medicine, health, law, technology, politics, and journalism. Students will identify and differentiate terminology specific to these various fields and will focus on practicing correct uses of the grammatical structures relevant to the translation of both English and Spanish. In the course's final projects students will apply, synthesize, and reflect on what has been learned in the class by completing a translation exercise individualized to their professional interests. Strategies of communication mastered in this course will help students of Spanish throughout their careers, in that achievement of the course objectives will help students discern, translate, and evaluate the usefulness of translations in different professional settings. May not be taken satisfactory/unsatisfactory. Not open to native speakers of Spanish. No new enrollments permitted after September 13th.			
AS.210.412	01	H	W	**Community Based Learning - Spanish Language Practicum** *Sanchez, Loreto* This fourth-year course involves a specially designed project related to the student's minor concentration. On completion of this course, the student will be able to use the Spanish language in real world contexts. The student-designed project may be related to each student´s current employment context or developed in agencies or organizations that complement student's research and experimental background while contributing to the improvement of his/her language proficiency. May not be taken satisfactory/unsatisfactory. No new enrollments permitted after September 13th.	3.00	12	M 1:30-2:20PM
AS.210.417	01	H	W	**Eloquent French** *Cook-Gailloud, Kristin*	3.00	15	MWF 11:00-11:50AM

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Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This interactive, writing intensive course places emphasis on : providing students with linguistic tools that will help them reach a high level of written proficiency (advanced lexical, stylistic and idiomatic expressions, linking words used to develop and enrich complex sentences, stylistic and grammatical differences between French and English) enhancing students' analytical skills by introducing them to the French method of Explication de textes teaching students how to express themselves in French by using the three basic modes of writing, descriptive, narrative, and persuasive. Students will concomitantly develop an academic style of writing by studying the different components of the dissertation française (introduction, problématique, argumentation, conclusion) teaching students to develop their own style of writing. To that effect, we will study excerpts of French literary texts that deal with themes likely to enhance their own creative writing (lieux imaginaires, mémoire et autobiographie, for example).			
AS.210.451	01		W	**Corso di Perfezionamento** *Zannirato, Alessandro* This task-based course is designed to prepare students to acquire Effective Operational Proficiency in Italian (C1 level of the Common European Framework). By the end of the course, successful students will be able to 1) understand a wide range of demanding, longer texts, and recognize implicit meaning, 2) produce clear, well-constructed, detailed texts on complex subjects 3) express themselves fluently and spontaneously without much obvious searching for expressions, and 4) use language flexibly and effectively for social, academic, and professional purposes. Extensive independent work required. Course adopts a continuous assessment system (no mid-term and no final), and is conducted entirely in Italian. No Satisfactory/Unsatisfactory option. Recommended Course Background: AS.210.352 with a grade of B+ or higher, or appropriate placement exam score and interview with Language Program Director.	0.00 - 3.00	15	MW 1:30-2:45PM
AS.211.319	01	H		**¡Salsa! The Afro-Antillean song** *Ramos, Maria Del Rosario*	3.00	10	MW 12:00-1:15PM

German & Romance Languages & Literatures

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				¡Salsa! The Afro-Antillean song surveys Caribbean music in an international Spanish-speaking context. As a language course, it reviews grammar and instils vocabulary acquisition through the close analysis of the biggest hits of salsa from the past one hundred years. On completion of this course the student will have developed the ability to read and critically discuss music and its history in the Spanish-speaking Caribbean and will have examined cultural roots, market dominance, and media crossovers in the musical universe of the Spanish-speaking archipelago of the Antilles. In completing the course's final project students will apply, synthesize, and reflect on what has been covered in the class by creating a professional dossier individualized to their own personal musical interests. Concepts learned in this course will be directly applicable to careers linked to intercultural and international relations while also apply to multiple careers in media, music industry and dance. May not be taken satisfactory/unsatisfactory. Not open to native speakers of Spanish. No new enrollments permitted after the third class session.			
AS.211.358	01	H		**Writing the Great War: French Literature and World War I** *Benaglia, Cecilia* This course examines literary texts engaging with WWI and related topics such as class struggle, gender conflicts, and colonialism. Authors studied include H. Barbusse, J. Cocteau, L.F. Celine, A. Malraux. Course taught in French.	3.00	5	MW 1:30-2:45PM
AS.211.390	01	H		**Modern Spanish Culture** *Staff* This course will explore the fundamental aspects of Spanish culture from the nineteenth to the twenty-first centuries. The course will offer a general survey of the history of Spain and will discuss texts, movies, songs, pictures, and paintings in relation to their social, political, and cultural contexts. This course will be of particular interest for students planning on spending a semester abroad in Spain—specially for those students going to the JHU Fall Semester in Madrid, at Carlos III University. Taught in Spanish. Recommended Course Background: AS.210.311 or appropriate Webcape score.	3.00	17	TTh 12:00-1:15PM
AS.211.390	02	H		**Modern Spanish Culture**	3.00	17	WF 3:00-4:15PM
AS.211.394	01	H	W	**Brazilian Culture & Civilization** *De Azeredo Cerqueira, Flavia Christina*	3.00	26	WF 3:00-4:15PM

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Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course is intended as an introduction to the culture and civilization of Brazil. It is designed to provide students with basic information about Brazilian history, art, literature, popular culture, theater, cinema, and music. The course will focus on how indigenous Asian, African, and European cultural influences have interacted to create the new and unique civilization that is Brazil today. The course is taught in English, but ONE extra credit will be given to students who wish to do the course work in Portuguese. Those wishing to do the course work in English for 3 credits should register for section 01. Those wishing to earn 4 credits by doing the course work in Portuguese should register for section 02. The sections will be taught simultaneously. Section 01: 3 credits Section 02: 4 credits (instructor's permission required)			
AS.211.394	02	H	W	**Brazilian Culture & Civilization**	4.00	4	WF 3:00-4:15PM
AS.211.401	01	H		**La France Contemporaine I** *Staff* Students will explore contemporary French society and culture through a wide variety of media: fiction and non-fiction readings (graphic novels, news periodicals, popular magazines), films, music, art, websites, and podcasts. A diverse range of hands-on activities in addition to guided readings will help students develop cultural awareness as we discuss topics such as education, politics, humor, sports, cuisine, immigration, slang, and national identity, as well as the historical factors that have influenced these facets of French and francophone culture. Recommended Course Background: AS.210.301 or AS.210.302 or permission of instructor.	3.00	15	TTh 10:30-11:45AM
AS.211.401	02	H		**La France Contemporaine I**	3.00	15	TTh 1:30-2:45PM
AS.212.333	01	H	W	**Introduction à la littérature française** *Staff* Introduction à la Littérature française I and II propose reading and discussion of texts of various genres from the Middle Ages to the 21st century. The two semesters may be taken in either order. Introduction à la littérature française I will cover readings and discussion of texts of various genres from the 14th to the 18th century. This sequence is a pre-requisite to all further literature courses. Students may co-register with an upper-level course during their second semester. Recommended Course Background: AS.210.301-AS.210.302 or at least one semester of AS.210.301-AS.210.302 with a grade of A and written permission of the instructor.	3.00	20	MW 12:00-1:15PM
AS.212.333	02	H	W	**Introduction à la littérature française** *Anderson, Wilda*	3.00	20	TTh 12:00-1:15PM
AS.212.358	01	H		**Writing the Great War: French Literature and World War I** *Benaglia, Cecilia*	3.00	10	MW 1:30-2:45PM

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Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course examines literary texts engaging with WWI and related topics such as class struggle, gender conflicts, and colonialism. Authors studied include H. Barbusse, J. Cocteau, L.F. Celine, A. Malraux. Course taught in French.			
AS.212.365	01	H		**Twisted Roots: Writing "Creole" in the French Caribbean** *Loescher, Rebecca Lynn* This course examines rootedness and hybridity in contemporary literary and critical works from the French Caribbean, exploring the act of writing "Creole" as illustrative of innovative thought-constructs. French students will read and write in French and should register for section 02; other students will read translations and should register for section 01. Discussions will be conducted in English.	3.00	6	TTh 12:00-1:15PM
AS.212.365	02	H		**Twisted Roots: Writing "Creole" in the French Caribbean**	3.00	6	TTh 12:00-1:15PM
AS.212.429	01	H		**Thesis Prep** *Anderson, Wilda* This course will meet three times during the Fall semester to enable all French majors to prepare their thesis subject, thesis bibliography, and abstract prior to the writing of the Senior Thesis (AS.212.430) in the Spring semester of their senior year. This course is required of all French majors and must be taken during the Fall semester of their senior year. Schedule TBA upon consultation with the class list, as there are only three group meetings. The rest of the meetings are in individual appointments with the DUS or another chosen French professor. Prerequisites: AS.212.333-334 and either prior enrollment or concurrent enrollment in AS.210.417 Eloquent French	1.00	30	T 6:30-7:30PM
AS.212.430	01	H	W	**Senior Seminar** *Anderson, Wilda* An in-depth and closely supervised initiation to research and thinking, oral and written expression, which leads to the composition of a senior thesis in French. Recommended Course Background: AS.212.429	3.00	30	TBA
AS.212.469	01	H		**Limit-Experience, Limit-Texts** *Schilling, Derek* Why tell stories? What power do writers wield against the disorder of life? How do literary narratives measure up to experiences that usher us beyond the limits of the imaginable? In this course we will examine modern and contemporary works in French that engage with such limit states and situations as combat, imprisonment, madness, terminal illness, and corporeal transformation. Authors to be considered include Carrère, Chevillard, Darrieussecq, Delbo, Duras, Guibert, and Volodine.	3.00	15	TTh 10:30-11:45AM
AS.213.345	01	H		**Healing and Health Beyond Theology** *Tobias, Rochelle*	3.00	20	T 1:30-4:00PM

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Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Nietzsche argues in The Gay Science that to bring about a new day we need a new health—"great health," as he calls it, that enables us to surmount the sickness of our age and transcend ourselves. However much of an iconoclast Nietzsche considered himself to be, his idea of "great health" fits squarely within a theological tradition that claims that the condition for becoming a member of the ecclesia is faith, which cleanses the individual of sin and restores him to his original state. This course will examine the theological inheritance that has and continues to shape the notion of sickness and health dominant even in secular contexts, where well-being would seem to be regarded as a condition of the body rather than of the spirit. Reading to include works by Nietzsche, Kierkegaard, Augustine, Tillich, Heidegger, Scholem, Tolstoy, Büchner, Flaubert, and Kafka. Taught in English.			
AS.213.358	01	H		**German Pop Culture** *Krauss, Andrea B* Taught in German. The term "pop(ular) culture" designates cultural products and practices that are disseminated as 'mass culture.' Pop culture is accessible to many and deals with objects and materials that circulate in the everyday life of a society; it functions, one might say, as a cultural archive of the present. In contrast to high culture, pop culture enjoys an ambiguous reputation: It represents the cultural mainstream, functions as an easily consumable commodity and promotes the marketing of dominant ideologies, in the view of critical theory. However, more recent debates within cultural studies discuss pop culture as a site of social-symbolic conflicts and subversive forms of reception. Against this background, the seminar examines pop-culture phenomena in Germany after 1950, including the cult object: soccer, popular film and TV ("Tatort"), German pop music and hits (from "Hitparade" to "Rosenstolz" and beyond), recent pop literature after 1990 (Sibylle Berg, Rainald Götz, Thomas Meinecke). At the center of the analyses are questions related to the historical and political situation of pop culture, its specific aesthetic processes, and the (critique of) ideology performed by these processes.	3.00	15	MW 1:30-2:45PM
AS.213.369	01	H		**Dada's Ideologies: Literature, Art, & Politics** *Pelcher, James Brandon* This course will examine the literary and political theories implied in, and encountered by, Dadaist works and praxes. Particular attention will be paid to Dadaist confrontations with the growth of modern mass media, the politics of World War I, and consumerist capitalism in the wake of Taylorism and Fordism. Readings include major Dadaists as well as Althusser, Benjamin, Debord, Gramsci, Irigaray, Lukács, Marx, Saussure, among others.	3.00	18	MW 3:00-4:15PM
AS.213.387	01	H		**Major City, Minor Literature? Berlin in German-Jewish and Yiddish Literature** *Spinner, Samuel Jacob*	3.00	25	Th 1:30-4:00PM

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Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Between the two World Wars, a period of intense artistic and intellectual vitality, Berlin was an international center for theater, visual arts, and literature. Many important Yiddish-language writers were drawn to Berlin and, together with their German- language counterparts, produced a body of literature that explores issues of modernity and identity. By comparing works in Yiddish and German, we will learn about inter-War Berlin's cultural diversity and richness, while also gaining insight into the particular issues of writing about Jewish identity in the 1920s, and the implications of writing in a minor language (Yiddish). We will read works by authors including Joseph Roth and Alfred Döblin in German, and Moyshe Kulbak and Dovid Bergelson in Yiddish. All texts will be in translation. Some questions we will explore include: • What is a minority/minor language or literature? • How did German and Yiddish interact in cultural and social spheres? • Can texts in different languages comprise a single body of literature? • What did it mean to be German and what did it mean to be Jewish? • Are assimilation and hybridity useful concepts? • Is there such a thing as Jewish modernism? • How did literature of the period respond to the rise of the Nazi party and the intensification of antisemitism?			
AS.214.125	01	H		**Freshman Seminar: Dangerous Liasons: Words and Music Through the Ages** *Refini, Eugenio* The seminar explores challenging questions with which men have been dealing for centuries: how do music and words interact? Do words have a priority on music or vice versa? Does music need words to be understood and interpreted? Are words filled with meaning by music? By addressing literary and philosophical writings, as well as musical examples from different periods and contexts, students will be led through a critical reconsideration of the topic. A variety of materials will be discussed, including genres as different as medieval songs, early modern madrigals, Romantic Lieder, opera, the American musical, and contemporary pop music. No musical skills required; strong doses of curiosity most welcome.	3.00	15	W 1:30-4:00PM
AS.214.347	01	H	W	**Petrarch and the Beginnings of the Renaissance** *Celenza, Christopher* This course will focus on the life, work, and thought of Francesco Petrarca, or "Petrarch." Though known today primarily as the author of Italian love poetry, Petrarch considered his Latin work more lasting. We will explore both sides of his work, the vernacular and Latin (in English translation) to come to an understanding of his place in medieval intellectual history, the history of philosophy, and the history of literature.	3.00	25	TTh 12:00-1:15PM

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Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.214.376	01	H		**Warrior Women from Ancient Times to Game of Thrones** *Gomez, Janet Elizabeth* This course will trace the origins of the warrior woman from ancient times through today's pop culture and reflect on the multiplicity of its social, cultural, and political ramifications.	3.00	18	MW 12:00-1:15PM
AS.214.477	01	H	W	**Magic, Marvel, and Monstrosity in the Renaissance** *Stephens, Walter E* Magic, Monstrosity,and Marvels or Wonders call into question what we see and experience: what is reality, what is illusion; what's natural and what's supernatural? What's human and what's more, or less, than human? During the Renaissance, ideas about the nature of reality were bound up with questions and issues very different from those of our time. With the exact sciences still being invented, the nature of the world was much less hard and fast for Renaissance people than it is for the modern educated person. The literary masterpieces of the Italian Renaissance provide vivid illustrations of the early modern sense of wonder. Foremost among these are the theatrical comedies which Italian authors revived in imitation of the ancients, and the romances, especially Ariosto's Orlando furioso (1532) and Tasso's Gerusalemme liberata (1581). These and other works influenced ideas about magical and marvelous phenomena across Europe for centuries to come. Works will be read and discussed in English. Italian majors and graduate students (who should enroll in section 2) will attend a weekly supplemental discussion in Italian and compose their written work in Italian.	3.00	12	TTh 1:30-2:45PM
AS.214.477	02	H	W	**Magic, Marvel, and Monstrosity in the Renaissance**	4.00	8	TTh 1:30-2:45PM
AS.215.231	01	H		**Introduction to Literature in Spanish** *Staff* The main objective of this course is to examine and discuss specific authors and topics in literature in Spanish from the Middle Ages to the 20th century. The course is designed to cover a selection of Hispanic texts from Spain and Latin America. Literary genres to be studied will include narratives, poetry, and drama. The bulk of each class session will be dedicated to the discussion of the assigned readings. This course is taught in Spanish. This course is required for the major in Spanish.	3.00	17	TTh 3:00-4:15PM
AS.215.231	02	H		**Introduction to Literature in Spanish**	3.00	17	MW 12:00-1:15PM
AS.215.324	01	H	W	**Reading Terror: The Migrant in the Trans-national Narrative: Abancay, Lima, London, Alabama, Madrid, Connecticut** *Castro-Klaren, Sara* The readings bring into consideration the question of terror (of war) and displacement as experienced by migrants in novels by prize winning authors such as Arguedas, Vargas Llosa, Alarcon, Riesco, Roncagiolo and Silva Passuni.	3.00	15	W 1:30-4:00PM

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Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.215.388	01	H	W	**Narrating Mexico: Novel and History** *Ray, Christopher M* The 200 years since the eruption of Mexican Independence present a panorama of struggle, strife, and literary creation. This course explores how Mexican literature formulates, contests and conditions portrayals of the national reality of Mexico. Taught in Spansh. Recommended Course Background: Advanced Spanish I or another Spanish survey course.	3.00	18	TTh 1:30-2:45PM
AS.215.411	01	H	W	**Folly & Insanity in Spanish Culture: Origins of Modern Madness in the Literature of Spain** *Ponce, Gabrielle Piedad* What is human madness? Taking into account Foucault's famous dictum, "There can be no madness without society," this course returns to the earliest constructions of madness in the early modern period and moves forward into modernity through a close reading of literary, philosophical and scientific texts published in Spain. Readings include: Cervnates, Leon Hebreo, Huarte de San Juan, Lope de Vega, Calderon, Galdos, Freud, and others. Earlier representations of mental disquiet will be compared with the latest advances in psychology and nueroscience published in the JHU Gazette and the HUB. Recommended Course Background: AS.210.312	3.00	13	MW 4:30-6:00PM
AS.215.458	01	H		**Cuba and its Culture Since the Revolution** *Gonzalez, Eduardo* We will study the visual and textual arts, cinema, political culture, and blogosphere; reaching back to the first phases in the building of the revolutionary state apparatus and its sovereign mandate. Taught in Spanish.	3.00	30	TTh 10:30-11:45AM
AS.215.491	01	H		**Muslim, Jewish & Christian Literatures of Medieval Spain** *Altschul, Nadia* Desde el 711 hasta el 1609 de la era cristiana, la Península Ibérica fue una sociedad multi-lingüística con zonas y ciudades pobladas y/o administradas por miembros de las tres religiones abrahámicas monoteístas. Este curso presenta un panorama de las literaturas hispano-musulmanas, hispano-judías e hispano-cristianas haciendo especial hincapié en el contexto histórico de la península. Los textos en árabe y hebreo serán leídos en traducción inglesa o castellana, dependiendo de su accesibilidad. Taught in Spanish	3.00	30	M 1:30-4:00PM
AS.216.373	01	H		**War in Israeli Arts and Culture** *Stahl, Neta*	3.00	9	TTh 10:30-11:45AM

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Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				In this course we will study the various representations of what functions as one of Israel's most unifying and yet dividing forces: war. By analyzing literary and cinematic works as well as visual art and popular culture we will attempt to understand the role of war in shaping Israeli society, culture and politics. Topics such as commemoration and mourning, dissent and protest, trauma and memory and the changing image of the soldier will stand at the center of the course. Students with a knowledge of Hebrew wishing to do extra work in Hebrew should enroll in section 2 and the fourth hour will be scheduled at a time convenient to the enrollees and instructor.			
AS.216.373	02	H		**War in Israeli Arts and Culture**	4.00	3	TTh 10:30-11:45AM
AS.216.457	01	H		**The Jewish Jesus: Literature, Film, Thought** *Stahl, Neta* "And Jesus was a Jew with ear-locks and prayer shawl" claimed Uri Zvi Greenberg, the ultra-nationalist giant of modern Jewish poetry. A flesh-and-blood Jew, a demon, a spoiled student, an idol, a brother, a (failed) Messiah, a nationalist rebel, a Greek god in a Jewish garb – these images of Jesus accompanied Jewish thought and imagination for almost two thousand years. In what ways do the representations of Jesus contribute to the self understanding of Jews over these two millenia? What were the major changes in the representation of Jesus by Jews throughout this vast period?These and similar questions regarding the Jewish Jesus will engage us at this seminar and will be studied through literary works, visual art, films and thought.	3.00	15	T 1:30-4:00PM
AS.360.133	01	H	W	**Freshman Seminar: Great Books at Hopkins** *Patton, Elizabeth* Students attend lectures by an interdepartmental group of Hopkins faculty and meet for discussion in smaller seminar groups; each of these seminars is led by one of the course faculty. In lectures, panels, multimedia presentations, and curatorial sessions among the University's rare book holdings, we will explore some of the greatest works of the literary and philosophical traditions in Europe and the Americas. Close reading and intensive writing instruction are hallmarks of this course; authors for Fall 2014 include Homer, Plato, Boccaccio, Shakespeare, Madame de Lafayette, Flaubert, Dostoevsky, Chekhov, and Joyce.	3.00	15	TTh 10:30-11:45AM
AS.360.133	02	H	W	**Freshman Seminar: Great Books at Hopkins** *Achinstein, Sharon*	3.00	15	TTh 10:30-11:45AM
AS.360.133	03	H	W	**Freshman Seminar: Great Books at Hopkins** *Bett, Richard*	3.00	15	TTh 10:30-11:45AM
AS.360.133	04	H	W	**Freshman Seminar:Great Books at Hopkins** *Russo, Elena*	3.00	15	TTh 10:30-11:45AM
AS.360.133	05	H	W	**Freshman Seminar: Great Books at Hopkins** *Stephens, Walter E*	3.00	15	TTh 10:30-11:45AM
AS.384.115	01			**First Year Hebrew** *Cohen, Zvi*	4.00	16	TBA

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Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Designed to provide reading and writing mastery, to provide a foundation in Hebrew grammar and to provide basic conversational skills. Cross-listed with Jewish Studies. Final day/time will be determined during the first week of classes based on students' schedules.			
AS.384.215	01	H		**Second Year Hebrew** *Cohen, Zvi* Designed to enrich vocabulary and provide intensive grammatical review, and enhance fluency in reading, writing and comprehension. Cross-listed with Jewish Studies. Final day/time will be determined during the first week of classes based on students' schedules.	4.00	16	TBA
AS.384.315	01	H		**Third Year Hebrew** *Cohen, Zvi* Designed to maximize comprehension and the spoken language through literary and newspaper excerpts providing the student with the language of an educated Israeli. Cross-listed with Jewish Studies. Final day/time will be determined during the first week of classes based on students' schedules.	4.00	16	TBA
AS.389.353	01	H	W	**Revolutions of the Book: Material Culture & the Transformation of Knowledge from Antiquity to the Renaissance** *Havens, Earle* Explores the material culture of knowledge through transformations in the technologies and arts of communication, taught entirely from rare books, manuscripts, and artifacts in JHU libraries and museum collections.	3.00	15	T 3:00-5:30PM

History

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.061.397	01	H	W	**French Masculinities** *Mason, Laura* Examines changing ideals of masculinity in French film from 1930 to today, rooting the work of iconic stars and directors in their cultural, political and historical contexts. $40 lab fee.	3.00	15	Th 3:00-5:20PM; M 7:30-10:00PM
AS.100.102	01	HS	W	**The Medieval World** *Spiegel, Gabrielle M* This course explores selected topics in the political, economic, social and intellectual history of Western Europe in the period between the fall of the Roman Empire and the 13th century.	3.00	20	MW 10:00-10:50AM; F 10:00-10:50AM
AS.100.102	02	HS	W	**The Medieval World**	3.00	20	F 10:00-10:50AM; MW 10:00-10:50AM
AS.100.102	03	HS	W	**The Medieval World**	3.00	20	F 11:00-11:50AM; MW 10:00-10:50AM
AS.100.102	04	HS	W	**The Medieval World**	3.00	20	F 11:00-11:50AM; MW 10:00-10:50AM
AS.100.102	05	HS	W	**The Medieval World**	3.00	20	F 12:00-12:50PM; MW 10:00-10:50AM
AS.100.102	06	HS	W	**The Medieval World**	3.00	20	F 12:00-12:50PM; MW 10:00-10:50AM
AS.100.109	01	HS	W	**Making America: Slavery, Violence, and the Coming of the Civil War** *Walters, Ronald* An examination of violence - primarily racial and political - in the decades between the American Revolution and Civil War (1789 to 1861).	3.00	20	MW 12:00-12:50PM; F 11:00-11:50AM
AS.100.109	02	HS	W	**Making America: Slavery, Violence, and the Coming of the Civil War**	3.00	20	MW 12:00-12:50PM; F 11:00-11:50AM
AS.100.109	03	HS	W	**Making America: Slavery, Violence, and the Coming of the Civil War**	3.00	20	MW 12:00-12:50PM; F 12:00-12:50PM
AS.100.109	04	HS	W	**Making America: Slavery, Violence, and the Coming of the Civil War**	3.00	20	MW 12:00-12:50PM; F 12:00-12:50PM
AS.100.193	01	HS	W	**Undergrad Sem in History** *Rowe, Erin* The first semester of the two-semester sequence required for majors, this course introduces students to the theory and practice of history. Following a survey of approaches to the study of the past and an introduction to research methods, students undertake original research and write an extended essay.	3.00	20	W 1:30-3:50PM
AS.100.193	02	HS	W	**Undergraduate Seminar In History** *Rowe, William T*	3.00	20	T 1:30-3:50PM
AS.100.208	01	HS		**China: Neolithic to Song** *Meyer-Fong, Tobie* This class offers a broad overview of changes in China from Neolithic times through the Song Dynasty (roughly from 5000 BCE through the 13th century CE) and will include discussion of art, material culture, and literature as well as politics and society. Close readings of primary sources in discussion sections and extensive use of visual material in lectures will help students gain firsthand perspective on the materials covered. Cross listed with East Asian Studies	3.00	20	MW 11:00-11:50AM; F 10:00-10:50AM
AS.100.208	02	HS		**China: Neolithic to Song**	3.00	20	MW 11:00-11:50AM; F 10:00-10:50AM

History

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.100.215	01	HS	W	**Freshman Seminar: US-USSR Cold War** *Brooks, Jeffrey P* Students explore politics and culture of the interactive Cold War from 1945 to the fall of Communism. Considerable assigned reading, 2 quizzes, and weekly 500 word papers on readings. Freshman Only.	3.00	18	TTh 1:30-2:45PM
AS.100.220	01	HS		**Freshman Seminar: Politics, Information, and the State in Early Modern China and Japan** *Mokros, Emily Carr* This introductory seminar examines culture and politics in early modern East Asia (ca. 1500-1900) by looking at changing modes of communication and attitudes about state control of information and ideology. Freshmen Only.	3.00	18	TTh 3:00-4:15PM
AS.100.255	01	HS	W	**The Haitian Revolution in World History** *Marvin, Nathan Elliot* This introductory seminar examines the revolution that transformed the slave colony of Saint-Domingue into the first black republic and second independent nation in the Americas, and its repercussions around the world. Non-Majors welcome.	3.00	18	TTh 9:00-10:15AM
AS.100.303	01	HS		**Old Regime and Revolutionary France** *Kwass, Michael* Examines the history of France from the reign of Louis XIV to the French Revolution, focusing on early modern society, absolutism, the Enlightenment, political culture, and the Revolution.	3.00	15	MW 12:00-1:15PM
AS.100.324	01	HS	W	**Dostoevsky's Russia** *Brooks, Jeffrey P* Dostoevsky and the culture of his era but also echoes of his ideas of Russia, religion, ethnicity, freedom, authority, and gender from 1917 until today. Short papers, quizzes.	3.00	18	W 1:30-3:50PM
AS.100.337	01	HS	W	**Historical Perspectives on Humans and Animals in the Atlantic World and the Early United States, 1500-1860** *Gherini, Claire Elizabeth* Relationships between humans and animals offer a fascinating window into the American past. Readings, written assignments, and discussions will explore environmental, cultural, and scientific approaches to the history of hunting, the domestication of animals and animal ethics in the Atlantic world and the early United States.	3.00	18	TTh 12:00-1:15PM
AS.100.348	01	HS	W	**20th-Century China** *Rowe, William T* The history of China from the last years of the Qing Empire to the post-Mao reforms.	3.00	70	TTh 10:30-11:45AM

History

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.100.353	01	HS	W	**Youth and Youth Movements during 20th Century: Germany, Britain, and the U.S** *Balz, Hanno* Through texts, music, and films, this course examines the rise of "youth" as a social and cultural category in a variety of forms, ranging from spontaneous (such as Rock'n'Roll and Techno) to state-organized (Hitler Youth).	3.00	18	T 1:30-3:50PM
AS.100.383	01	HS	W	**Conversion and Apostasy in the Middle Ages** *Staff* Compares religious transformation in medieval Europe and the Middle East (ca. 600-1500), including conquest and conversion; conversion narratives; apostasy, martyrdom and other encounters between medieval Jews, Christians, and Muslims.	3.00	18	TTh 12:00-1:15PM
AS.100.397	01	HS	W	**U.S. Histories Male and Female** *Ryan, Mary* This seminar will be devoted to exploring gender differences as they have been expressed in a sequence of autobiographies and autobiographical fiction set in a shifting social and historical context.	3.00	20	M 1:30-3:50PM
AS.100.411	01	HS	W	**Readings in the History of Public Health in the 20th and 21st Centuries** *Galambos, Louis P* The students will read major and some minor works in the history of global public health and will each develop their own concept of how and why the major institutions, professions, and practices associated with public health have evolved over the past long century. To help the students focus on their ideas, they will write three essays on particular aspects of the history.	3.00	25	Th 1:30-3:50PM
AS.100.417	01	HS	W	**Capitalism, Socialism, and Democracy** *Galambos, Louis P* This course examines the ideas of Joseph A. Schumpeter, the father of entrepreneurial studies. Each student will develop a perspective on the history of capitalism and socialism.	3.00	25	TTh 9:00-10:15AM
AS.100.420	01	HS	W	**George Washington and his World** *Furstenberg, Francois* This research-intensive course explores eighteenth-century America through George Washington's papers. Although Washington is not the most representative person, he is an exceptionally well-documented one; we use his papers to focus on life in Virginia, North America, and the Atlantic World. Workshop-style research and writing prepare students for the craft of history.	3.00	12	W 4:00-6:30PM
AS.100.435	01	HS	W	**Jewish and Black Diasporas in History and Social Theory, 1890-1945** *Connolly, Nathan D*	3.00	15	T 2:00-4:30PM

History

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				The formation of minority peoplehoods in the age of global racialism, mass migration, and nationalism's ascendancy as a political principle. Focuses on social thinkers who grappled with this issue (Weber, Du Bois, Arendt); on making sense of the global structures of race, imperial rule, nationhood, and intellectual exchange that framed peoplehood 1890-1945; and on the particular history of African American and East European Jewish negotiations with peoplehood between choice and violent imposition. Permission of instructors.			
AS.100.445	01	HS	W	**African Fiction as History** *Larson, Pier M* An exploration of Modern African history through the African historical novel.	3.00	15	TTh 3:00-4:15PM
AS.100.499	01	HS	W	**Film and Propaganda in Nazi Germany** *Balz, Hanno* By examining a range of cinematic works—from explicitly ideological pseudo-documentaries to entertainment films—this course will explore the transmission of propaganda into the everyday culture of Nazi Germany.	3.00	15	Th 1:30-3:50PM; W 6:00-9:00PM
AS.140.105	01	HS		**History of Medicine** *Pomata, Gianna* Course provides an overview of the medical traditions of six ancient cultures; the development of Greek and Islamic traditions in Europe; and the reform and displacement of the Classical traditions during the Scientific Revolution.	3.00	20	MW 10:00-10:50AM; F 10:00-10:50AM
AS.140.105	02	HS		**History of Medicine**	3.00	20	MW 10:00-10:50AM; F 10:00-10:50AM
AS.140.105	03	HS		**History of Medicine**	3.00	20	MW 10:00-10:50AM; F 10:00-10:50AM
AS.211.394	01	H	W	**Brazilian Culture & Civilization** *De Azeredo Cerqueira, Flavia Christina* This course is intended as an introduction to the culture and civilization of Brazil. It is designed to provide students with basic information about Brazilian history, art, literature, popular culture, theater, cinema, and music. The course will focus on how indigenous Asian, African, and European cultural influences have interacted to create the new and unique civilization that is Brazil today. The course is taught in English, but ONE extra credit will be given to students who wish to do the course work in Portuguese. Those wishing to do the course work in English for 3 credits should register for section 01. Those wishing to earn 4 credits by doing the course work in Portuguese should register for section 02. The sections will be taught simultaneously. Section 01: 3 credits Section 02: 4 credits (instructor's permission required)	3.00	26	WF 3:00-4:15PM
AS.211.394	02	H	W	**Brazilian Culture & Civilization**	4.00	4	WF 3:00-4:15PM
AS.214.347	01	H	W	**Petrarch and the Beginnings of the Renaissance** *Celenza, Christopher*	3.00	25	TTh 12:00-1:15PM

History

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course will focus on the life, work, and thought of Francesco Petrarca, or "Petrarch." Though known today primarily as the author of Italian love poetry, Petrarch considered his Latin work more lasting. We will explore both sides of his work, the vernacular and Latin (in English translation) to come to an understanding of his place in medieval intellectual history, the history of philosophy, and the history of literature.			
AS.214.477	01	H	W	**Magic, Marvel, and Monstrosity in the Renaissance** *Stephens, Walter E* Magic, Monstrosity,and Marvels or Wonders call into question what we see and experience: what is reality, what is illusion; what's natural and what's supernatural? What's human and what's more, or less, than human? During the Renaissance, ideas about the nature of reality were bound up with questions and issues very different from those of our time. With the exact sciences still being invented, the nature of the world was much less hard and fast for Renaissance people than it is for the modern educated person. The literary masterpieces of the Italian Renaissance provide vivid illustrations of the early modern sense of wonder. Foremost among these are the theatrical comedies which Italian authors revived in imitation of the ancients, and the romances, especially Ariosto's Orlando furioso (1532) and Tasso's Gerusalemme liberata (1581). These and other works influenced ideas about magical and marvelous phenomena across Europe for centuries to come. Works will be read and discussed in English. Italian majors and graduate students (who should enroll in section 2) will attend a weekly supplemental discussion in Italian and compose their written work in Italian.	3.00	12	TTh 1:30-2:45PM
AS.214.477	02	H	W	**Magic, Marvel, and Monstrosity in the Renaissance**	4.00	8	TTh 1:30-2:45PM
AS.230.377	01	S		**Colonialism and Anti-Colonialism** *Kuo, Huei-Ying* This seminar examines the theories and historiography of colonialism and anti-colonial movements. It focuses on the establishment of the colonial division of labor, comparative colonialism, identity formation, and nationalism as well as anti-colonial movement.	3.00	20	TTh 10:30-11:45AM
AS.300.139	01	H		**Introduction to Intellectual History** *Marrati, Paola* This course offers a conceptual and historical introduction to Intellectual History. What makes the "history of ideas" different from the history of other objects? What, if anything, distinguishes the history of ideas from the history of philosophy? What is it exactly that we call "ideas"? In what sense do they have a history? These are examples of the kind of questions addressed in the course.	3.00	25	TTh 12:00-1:15PM
AS.360.147	01	HS	W	**Freshmen Seminar: Adam Smith and Karl Marx** *Jelavich, Peter*	3.00	20	W 1:30-3:50PM

History

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This freshmen seminar examines the ideas of Smith, the greatest proponent of the free market, and Marx, his most radical critic. Freshmen only.			
AS.363.201	01	HS		**Introduction to the Study of Women, Gender, and Sexuality** *Nealon, Christopher* This course offers an introduction into the fields of Women's Studies, Gender Studies, and Sexuality Studies. It explores why we need these fields of inquiry, how they have emerged historically, what some of the major and most interesting contributions are and where we might go from here. The course is meant as a preparation for the other WGS core courses.	3.00	40	MW 1:30-2:45PM
AS.389.201	01	HS		**Introduction to the Museum: Past and Present** *Kingsley, Jennifer P* This course surveys museums, from their origins to their most contemporary forms, in the context of broader historical, intellectual, and cultural trends. Anthropology, art, history, and science museums are considered. Cross-listed with Anthropology, History, and History of Art.	3.00	25	TTh 1:30-2:45PM
AS.389.261	01	H		**Curating Homewood** *Arthur, Catherine Rogers* Students explore early American life related to the region and the Carroll family of Homewood. Primary research and object study culminate in student-curated thematic exhibition. Optional intersession practicum experience is also possible. For more on exhibit theme, contact instructor. M&S practicum course.	3.00	12	W 1:30-3:50PM

History of Art

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.010.101	01	H	W	**Introduction to History of European Art I** *Lakey, Christopher* A survey of painting, sculpture, and architecture from Egyptian, Greek, Roman, and medieval culture.	4.00	15	F 10:00-10:50AM; MW 12:00-1:15PM
AS.010.101	02	H	W	**Introduction to History of European Art I**	4.00	15	F 11:00-11:50AM; MW 12:00-1:15PM
AS.010.101	03	H	W	**Introduction to History of European Art I**	4.00	20	F 12:00-12:50PM; MW 12:00-1:15PM
AS.010.101	04	H	W	**Introduction to History of European Art I**	4.00	20	F 12:00-12:50PM; MW 12:00-1:15PM
AS.010.105	01	H		**Art of the Ancient Americas** *Deleonardis, Lisa* Surveys the art of Olmec, West Mexico, Teotihuacan, Maya, and Aztec.	3.00	25	TTh 10:30-11:45AM
AS.010.110	01	H		**Art of the Islamic World** *Brown, Rebecca Mary* This course is an introduction to the art of the Islamic world from the 7th century to the present, to include architecture, painting, mosaic, ceramics, textiles, metalwork, and contemporary media such as video and installation art. In addition to engaging with the region where Islam emerged—the eastern Mediterranean and the Arabian Peninsula—the course examines North Africa, Spain, Iran and Central Asia, and South Asia.	3.00	25	MW 12:00-1:15PM
AS.010.220	01		W	**Theft, Theory, and Telescopes: Rome and Naples in the Age of Caravaggio** *Friedman, Hannah Joy* This course will offer an overview of painting in Rome and Naples in both Caravaggio's generation and the one that followed it, exploring broad shifts in artistic theory and practice from the 1590s to the late 1630s.	3.00	18	TTh 3:00-4:15PM
AS.010.232	01	H		**Art and Architecture of the Medieval Mediterranean World** *Hauknes, Marius* This course explores the development of medieval painting, sculpture, and architecture in the Mediterranean region from ca. 250 to 1400. The class will focus especially on moments and sites of contact between Western European, Byzantine, and Islamic cultures and will examine the impact of cross-cultural exchange on artistic and architectural production.	3.00	15	TTh 12:00-1:15PM
AS.010.236	01	H		**Palaces, Temples and Tombs in Mesopotamia** *Feldman, Marian* Mesopotamia, the “land between the rivers,” is considered the cradle of civilization. Its earliest urban centers appeared by 3500 BCE in the region of modern-day Iraq, Iran, and Syria. Along with urbanism came the emergence of temples and palaces as large-scale elite institutions (replete with written records). Their arts manifest some of the earliest complex representations. This course explores the art and architecture within the social, political and cultural context of Mesopotamia (ancient Sumer, Babylonia and Assyria) from 3500 to 330 BCE.	3.00	25	TTh 10:30-11:45AM
AS.010.316	01			**Venetian Art and the Mediterranean World: 1350-1550** *Campbell, Stephen*	3.00	25	MW 1:30-2:45PM

History of Art

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course is an investigation into the fashioning of Venetian identity in architecture and the visual arts, with a particular address to the encounter with Byzantine and Islamic traditions and exchanges with other centers of the Italian peninsula.			
AS.010.321	01			**Shopping for Status: Patronage & Collecting at the Early Modern European Court** *Teresi, Rebecca Quinn* At the early modern European princely court, wonders of art (ancient sculptures, priceless tapestries, masterpieces of oil on canvas) were displayed alongside wonders of religion, science, and nature (saintly relics, astronomical devices, unicorn horns). Through the study of courtly patronage and collecting practices, this seminar will examine the court as both a locus of power and a social organism. Students will explore the way players at court staged strategic and social exchange through the circulation, organization, display and concealment of art and artifacts to powerful ends.	3.00	12	W 1:30-4:00PM
AS.010.322	01			**Knowledge, Holiness, and Pleasure: The Illustrated Book in the Medieval World** *Zchomelidse, Nino* The book was the primary source for the collection of knowledge in the Middle Ages. It was also the medium for the preservation and proliferation of the texts that underlay the three monotheistic religions (Judaism, Christianity, Islam). Finally, the book served as a source for elite entertainment, perhaps most importantly in Late Antiquity and the later Middle Ages. This course investigates the role of the illustrated book within the political, religious, and artistic developments that took place after the rise of Christianity from the end of the Roman Empire until the early modern period in the medieval West and in Byzantium, permeating Jewish and Islamic traditions. We will examine how the different types of books, such as horizontal and vertical scrolls, large and miniature size codices influenced the placement, conception, and style of the illustrations. The course also addresses processes of manufacture, issues of materiality (i.e. precious multi-media book covers, papyrus, parchment, paper), and the relationship between text and image. A major aspect of the seminar focuses on the performative aspect of the book in its wide range of functions: secular and liturgical, public and private. Students will be able to work first hand with manuscripts and facsimiles from the rare book collection of Eisenhower Library and the Walters Art Museum.	3.00	12	W 4:00-6:30PM
AS.010.389	01	H	W	**The Stone and the Thread** *Deleonardis, Lisa* This course examines the built environment of the Inka and considers architecture in its social, historical, and cultural contexts. Shared forms and ideas implicit in the fiber arts offer comparative points for analysis and discussion.	3.00	25	TTh 1:30-2:45PM
AS.010.410	01		W	**The Epistemology of Photography**	3.00	8	M 1:30-4:00PM

History of Art

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Brown, Rebecca Mary This seminar will ask how photography produces ways of knowing: how does photography's reality-effect shape its dissemination and absorption? Is photography's emergence during the colonial era coincidental or catalytic? How is memory (re)constituted in a photography-saturated world? What kinds of histories does photography encourage and discourage? Is a photograph an object? We will read across disciplines (literature, anthropology, history, history of art, political science, theory) to investigate the epistemology of photography and the photograph.			
AS.010.411	01			**A Continued History of Chinese Painting, 1400-1800** *Liu, Lihong*	3.00		TBA
AS.040.366	01	H	W	**The Archaeology of Ancient Cyprus: Investigating a Mediterranean Island World in the JHU Museum** *Anderson, Emily S.K.* This course explores the visual and material worlds of ancient Cyprus from the earliest human evidence through the Iron Age. Class involves regular analysis of artifacts based in the Archaeological Museum.	3.00	12	T 1:30-4:00PM
AS.130.213	01	H		**Introduction to Ancient Egyptian Art** *Bryan, Betsy Morrell* This class is a combination of illustrated lecture and discussion, punctuated with visits to museums with Egyptian collections. Participants must be able to join at least one overnight trip to New York and/or Boston (weekend) and be available for two half day visits to Philadelphia and Washington, D.C . or elsewhere (TBA as best for participants) , in addition to visiting Baltimore institutions with the class as part of the course. Discussion of sculpture will take place in front of the objects, so attendance is important for the visits.	3.00	15	MW 12:00-1:15PM
AS.130.377	01	H		**Creating an Egyptian Temple** *Bryan, Betsy Morrell* This class will challenge every participant to plan a temple environment for a particular deity. The readings, lectures, and discussions will cover the mythology around specific gods and how it influenced temple architecture, location, ritual, and festivals. It will survey the history of temple building in Egypt, the role of architecture and art -- particularly wall reliefs -- in communicating the functions of particular parts of temples. The aim is to help students understand what requirements an Egyptian temple needed to fulfill. Then each student will plan a temple for a chosen deity and explain to peers how it meets the ancient requirements.	3.00	12	T 2:00-4:30PM

History of Art

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.145.101	01			**Death and Dying in Art, Literature, and Philosophy:Introduction to Medical Humanities** *Lisi, Leonardo* This team-taught course offers an introduction to the new concentration in medicine, science, and humanities by approaching the topic of death and dying from historical, anthropological, philosophical, theological, literary and art historical perspectives.	3.00	19	T 10:30-11:45AM; Th 10:30-11:45AM
AS.145.101	02			**Death and Dying in Art, Literature, and Philosophy:Introduction to Medical Humanities** *Strowick, Elisabeth*	3.00	19	T 10:30-11:45AM; Th 10:30-11:45AM
AS.145.101	03			**Death and Dying in Art, Literature, and Philosophy:Introduction to Medical Humanities** *Merback, Mitchell*	3.00	19	T 10:30-11:45AM; Th 10:30-11:45AM
AS.213.369	01	H		**Dada's Ideologies: Literature, Art, & Politics** *Pelcher, James Brandon* This course will examine the literary and political theories implied in, and encountered by, Dadaist works and praxes. Particular attention will be paid to Dadaist confrontations with the growth of modern mass media, the politics of World War I, and consumerist capitalism in the wake of Taylorism and Fordism. Readings include major Dadaists as well as Althusser, Benjamin, Debord, Gramsci, Irigaray, Lukács, Marx, Saussure, among others.	3.00	18	MW 3:00-4:15PM
AS.389.201	01	HS		**Introduction to the Museum: Past and Present** *Kingsley, Jennifer P* This course surveys museums, from their origins to their most contemporary forms, in the context of broader historical, intellectual, and cultural trends. Anthropology, art, history, and science museums are considered. Cross-listed with Anthropology, History, and History of Art.	3.00	25	TTh 1:30-2:45PM

History of Science & Technology

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.140.105	01	HS		**History of Medicine** *Pomata, Gianna* Course provides an overview of the medical traditions of six ancient cultures; the development of Greek and Islamic traditions in Europe; and the reform and displacement of the Classical traditions during the Scientific Revolution.	3.00	20	MW 10:00-10:50AM; F 10:00-10:50AM
AS.140.105	02	HS		**History of Medicine**	3.00	20	MW 10:00-10:50AM; F 10:00-10:50AM
AS.140.105	03	HS		**History of Medicine**	3.00	20	MW 10:00-10:50AM; F 10:00-10:50AM
AS.140.115	01	HS	W	**Freshman Seminar: Artificial Humans** *Frumer, Yulia* Looking at the history of attempts to augment or construct human beings, the course will explore the role of technology in molding human existence and shaping the defination of humanity.	3.00	14	TTh 10:30-11:45AM
AS.140.163	01	HS		**Jungle Doctors: Medical Missions in Africa from David Livingston to Paul Farmer** *Cummiskey, Julia Ross* Freshman seminar using a variety of primary and secondary sources, students will explore the motivations and activities of expatriates practicing medicine in Africa from the 19th century to the present.	3.00	18	TTh 9:00-10:15AM
AS.140.165	01	HS	W	**Enlightenment Science Through Brilliant Books** *Richard, Jean-Olivier* Course explores the brilliant scientific and philosophic achievements of the 18th-century intellectual movement known as the Enlightenment through the reading of a selection of key authors (Voltaire, Franklin, the great Encyclopedists...). Includes introduction to research method and writing in the humanities.	3.00	15	MW 3:00-4:15PM
AS.140.321	01	HS		**Scientific Revolution** *Portuondo, Maria M* Explore how the Western understanding of nature changed between 1500 and 1720 through the works of astronomers and astrologers, naturalists and magi, natural philosophers and experimentalists, doctors and alchemists & others.	3.00	20	MW 10:00-10:50AM; F 10:00-10:50AM
AS.140.321	02	HS		**Scientific Revolution**	3.00	20	MW 10:00-10:50AM; F 10:00-10:50AM
AS.140.343	01	HS		**What it Means to be Human: Perspectives in the History of Anthropology, 1860-1995** *Link, Adrianna Halina* This course explores the changing scientific, social, and cultural ideas that shaped how anthropologists and other scholars approached the study of human beings from the mid-nineteenth through the twentieth centuries.	3.00	15	MW 1:30-2:45PM
AS.140.345	01	HS		**Animal Minds: Beyond the Black Box** *Nash, Richard Stephen*	3.00	12	W 3:00-5:20PM

History of Science & Technology

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				How do migratory birds and fish find their way home? Do honeybees communicate using a “dance language”? Do chimpanzees have mental lives akin to those of human beings? How do scientists attempt to answer such questions, and why was the “animal mind” a taboo for over 50 years in American science? Focusing on ethology and psychology from Darwin to the present, this course examines the history of the study of animal cognition and behavior. A major emphasis throughout the course will be on the question of animal consciousness from the late-19th through the 20th century.			
AS.140.346	01	HS		**History of Chinese Medicine** *Hanson, Marta* Students will study the most recent anthropological, philosophical, and historical scholarship on medicine in traditional and modern Chinese society. They will approach the topic from several angles including medical pluralism, the range of healers, domestic and literate medicine, gender, emergence of new disciplines, public health and the history of disease. The course relies on secondary sources and primary sources in English translation. Cross-listed with East Asian Studies.	3.00	20	MWF 9:00-9:50AM
AS.140.382	01	HS	W	**Plagues and Societies in World History** *Arner, Katherine Elizabeth* This course examines some of the most notable epidemics in world history from the Black Death to Ebola in 2014. Topics include the origins of epidemic diseases; the relations between epidemics and warfare, empires, and trade; and the sociocultural underpinnings of disease response.	3.00	20	TTh 9:00-10:15AM
AS.140.398	01	HS	W	**Godzilla and Fukushima: Japanese Environment in History and Films** *Frumer, Yulia* Juxtaposing Japanese environmental history and its reflection in popular media, the course will explore the intersection between technology, environment, and culture. The course will be accompanied by relevant movie screenings.	3.00	18	T 3:00-5:20PM
AS.140.411	01	HS		**Senior Research Seminar** *Frumer, Yulia* For majors pursuing independent research.	2.00	20	TBA
AS.140.447	01	HS		**Science and the City** *Kargon, Robert H* This seminar explores the nature and growth of urban scientific communities from Victorian Manchester, through geographic growth clusters such as Silicon Valley and Route 128, to new eco-cities in China and Abu Dhabi.	3.00	15	T 1:30-3:50PM
AS.190.471	01	S		**The University and Society** *Ginsberg, Benjamin*	3.00	25	W 1:30-3:50PM

History of Science & Technology

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				In the 20th century, American universities became the envy of the world, leading in most categories of scholarly productivity and attracting students from every nation. In recent years, though, American higher education has come to face a number of challenges including rapidly rising costs, administrative bloat, corporatization and moocification. We will examine the problems and promises of American higher education, the political struggles within the university and the place of the university in the larger society. Upper classes and Grad Students only.			

Humanities Center

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.145.101	01			**Death and Dying in Art, Literature, and Philosophy:Introduction to Medical Humanities** *Lisi, Leonardo* This team-taught course offers an introduction to the new concentration in medicine, science, and humanities by approaching the topic of death and dying from historical, anthropological, philosophical, theological, literary and art historical perspectives.	3.00	19	T 10:30-11:45AM; Th 10:30-11:45AM
AS.145.101	02			**Death and Dying in Art, Literature, and Philosophy:Introduction to Medical Humanities** *Strowick, Elisabeth*	3.00	19	T 10:30-11:45AM; Th 10:30-11:45AM
AS.145.101	03			**Death and Dying in Art, Literature, and Philosophy:Introduction to Medical Humanities** *Merback, Mitchell*	3.00	19	T 10:30-11:45AM; Th 10:30-11:45AM
AS.300.139	01	H		**Introduction to Intellectual History** *Marrati, Paola* This course offers a conceptual and historical introduction to Intellectual History. What makes the “history of ideas” different from the history of other objects? What, if anything, distinguishes the history of ideas from the history of philosophy? What is it exactly that we call “ideas”? In what sense do they have a history? These are examples of the kind of questions addressed in the course.	3.00	25	TTh 12:00-1:15PM
AS.300.143	01	H		**Introduction to Comparative Literature** *Lisi, Leonardo* This course offers an introduction to the history, theory, and praxis of comparative literature. We will read texts from some of the founding figures of the discipline and look at the most recent debates in the field, including translation studies, literary theory, and world literature, among others. Particular attention will be given to the methodologies and problems of studying literatures in different linguistic traditions and the relation between literature and other areas of thought and culture, such as philosophy, art history, and psychoanalysis. Case studies in comparative approaches to literature will provide concrete examples to our discussions.	3.00	25	Th 1:30-4:00PM

Humanities Center

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.300.241	01	H		**The Literature of the Everday** *Ong, Yi-Ping* The ordinary, the common, the everyday: why does literary realism consider the experiences of the average individual to be worthy of serious contemplation? In this course, we will read closely a set of novels by Flaubert, Mann, Dickens, Zola, Tolstoy, and Woolf from the period between 1850 and 1950 in which the development of realism reaches it climax. These novels explore the nature of work, family, the body, consciousness, and the changing relation between individual and tradition in modernity. We will situate these novels in their social, historical, and literary contexts, and establish a set of terms for the formal study of the novel as a genre (plot, character, setting, narrative, etc.). (Students of all levels who are interested in literature are encouraged to take this course.)	3.00	15	M 1:30-4:00PM
AS.300.290	01	H	W	**Freshman Seminar: Shakespeare and his "Goddess": real and imaginary lovers in the poetry and drama of early modern Europe** *Patton, Elizabeth* Shakespeare's description of his lover's eyes as 'nothing like the sun' is both an homage and a sendup of a 300-year-old poetic convention reaching back to the days of Petrarch and the early humanist poets. Incorporating music and drama, we will examine that sonnet tradition from the perspective of Shakespeare and his contemporaries, tracing both the historical roots of the Shakespearian sonnet form its influence on the music of the present day, and finishing the semester with Shakespeare's The Taming of the Shrew, a play that further illustrates and problematizes Shakespeare's 'goddess' reference. Readings will include poetic dialogues between male and female poets, such as those by the early Italian Petrarchans Vittoria Colonna, Michelangelo, Veronica Gambara, and Gaspara Stampa; their French counterparts, Maurice Scéve, Louis Labé, Joachim du Bellay and Pernette du Guillet; and later reflections on the sonnet by Shakespeare and his English contemporaries: Sir Philip Sidney; Sidney's niece, Mary Herbert, Lady Wroth; John Donne; Robert Southwell; and Katherine Phillips. All continental works will be read in translation.	3.00	15	TTh 3:00-4:15PM
AS.300.305	01	H	W	**Islamic Philosophy** *Ferhat, Loumia Rafika*	3.00	15	Th 1:30-4:00PM

Humanities Center

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course is an introduction to key concepts and seminal texts of Islamic Philosophy in the classical period, running from the 7th to the 13th century. Although instrumental to the transmission of Greek philosophy and to the rise of modern philosophy in the western world. Islamic philosophy is not merely a conduit of transmission. Philosophers on Islamic lands, offered original philosophical solution to both old problems, and new problems that arose with monotheism. We will begin our examination of the specificity of Islamic Philosophy by situating it in its historical and political context. We will have to tackle fundamental questions: How did philosophers who wrote in Arabic translate and transmit Greek philosophical texts? What does it mean to do philosophy within an Islamic context? Is it not an oxymoron to talk about philosophy within a religious context? The course is divided into three sections that treat of three general fields: politics, metaphysics and psychology and discusses the major Philosophers of the classical period, with particular attention paid to the work of Alfarabi, Avicenna and Averroes.			
AS.300.324	01	H		**Cinema of the 1930s: Communist and Capitalist Fantasies** *Eakin Moss, Anne* Comedy and musical comedy film flourished in the USA during the Great Depression as well as in the USSR during the Stalinist Great Terror. This course will compare films of the era in a variety of genres (musical, epic, Western, drama), examining the intersections between politics and aesthetics as well as the lasting implications of the films themselves in light of theoretical works on film as a medium, ethics and gender.	3.00	12	TTh 10:30-11:45AM
AS.300.333	01	H		**Melancholy in Science, Literature, and Film** *Fabietti, Elena* This course explores the manifold nature of melancholy from an interdisciplinary perspective that combines sciences, history of medicine, and the arts. Defined by Greek medicine as the excess of black bile, melancholy, in its long history, has been seen as disease of the soul, state of intellectual grace, or psychological condition. The course will examine chronologically the development and variety of the meanings of melancholy between medical texts, visual representations, poetry, psychoanalytic theory, and films. The works analyzed will include, among others, those by Galen, Robert Burton, Albrecht Dürer, Shakespeare, Cervantes, Baudelaire, Freud, Lars von Trier.	3.00	12	Th 1:30-4:00PM
AS.300.357	01	H	W	**Forms of Modern Fiction** *Macksey, Richard A*	3.00	12	Th 5:00-7:30PM

Humanities Center

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				A comparative tour of modern narrative forms from 3 continents. The emphasis is on the development of shorter fictional models, though some of the founders and innovators are better known for their novels. The emphasis will be on the emergence new structural, rhetorical, and thematic concerns, including adaptation to other media. There will be an optional hour for queries and discussion TBA.			
AS.300.371	01	H		**The Modernist Novel: James, Woolf, and Joyce** *Ong, Yi-Ping* The purpose of this course is to survey works by three of the greatest, most relentless innovators of the twentieth century – Henry James, Virginia Woolf, and James Joyce -- who explored and exploded narrative techniques for depicting what Woolf called the “luminous halo” of life. Selected works include: "The Beast in the Jungle," The Portrait of a Lady, Jacob’s Room, Mrs. Dalloway, To the Lighthouse, A Portrait of the Artist as a Young Man, and Ulysses.	3.00	20	MW 12:00-1:15PM
AS.300.383	01	H		**History of Madness from the Bible to DSM-V** *Ophir, Orna* Madmen, lunatics or the insane, have seen an extraordinary variety of responses and attitudes across the centuries. Whether seen as a “true” phenomenon or as socially constructed “madness” was defined and treated, examined and controlled, diagnosed and “cured” according to the spirit of the time. This course will follow the varied social imageries of “madness” throughout Western history, from the Bible to the contemporary and controversial Diagnostic Statistical Manual (DSM) in its most recent 5th edition. Alongside primary texts by Hippocrates, Avicenna, Pinel, and Freud and secondary texts by Michel Foucault, Ian Hacking, Edward Shorter, and Elaine Showalter, among others, we will acquaint ourselves with first-person accounts of “madness” and its different forms of treatment, ranging from lunatic asylum, through electric-shock treatments and lobotomies to psychoanalysis. The course will explore the interaction between the historical and social, scientific and political as well as economical factors that have shaped the views of “madness” and its treatment.	3.00	15	F 1:30-4:00PM
AS.300.419	01	H	W	**Gendered Performance** *Patton, Elizabeth* Male and Female Playwrights in Post-Reformation England (1560-1660). In this seminar we will read and compare plays by men and women in later Elizabethan and Stuart England, taking into account contemporary views of appropriate social roles and behavior for both men and women along with later critical assessments. Authors include William Shakespeare, Mary Sidney, Countess of Pembroke; Christopher Marlowe; Elizabeth Cary; Ben Jonson; and Lady Mary Wroth.	3.00	15	W 1:30-4:00PM
AS.300.427	01	H		**Reading Freud** *Ophir, Orna*	3.00	30	TTh 12:00-1:15PM

Humanities Center

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Sigmund Freud was one of the most influential thinkers of the 20th century. Psychoanalysis, which was his theory of mind, a research method, and a therapeutic technique, offered concepts that pervade Western culture and the humanities. In this seminar which is designed for students from all fields of knowledge, we will closely and chronologically read Freud's major works, follow his developing theories, and become familiar with psychoanalytic concepts such as the unconscious, the uncanny, instincts, sexuality and aggression, which illuminated mysteries in other fields, from literature to anthropology, from political science to religious studies, and from philosophy to the arts.			
AS.300.435	01	H		**Emmanuel Levinas: Essential Works, Guiding Concepts, Lasting Influence** *de Vries, Hent* This seminar will address the major writings and guiding concepts of Emmanuel Levinas and investigate his increasing critical role as a touchstone and dividing line in the formation of twentieth century and contemporary schools of thought (phenomenology, pragmatism, post-analytic philosophy, literary, feminist, and political theory, anthropology). Additional readings will include Stanley Cavell, Jacques Derrida, Vasily Grossman, Jean-François Lyotard, and Hilary Putnam.	3.00	15	W 4:00-6:00PM
AS.360.133	01	H	W	**Freshman Seminar: Great Books at Hopkins** *Patton, Elizabeth* Students attend lectures by an interdepartmental group of Hopkins faculty and meet for discussion in smaller seminar groups; each of these seminars is led by one of the course faculty. In lectures, panels, multimedia presentations, and curatorial sessions among the University's rare book holdings, we will explore some of the greatest works of the literary and philosophical traditions in Europe and the Americas. Close reading and intensive writing instruction are hallmarks of this course; authors for Fall 2014 include Homer, Plato, Boccaccio, Shakespeare, Madame de Lafayette, Flaubert, Dostoevsky, Chekhov, and Joyce.	3.00	15	TTh 10:30-11:45AM
AS.360.133	02	H	W	**Freshman Seminar: Great Books at Hopkins** *Achinstein, Sharon*	3.00	15	TTh 10:30-11:45AM
AS.360.133	03	H	W	**Freshman Seminar: Great Books at Hopkins** *Bett, Richard*	3.00	15	TTh 10:30-11:45AM
AS.360.133	04	H	W	**Freshman Seminar:Great Books at Hopkins** *Russo, Elena*	3.00	15	TTh 10:30-11:45AM
AS.360.133	05	H	W	**Freshman Seminar: Great Books at Hopkins** *Stephens, Walter E*	3.00	15	TTh 10:30-11:45AM
AS.371.149	01	H		**Visual Reality** *Bakker, D.S.*	3.00	12	F 1:30-4:20PM

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				In art, "Realism" is a simulation of visual reality. But art can also simulate alternative realities, those realities or truths which exist only in daydreams or nightmares. In this class, we will learn to explore and create representations of these additional moments of existence. This will require thinking creatively or "outside the box," a useful skill in any field. Using a variety of media, students are asked to solve problems to which there is no one correct answer.			
AS.371.151	01	H		**Photoshop/Digital Darkroom** *Ehrenfeld, Howard* Photoshop is not only the digital darkroom for processing images created with digital cameras; it is also a creative application for making original artwork. In this course, students use Photoshop software as a tool to produce images from a fine art perspective, working on projects that demand creative thinking while gaining technical expertise. Students will make archival prints, have regular critiques, and attend lectures on the history of the manipulated image and its place in culture. We will look at art movements which inspire digital artists, including 19th century collage, dada, surrealism, and the zeitgeist of Hollywood films. Students must have a digital camera. Prior knowledge of Photoshop is not required. Attendance at first class is mandatory.	3.00	10	M 10:00AM-12:50PM
AS.371.152	01	H		**Introduction to Digital Photography** *Ehrenfeld, Howard* Introduction to Digital Photography Students learn to use their digital cameras through a variety of projects, which will help them develop technical and creative skills. Students explore documentary, landscape and portrait photography. Critiques and slide lectures of historic photographs, which range from postmortem daguerreotypes to postmodern digital imagery, help students develop a personal vision. Students gain camera proficiency with one-on-one instruction in the field. Basics for print adjustment and output will be covered. Attendance at first class is mandatory.	3.00	10	T 10:00AM-12:50PM
AS.371.162	01	H		**Black and White: Digital Darkroom** *Berger, Phyllis A* In this digital course, students explore the black-and-white aesthetic. They develop camera skills on numerous field trips including Ladew Topiary Gardens, the Maryland Zoo & Botanical Gardens, and an optional weekend trip to Cape Henlopen State Park in Delaware. Students meet frequently for critiques and discussions based on historic and contemporary imagery. They will learn to use Photoshop for image adjustment. Techniques such as high dynamic range, duotone, panorama and infrared will be covered. Students work on a project of their choice and produce a portfolio of ten prints. Digital SLRs are provided. Attendance at 1st class is mandatory.	3.00	10	W 10:00AM-12:50PM
AS.371.162	02	H		**Black and White: Digital Darkroom**	3.00	10	W 2:00-4:50PM
AS.371.303	01	H		**Documentary Photography**	3.00	10	F 10:00AM-12:50PM

Humanities Center

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Berger, Phyllis A In this course, we will explore different genres of documentary photography, including the fine art document, photojournalism, social documentary photography, the photo essay and photography of propaganda. Students will work on a semester-long photo-documentary project on a subject of their choice. Digital SLRs will be provided. First class is mandatory.			
AS.371.303	02	H		**Documentary Photography**	3.00	10	F 2:00-4:50PM

Interdepartmental

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.360.133	01	H	W	**Freshman Seminar: Great Books at Hopkins** *Patton, Elizabeth* Students attend lectures by an interdepartmental group of Hopkins faculty and meet for discussion in smaller seminar groups; each of these seminars is led by one of the course faculty. In lectures, panels, multimedia presentations, and curatorial sessions among the University's rare book holdings, we will explore some of the greatest works of the literary and philosophical traditions in Europe and the Americas. Close reading and intensive writing instruction are hallmarks of this course; authors for Fall 2014 include Homer, Plato, Boccaccio, Shakespeare, Madame de Lafayette, Flaubert, Dostoevsky, Chekhov, and Joyce.	3.00	15	TTh 10:30-11:45AM
AS.360.133	02	H	W	**Freshman Seminar: Great Books at Hopkins** *Achinstein, Sharon*	3.00	15	TTh 10:30-11:45AM
AS.360.133	03	H	W	**Freshman Seminar: Great Books at Hopkins** *Bett, Richard*	3.00	15	TTh 10:30-11:45AM
AS.360.133	04	H	W	**Freshman Seminar:Great Books at Hopkins** *Russo, Elena*	3.00	15	TTh 10:30-11:45AM
AS.360.133	05	H	W	**Freshman Seminar: Great Books at Hopkins** *Stephens, Walter E*	3.00	15	TTh 10:30-11:45AM
AS.360.147	01	HS	W	**Freshmen Seminar: Adam Smith and Karl Marx** *Jelavich, Peter* This freshmen seminar examines the ideas of Smith, the greatest proponent of the free market, and Marx, his most radical critic. Freshmen only.	3.00	20	W 1:30-3:50PM
AS.360.247	01	S	W	**Introduction to Social Policy: Baltimore and Beyond** *Edin, Kathryn* Thsi course will introduce students to basic concepts in economics, political science and sociology relevant to the study of social problems and the programs designed to remedy them. It will address the many inequalities in access to education and health car, unequal treatment in the criminal justice system, disparities in income and wealth, and differential access to political power. The focus will be on designing effective policies at the national and local level to address these pressing issues. This courseis open to all students, but will be required for the new Social Policy Minor. The course is also recommended for students who are interested in law school, medical school, programs in public health, and gradaute school in related social science fields. Cross list with Sociology, Economics and Political Science. Freshman, Sophomore and Juniors only.	3.00	75	TTh 12:00-1:15PM

Interdepartmental

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.360.400	01	S	W	**Social Policy Senior Seminar** *Cherlin, Andrew J* This course is designed for students who have completed either the Baltimore or Washington intensive semesters of the Social Policy Minor. The students will make presentations and pursue joint projects based on what they have learned during the intensive semesters concerning key social policy issues.	3.00	16	TTh 10:30-11:45PM
EN.570.428	01	QS	W	**Problems in Applied Economics** *Hanke, Steve H* This course brings the principles of economic theory to bear upon particular problems in the fields of economics, finance and public policy. Micro, macro and international problems, from both the private and public sectors, are addressed. A heavy emphasis is placed on research and writing. Students learn how to properly conduct substantive economic research, utilizing statistical techniques and lessons from economic history. Findings are presented in the form of either memoranda or working papers. Exceptional work may be suitable for publication through the Johns Hopkins Institute for Applied Economics, Global Health, and the Study of Business Enterprise.	3.00	19	TBA
EN.570.470	01	QS	W	**Applied Econ & Finance** *Hanke, Steve H* This course focuses on company valuations, using the proprietary Hanke-Guttridge Discounted Free Cash Flow Model. Students use the model and data from financial statements filed with the Securities and Exchange Commission to calculate the value of publicaly-traded companies. Using Monte Carlo simulations, students also generate forecast scenarios, project likely share-price ranges and assess potential gains/losses. Stress is placed on using these simulations to diagnose the subjective market expectations contained in current objective market prices, and the robustness of these expectations. During the weekly seminar, students' company valuations are reviewed and critiqued.	3.00	11	F 1:30-4:30PM
EN.570.487	01	QS	W	**Financial Market Research** *Hanke, Steve H* This course investigates the workings of financial, foreign exchange, and commodity futures markets. Research is focused on price behavior, speculation, and hedging in these markets. Extensive research and writing is required. Exceptional work may be suitable for publication through the Johns Hopkins Institute for Applied Economics, Global Health, and the Study of Business Enterprise.	3.00	10	TBA

International Studies

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.140.398	01	HS	W	**Godzilla and Fukushima: Japanese Environment in History and Films** *Frumer, Yulia* Juxtaposing Japanese environmental history and its reflection in popular media, the course will explore the intersection between technology, environment, and culture. The course will be accompanied by relevant movie screenings.	3.00	18	T 3:00-5:20PM
AS.180.241	01	S		**International Trade** *Bertrand, Trent* Theory of comparative advantage and the international division of labor: the determinants and pattern of trade, factor price equalization, factor mobility, gains from trade and distribution of income, and theory and practice or tariffs and other trade restrictions.	3.00	120	TTh 12:00-1:15PM
AS.180.289	01	S		**Economics of Health** *Bishai, David M* Application of economic concepts and analysis to the health services system. Review of empirical studies of demand for health services, behavior of providers, and relationship of health services to population health levels. Discussion of current policy issues relating to financing and and resource allocation.	3.00	100	M 3:30-5:50PM
AS.180.355	01	S		**Economics of Poverty/Inequality** *Moffitt, Robert A* This course focuses on the economics of poverty and inequality. It covers the measurement of poverty and inequality, facts and trends over time, the causes of poverty and inequality with a focus on those related to earnings and the labor market, and public policy toward poverty and inequality, covering both taxation and government expenditure and programs. By the nature of the material, the course is fairly statistical and quantitative. Students should have an intermediate understanding of microeconomic concepts. Basic knowledge of regression analysis is also helpful.	3.00	25	TTh 10:30-11:45AM
AS.190.101	01	S		**Introduction to American Politics** *Ginsberg, Benjamin* This course is an introduction to government and politics through the study of the government and politics of the United States. All governments combine coercion and legitimacy. In a stable and legitimate system of government, coercion is hardly noticed by most citizens. Government comes to be seen as a source of benefits. The purpose of this course is to look behind institutions, practices, and benefits to appreciate how, for what and by whom we are governed.	3.00	20	MW 11:00-11:50AM; F 11:00-11:50AM
AS.190.101	02	S		**Introduction to American Politics**	3.00	20	MW 11:00-11:50AM; F 11:00-11:50AM
AS.190.101	03	S		**Introduction to American Politics**	3.00	20	MW 11:00-11:50AM; F 11:00-11:50AM
AS.190.101	04	S		**Introduction to American Politics**	3.00	20	MW 11:00-11:50AM; F 12:00-12:50PM
AS.190.101	05	S		**Introduction to American Politics**	3.00	20	MW 11:00-11:50AM; F 12:00-12:50PM
AS.190.101	06	S		**Introduction to American Politics**	3.00	20	MW 11:00-11:50AM; F 12:00-12:50PM

International Studies

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.190.101	07	S		**Introduction to American Politics**	3.00	20	MW 11:00-11:50AM; F 9:00-9:50AM
AS.190.101	08	S		**Introduction to American Politics**	3.00	20	MW 11:00-11:50AM; F 9:00-9:50AM
AS.190.101	09	S		**Introduction to American Politics**	3.00	20	MW 11:00-11:50AM; F 9:00-9:50AM
AS.190.101	10	S		**Introduction to American Politics**	3.00	20	MW 11:00-11:50AM; F 9:00-9:50AM
AS.190.101	11	S		**Introduction to American Politics**	3.00	20	MW 11:00-11:50AM; F 11:00-11:50AM
AS.190.101	12	S		**Introduction to American Politics**	3.00	20	MW 11:00-11:50AM; F 12:00-12:50PM
AS.190.209	01	S		**Contemporary International Politics** *David, Steven R* An introduction to international politics. Emphasis will be on continuity and change in international politics and the causes of war and peace. The first half of the course will focus on events prior to the end of the Cold War, including the Peloponnesian War, the European balance of power, imperialism, the origins and consequences of WWI and WWII, and the Cold War. The second half will focus on international politics since 1990, including globalization, whether democracies produce peace, the impact of weapons of mass destruction, terrorism, and the prospects for peace in the 21st century. Theories of realism and liberalism will also be considered.	3.00	20	MW 1:30-2:20PM; F 1:30-2:20PM
AS.190.209	02	S		**Contemporary International Politics**	3.00	20	MW 1:30-2:20PM; F 1:30-2:20PM
AS.190.209	03	S		**Contemporary International Politics**	3.00	20	MW 1:30-2:20PM; F 3:00-3:50PM
AS.190.209	04	S		**Contemporary International Politics**	3.00	20	MW 1:30-2:20PM; F 3:00-3:50PM
AS.190.209	05	S		**Contemporary International Politics**	3.00	20	MW 1:30-2:20PM; Th 9:00-9:50AM
AS.190.209	06	S		**Contemporary International Politics**	3.00	20	MW 1:30-2:20PM; Th 9:00-9:50AM
AS.190.209	07	S		**Contemporary International Politics**	3.00	20	MW 1:30-2:20PM; Th 10:30-11:20AM
AS.190.209	08	S		**Contemporary International Politics**	3.00	20	MW 1:30-2:20PM; Th 10:30-11:20AM
AS.190.209	09	S		**Contemporary International Politics**	3.00	20	MW 1:30-2:20PM; W 3:00-3:50PM
AS.190.209	10	S		**Contemporary International Politics**	3.00	20	MW 1:30-2:20PM; W 4:00-4:50PM
AS.190.396	01	NS	W	**Capitalism and Ecology** *Connolly, William E* This seminar explores the bumpy relations between contemporary capitalism and the Anthropocene-the two hundred year period when modern political economies have promoted rapid climate change. We examine different readings of capitalism in relation to the self-organizing capacities of climate, ocean currents, glaciers and other force-fields. We also explore the effects on late-modern life and different strategies to respond to them. Key texts: Hayek, Law, Legislation and Liberty, Pearce, With Speed and Violence, Lazzarato, The Rise of The Indebted Man, Hirsch The Social Limits to Growth, Klein, This Changes Everything, Connolly The Fragility of Things. Two 10-12 page essays. Previous course in theory or some near equivalent suggested.	3.00	15	M 1:30-3:50PM
AS.190.471	01	S		**The University and Society** *Ginsberg, Benjamin*	3.00	25	W 1:30-3:50PM

International Studies

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				In the 20th century, American universities became the envy of the world, leading in most categories of scholarly productivity and attracting students from every nation. In recent years, though, American higher education has come to face a number of challenges including rapidly rising costs, administrative bloat, corporatization and moocification. We will examine the problems and promises of American higher education, the political struggles within the university and the place of the university in the larger society. Upper classes and Grad Students only.			
AS.191.335	01	S		**Arab-Israeli Conflict (IR)** *Freedman, Robert* The course will focus on the origin and development of the Arab-Israeli conflict from its beginnings when Palestine was controlled by the Ottoman Empire, through World War I, The British Mandate over Palestine, and the first Arab-Israeli war (1947-1949). It will then examine the period of the Arab-Israeli wars of 1956, 1967, 1973, and 1982, the Palestinian Intifadas (1987-1993 and 2000-2005); and the development of the Arab-Israeli peace process from its beginnings with the Egyptian-Israeli treaty of 1979, the Oslo I and Oslo II agreements of 1993 and 1995, Israel's peace treaty with Jordan of 1994, the Road Map of 2003; and the periodic peace talks between Israel and Syria. The conflict will be analyzed against the background of great power intervention in the Middle East, the rise of political Islam and the dynamics of Intra-Arab politics, and will consider the impact of the Arab Spring.	3.00	40	T 4:00-6:30PM
AS.191.345	01	S		**Russian Foreign Policy (IR)** *Freedman, Robert* This course will explore the evolution of Russian Foreign Policy from Czarist times to the present. The main theme will be the question of continuity and change, as the course will seek to determine to what degree current Russian Foreign Policy is rooted in the Czarist(1613-1917) and Soviet(1917-1991) periods, and to what degree it has operated since 1991 on a new basis. The main emphasis of the course will be on Russia's relations with the United States and Europe, China, the Middle East and the countries of the former Soviet Union--especially Ukraine, the Baltic States, Transcaucasia and Central Asia. The course will conclude with an analysis of the Russian reaction to the Arab Spring and its impact both on Russian domestic politics and on Russian foreign policy.	3.00	35	W 4:00-6:30PM
AS.191.402	01	QS		**Numbers, Pictures, Politics** *Rom, Mark* Aitchison students only.	3.00	15	Th 6:30-9:00PM
AS.211.394	01	H	W	**Brazilian Culture & Civilization** *De Azeredo Cerqueira, Flavia Christina*	3.00	26	WF 3:00-4:15PM

International Studies

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course is intended as an introduction to the culture and civilization of Brazil. It is designed to provide students with basic information about Brazilian history, art, literature, popular culture, theater, cinema, and music. The course will focus on how indigenous Asian, African, and European cultural influences have interacted to create the new and unique civilization that is Brazil today. The course is taught in English, but ONE extra credit will be given to students who wish to do the course work in Portuguese. Those wishing to do the course work in English for 3 credits should register for section 01. Those wishing to earn 4 credits by doing the course work in Portuguese should register for section 02. The sections will be taught simultaneously. Section 01: 3 credits Section 02: 4 credits (instructor's permission required)			
AS.211.394	02	H	W	**Brazilian Culture & Civilization**	4.00	4	WF 3:00-4:15PM
AS.230.175	01	S	W	**Chinese Revolutions** *Kuo, Huei-Ying* This course introduces the origins, operation and impacts of five major revolutions in modern China between 1850 and 1950. These include the Taiping Rebellion, the republican revolutions, federalist and southern automatic movements, labor strikes as well as peasant rebellions. It draws on the existing historiography that examines China's transition from an empire to a republic, impacts of western and Japanese influences to China, as well as the continuity and change of Chinese social organizations. Cross list with International Studies and East Asian Studies. Fulfills IS History requirement.	3.00	20	TTh 1:30-2:45PM
AS.230.213	01	S	W	**Social Theory** *Andreas, Joel* This course provides an introduction to classical sociological theories (with an emphasis on Marx, Weber, and Durkheim). Contemporary theoretical perspectives on social inequality, conflict, and social change are also explored. Emphasis is placed on understanding the theoretical constructs as well as on applying them in the analysis of current social issues. Special Note: Required for IS GSCD track students.	3.00	30	TTh 12:00-1:15PM

International Studies

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.230.265	01	QS		**Research Tools and Technologies for the Social Sciences** *Upadhyay, Smriti* This course will introduce students to a range of digital technologies that are critical for conducting social scientific research in the 21st century, using examples from ongoing social science faculty research projects at Johns Hopkins on global inequality and international development and on the 2010-2012 global wave of social protest. Students will develop competency in the use of computer programs for statistical analysis, database management, the creation of maps and timelines, and the presentation of research reports. Special Note: Required for IS GSCD track students.	3.00	15	MW 1:30-2:45PM
AS.230.343	01	S		**Political Sociology of Latin America** *von der Heydt-Coca, Magda Zonia* This course provides an overview of Latin America through its historical, economic, social, and political dimensions. Emphasis will be given to the analysis of social structures: class, race and ethnicity, and the contemporary social movements. The course begins with an overview of the pre-Columbian civilizations and colonial legacies that gave rise to the multiethnic societies and the ethnic conflicts which characterize contemporary Latin America.Cross-listed with Program in Latin American Studies and International Studies (CP)	3.00	20	TTh 3:00-4:15PM
AS.230.377	01	S		**Colonialism and Anti-Colonialism** *Kuo, Huei-Ying* This seminar examines the theories and historiography of colonialism and anti-colonial movements. It focuses on the establishment of the colonial division of labor, comparative colonialism, identity formation, and nationalism as well as anti-colonial movement.	3.00	20	TTh 10:30-11:45AM
AS.230.385	01	S		**Schooling, Racial Inequality and Public Policy in America** *Morgan, Stephen L* After examining alternative explanations for why individuals obtain different amounts and types of educational training, the course focuses on how an individual's family background and race affect his or her trajectory through the educational system. The course covers the specific challenges that have confronted urban schooling in America since the 1960s, including the classic literature on the effects of school and community resources on student achievement as well as the development and later evaluation of school desegregation policies. The course also considers case studies of current policy debates in the US, such as housing segregation and school resegregation, voucher programs for school choice, and the motivation for and consequences of the establishment of state-mandated testing requirements. Throughout the course, emphasis is placed upon the alternative modes of inquiry and writing which opposing scholars, policymakers, and journalists use to address these contentious topics.	3.00	15	MW 12:00-1:15PM

International Studies

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.250.353	01	N		**Computational Biology** *Fleming, Patrick* This course introduces several computational approaches to the study of biological macromolecules. Students will learn to use computational tools to carry out and analyze molecular simulations and how to work in a UNIX networked environment. A major goal is to understand molecular systems as ensembles. No programming experience is required. A previous biochemistry course is strongly recommended.	3.00	36	TTh 10:30-11:45AM
AS.310.115	01	H		**Ghost Tales from China and Japan, 14th-19th Centuries** *Joo, Fumiko* We cannot express our own experience of death – only imagine life after death. How did people in the past conceptualize the world of the dead? Ghost tales will teach us what we imagine as the experience of dead and life after death. This course aims to introduce students to a variety of ghost stories in Late Imperial China and Tokugawa Japan and connect their literary imagination of the dead to the cultural, socio-historical, and religious context of each society as well as to the broad East Asian tradition of supernatural narratives. While we also touch upon earlier traditions on narrating the dead, most of the stories in class readings are from the Ming (1368-1644) and Qing (1644-1911) dynasties of China, and the Tokugawa period (1600-1868) of Japan. Key issues include family, gender, sexuality, body, medicine and many more. Although we will also take a look at visual and theatrical representations of the dead, we will primarily focus on literary texts about ghostly phenomena. Film screenings required. All readings are in English.	3.00	25	MW 3:00-4:15PM
AS.310.305	01	S		**Southeast Asia and US Security** *Ott, Marvin C* This survey course is designed to introduce students to Southeast Asia -- the ten member countries of the Association of Southeast Asian Nations (ASEAN) plus Australia and New Zealand. Southeast Asia is an integral part of the broader region of East Asia and a geographic bridge to the Indian subcontinent (South Asia). Southeast Asia has been one of the great success stories in the saga of modernization and development of post-colonial Afro-Asia over the last six decades. Its resulting economic importance is matched by its strategic significance given the presence of imbedded jihadist networks and the emergence of China as a regional great power and aspirant superpower. Nevertheless, the region has been largely overlooked by senior foreign policy and defense officials in Washington. This course will equip students to fill that void by examining the region from the perspective of national security strategy -- broadly understood in its multiple dimensions. Students will be challenged to formulate some element of a viable U.S. national security strategy for the region.	3.00	20	T 1:30-4:00PM

Jewish Studies Program

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.100.435	01	HS	W	**Jewish and Black Diasporas in History and Social Theory, 1890-1945** *Connolly, Nathan D* The formation of minority peoplehoods in the age of global racialism, mass migration, and nationalism's ascendancy as a political principle. Focuses on social thinkers who grappled with this issue (Weber, Du Bois, Arendt); on making sense of the global structures of race, imperial rule, nationhood, and intellectual exchange that framed peoplehood 1890-1945; and on the particular history of African American and East European Jewish negotiations with peoplehood between choice and violent imposition. Permission of instructors.	3.00	15	T 2:00-4:30PM
AS.130.301	01	H		**History of Ancient Syria-Palestine** *McCarter, P Kyle, Jr.* A survey of the history of Ancient Syria and Cannan, including Ancient Israel.	3.00	25	MW 12:00-1:15PM
AS.130.330	01	H		**The Garden of Eden** *Robbins, Ellen Ann* The story of the Garden of Eden remains an archetype in popular culture. Find out about the real biblical story and how it developed into the one we think we know. The only requirements are an open mind and a strong desire to learn.	3.00	10	TTh 3:00-4:15PM
AS.130.348	01	H		**Religious Law Wrestles With Change: The Case of Judaism** *Katz, David* Description: "How does a religious system which defines its ancient laws as God-given and unchangeable apply them to radically different and changing social, political and intellectual situations? This course explores the literature of "Questions and Answers"(She'elot u-Teshuvot), the Jewish legal responsa which have struggled to match Jewish religious law to modern life for fifteen centuries. A sweeping survey of Jewish history as revealed by one of its most impenetrable yet fascinating sources. Cross-listed with Jewish Studies.	3.00	25	TTh 9:00-10:15AM
AS.130.376	01	H		**Ancient Ritual** *Delnero, Paul* This course will introduce students to the vast body of rituals that were practiced and performed in antiquity, with a particular emphasis on rituals from ancient Mesopotamia, Egypt, and the Hebrew Bible. In addition to examining rituals from a comparative perspective, anthropological and sociological studies of ritual will be read and discussed to shed light on the social, cultural, and political significance of ritual in the ancient world and beyond.	3.00	30	MW 3:00-4:15PM
AS.130.442	01	H		**Readings - Hebrew Prose** *Staff* Reading of biblical Hebrew prose, especially from the Pentateuch, Joshua, Judges, Samuel, and Kings. Cross-listed with Jewish Studies.	3.00	25	TBA
AS.191.335	01	S		**Arab-Israeli Conflict (IR)** *Freedman, Robert*	3.00	40	T 4:00-6:30PM

Jewish Studies Program

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				The course will focus on the origin and development of the Arab-Israeli conflict from its beginnings when Palestine was controlled by the Ottoman Empire, through World War I, The British Mandate over Palestine, and the first Arab-Israeli war (1947-1949). It will then examine the period of the Arab-Israeli wars of 1956, 1967, 1973, and 1982, the Palestinian Intifadas (1987-1993 and 2000-2005); and the development of the Arab-Israeli peace process from its beginnings with the Egyptian-Israeli treaty of 1979, the Oslo I and Oslo II agreements of 1993 and 1995, Israel's peace treaty with Jordan of 1994, the Road Map of 2003; and the periodic peace talks between Israel and Syria. The conflict will be analyzed against the background of great power intervention in the Middle East, the rise of political Islam and the dynamics of Intra-Arab politics, and will consider the impact of the Arab Spring.			
AS.193.200	01	S	W	**Early Holocaust Literature: Jewish Poetry and Prose 1939-1949** *Trinh, Miriam* Introduces the two earliest forms of Holocaust literature: literary writing by Jews under Nazi rule and literary writing by Jewish survivors of the Holocaust produced in its immediate wake (between liberation in 1945 and the decisive moment of the foundation of the State of Israel in 1948). Treats questions of literature as a form of immediate reaction to persecution and annihilation, literature as testimony, the relationship of poetics and early Holocaust memory and consciousness. Reference will be made mainly to professional writers in Yiddish and Polish. All readings in English translation.	3.00	25	Th 1:30-3:50PM
AS.193.300	01	S		**Readings in Yiddish** *Niborski, Eliezer*	3.00	5	TBA
AS.193.304	01	S		**Poetry of Ordinary People: Jewish Poetic Expression in Ghettos and Camps** *Trinh, Miriam* The course aims to encourage knowledge of a relatively unknown mass phenomenon - poetic creativity by Jews under Nazi Rule, in the Ghettos and Camps. The study of multi-lingual texts, written by non-professional writers, will enable to better understand the complexity of immediate Jewish reaction to Holocaust reality, in its multi-cultural contexts. Texts from selected ghettos and camps, originally written in Yiddish, Polish, German and Hebrew will be read in English translation and analyzed. Emphasis will be put on the differences and similarities between Eastern and Western European Jewry.	3.00	15	W 5:30-7:50PM
AS.210.163	01			**Elementary Yiddish I** *Caplan, Beatrice*	3.00	12	TTh 9:00-10:15AM

Jewish Studies Program

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Year-long course. Includes the four language skills, reading,writing, listening, and speaking, and introduces students to Yiddish culture through text, song, and film. Emphasis is placed both on the acquisition of Yiddish as a tool for the study of Yiddish literature and Ashkenazic history and culture, and on the active use of the language in oral and written communication. Both semesters must be taken with a passing grade to receive credit. Students wishing to retain credits for Yiddish Elements I must complete Yiddish Elements II with a passing grade.			
AS.213.387	01	H		**Major City, Minor Literature? Berlin in German-Jewish and Yiddish Literature** *Spinner, Samuel Jacob* Between the two World Wars, a period of intense artistic and intellectual vitality, Berlin was an international center for theater, visual arts, and literature. Many important Yiddish-language writers were drawn to Berlin and, together with their German- language counterparts, produced a body of literature that explores issues of modernity and identity. By comparing works in Yiddish and German, we will learn about inter-War Berlin's cultural diversity and richness, while also gaining insight into the particular issues of writing about Jewish identity in the 1920s, and the implications of writing in a minor language (Yiddish). We will read works by authors including Joseph Roth and Alfred Döblin in German, and Moyshe Kulbak and Dovid Bergelson in Yiddish. All texts will be in translation. Some questions we will explore include: • What is a minority/minor language or literature? • How did German and Yiddish interact in cultural and social spheres? • Can texts in different languages comprise a single body of literature? • What did it mean to be German and what did it mean to be Jewish? • Are assimilation and hybridity useful concepts? • Is there such a thing as Jewish modernism? • How did literature of the period respond to the rise of the Nazi party and the intensification of antisemitism?	3.00	25	Th 1:30-4:00PM
AS.216.373	01	H		**War in Israeli Arts and Culture** *Stahl, Neta* In this course we will study the various representations of what functions as one of Israel's most unifying and yet dividing forces: war. By analyzing literary and cinematic works as well as visual art and popular culture we will attempt to understand the role of war in shaping Israeli society, culture and politics. Topics such as commemoration and mourning, dissent and protest, trauma and memory and the changing image of the soldier will stand at the center of the course. Students with a knowledge of Hebrew wishing to do extra work in Hebrew should enroll in section 2 and the fourth hour will be scheduled at a time convenient to the enrollees and instructor.	3.00	9	TTh 10:30-11:45AM

Jewish Studies Program

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.216.373	02	H		**War in Israeli Arts and Culture**	4.00	3	TTh 10:30-11:45AM
AS.216.457	01	H		**The Jewish Jesus: Literature, Film, Thought** *Stahl, Neta* "And Jesus was a Jew with ear-locks and prayer shawl" claimed Uri Zvi Greenberg, the ultra-nationalist giant of modern Jewish poetry. A flesh-and-blood Jew, a demon, a spoiled student, an idol, a brother, a (failed) Messiah, a nationalist rebel, a Greek god in a Jewish garb – these images of Jesus accompanied Jewish thought and imagination for almost two thousand years. In what ways do the representations of Jesus contribute to the self understanding of Jews over these two millenia? What were the major changes in the representation of Jesus by Jews throughout this vast period?These and similar questions regarding the Jewish Jesus will engage us at this seminar and will be studied through literary works, visual art, films and thought.	3.00	15	T 1:30-4:00PM
AS.384.115	01			**First Year Hebrew** *Cohen, Zvi* Designed to provide reading and writing mastery, to provide a foundation in Hebrew grammar and to provide basic conversational skills. Cross-listed with Jewish Studies. Final day/time will be determined during the first week of classes based on students' schedules.	4.00	16	TBA
AS.384.215	01	H		**Second Year Hebrew** *Cohen, Zvi* Designed to enrich vocabulary and provide intensive grammatical review, and enhance fluency in reading, writing and comprehension. Cross-listed with Jewish Studies. Final day/time will be determined during the first week of classes based on students' schedules.	4.00	16	TBA
AS.384.315	01	H		**Third Year Hebrew** *Cohen, Zvi* Designed to maximize comprehension and the spoken language through literary and newspaper excerpts providing the student with the language of an educated Israeli. Cross-listed with Jewish Studies. Final day/time will be determined during the first week of classes based on students' schedules.	4.00	16	TBA

Mathematics

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.110.105	01	Q		**Introduction to Calculus** *Staff* This course starts from scratch and provides students with all the background necessary for the study of calculus. It includes a review of algebra, trigonometry, exponential and logarithmic functions, coordinates and graphs. Each of these tools will be introduced in its cultural and historical context. The concept of the rate of change of a function will be introduced. Not open to students who have studied calculus in high school.	4.00	30	MWF 9:00-9:50AM; T 1:30-2:20PM
AS.110.106	01	Q		**Calculus I** *Staff* Differential and integral calculus. Includes analytic geometry, functions, limits, integrals and derivatives, introduction to differential equations, functions of several variables, linear systems, applications for systems of linear differential equations, probability distributions. Many applications to the biological and social sciences will be discussed.	4.00	30	MWF 10:00-10:50AM; T 4:30-5:20PM
AS.110.106	02	Q		**Calculus I**	4.00	30	MWF 10:00-10:50AM; T 3:00-3:50PM
AS.110.106	03	Q		**Calculus I**	4.00	30	MWF 10:00-10:50AM; Th 4:30-5:20PM
AS.110.106	04	Q		**Calculus I**	4.00	30	MWF 10:00-10:50AM; Th 3:00-3:50PM
AS.110.106	05	Q		**Calculus I**	4.00	30	MWF 10:00-10:50AM; Th 1:30-2:20PM
AS.110.106	06	Q		**Calculus I**	4.00	30	MWF 11:00-11:50AM; Th 4:30-5:20PM
AS.110.106	07	Q		**Calculus I** *Li, Zhan*	4.00	30	MWF 11:00-11:50AM; Th 1:30-2:20PM
AS.110.106	08	Q		**Calculus I**	4.00	30	MWF 11:00-11:50AM; T 3:00-3:50PM
AS.110.106	09	Q		**Calculus I**	4.00	30	MWF 11:00-11:50AM; T 1:30-2:20PM
AS.110.106	10	Q		**Calculus I**	4.00	30	MWF 11:00-11:50AM; Th 3:00-3:50PM
AS.110.107	01	Q		**Calculus II** *Wilson, W Stephen* Differential and integral calculus. Includes analytic geometry, functions, limits, integrals and derivatives, introduction to differential equations, functions of several variables, linear systems, and applications for systems of linear differential equations, probability distributions.	4.00	30	MWF 10:00-10:50AM; T 4:30-5:20PM
AS.110.107	02	Q		**Calculus II**	4.00	30	MWF 10:00-10:50AM; T 3:00-3:50PM
AS.110.107	03	Q		**Calculus II**	4.00	30	MWF 10:00-10:50AM; Th 3:00-3:50PM
AS.110.107	04	Q		**Calculus II**	4.00	30	MWF 10:00-10:50AM; Th 1:30-2:20PM
AS.110.108	01	Q		**Calculus I** *Bernstein, Jacob* Differential and integral calculus. Includes analytic geometry, functions, limits, integrals and derivatives, polar coordinates, parametric equations, Taylor's theorem and applications, infinite sequences and series.	4.00	30	MWF 10:00-10:50AM; T 1:30-2:20PM
AS.110.108	02	Q		**Calculus I**	4.00	30	MWF 10:00-10:50AM; T 3:00-3:50PM
AS.110.108	03	Q		**Calculus I**	4.00	30	MWF 10:00-10:50AM; Th 1:30-2:20PM
AS.110.108	04	Q		**Calculus I**	4.00	30	MWF 11:00-11:50AM; Th 4:30-5:20PM
AS.110.108	05	Q		**Calculus I**	4.00	30	MWF 11:00-11:50AM; Th 3:00-3:50PM
AS.110.109	01	Q		**Calculus II** *Staff*	4.00	29	MWF 10:00-10:50AM; T 1:30-2:20PM

Mathematics

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Differential and integral calculus. Includes analytic geometry, functions, limits, integrals and derivatives, polar coordinates, parametric equations, Taylor's theorem and applications, infinite sequences and series. Some applications to the physical sciences and engineering will be discussed, and the courses are designed to meet the needs of students in these disciplines.			
AS.110.109	02	Q		**Calculus II**	4.00	29	MWF 10:00-10:50AM; T 3:00-3:50PM
AS.110.109	03	Q		**Calculus II**	4.00	29	MWF 10:00-10:50AM; Th 4:30-5:20PM
AS.110.109	04	Q		**Calculus II**	4.00	29	MWF 10:00-10:50AM; Th 3:00-3:50PM
AS.110.109	05	Q		**Calculus II**	4.00	29	MWF 11:00-11:50AM; Th 1:30-2:20PM
AS.110.109	06	Q		**Calculus II**	4.00	29	MWF 11:00-11:50AM; T 3:00-3:50PM
AS.110.109	07	Q		**Calculus II**	4.00	29	MWF 11:00-11:50AM; T 1:30-2:20PM
AS.110.109	08	Q		**Calculus II**	4.00	29	MWF 11:00-11:50AM; Th 3:00-3:50PM
AS.110.109	09	Q		**Calculus II**	4.00	29	MWF 11:00-11:50AM; Th 4:30-5:20PM
AS.110.201	01	Q		**Linear Algebra** *Di Matteo, Giovanni* Vector spaces, matrices, and linear transformations. Solutions of systems of linear equations. Eigenvalues, eigenvectors, and diagonalization of matrices. Applications to differential equations.	4.00	35	MWF 10:00-10:50AM; T 1:30-2:20PM
AS.110.201	02	Q		**Linear Algebra**	4.00	35	MWF 10:00-10:50AM; T 3:00-3:50PM
AS.110.201	03	Q		**Linear Algebra**	4.00	35	MWF 10:00-10:50AM; T 4:30-5:20PM
AS.110.201	04	Q		**Linear Algebra**	4.00	35	MWF 10:00-10:50AM; Th 1:30-2:20PM
AS.110.201	05	Q		**Linear Algebra**	4.00	35	MWF 10:00-10:50AM; Th 3:00-3:50PM
AS.110.202	01	Q		**Calculus III** *Zhu, Jiuyi* Calculus of functions of more than one variable: partial derivatives, and applications; multiple integrals, line and surface integrals; Green's Theorem, Stokes' Theorem, and Gauss' Divergence Theorem.	4.00	30	MWF 11:00-11:50AM; T 1:30-2:20PM
AS.110.202	02	Q		**Calculus III**	4.00	32	MWF 11:00-11:50AM; T 3:00-3:50PM
AS.110.202	03	Q		**Calculus III**	4.00	32	MWF 11:00-11:50AM; Th 4:30-5:20PM
AS.110.202	04	Q		**Calculus III**	4.00	32	MWF 11:00-11:50AM; Th 3:00-3:50PM
AS.110.202	05	Q		**Calculus III**	4.00	32	MWF 11:00-11:50AM; Th 1:30-2:20PM
AS.110.202	06	Q		**Calculus III**	4.00	32	MWF 11:00-11:50AM; T 1:30-2:20PM
AS.110.202	07	Q		**Calculus III**	4.00	32	MWF 12:00-12:50PM; T 4:30-5:20PM
AS.110.202	08	Q		**Calculus III**	4.00	30	MWF 12:00-12:50PM; Th 1:30-2:20PM
AS.110.202	09	Q		**Calculus III**	4.00	32	MWF 12:00-12:50PM; Th 3:00-3:50PM
AS.110.202	10	Q		**Calculus III**	4.00	32	MWF 12:00-12:50PM; T 1:30-2:20PM
AS.110.202	11	Q		**Calculus III**	4.00	32	MWF 12:00-12:50PM; T 3:00-3:50PM
AS.110.211	01	Q		**Honors Multivariable Calculus** *Pingali, Vamsi* This course includes the material in AS.110.202 with some additional applications and theory. Recommended for mathematically able students majoring in physical science, engineering, or especially mathematics. AS.110.211 -AS.110.212 used to be an integrated yearlong course, but now the two are independent courses and can be taken in either order.	4.00	30	MW 12:00-1:15PM; F 12:00-12:50PM

Mathematics

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.110.212	01	Q		**Honors Linear Algebra** *Zucker, Steven* This course includes the material in Linear Algebra (201) with some additional applications and theory. Recommended for mathematically able students majoring in physical science, engineering, or mathematics. 211-212 used to be an integrated yearlong course, but now the two are independent courses and can be taken in either order. This course satisfies a requirement for the math major that its non-honors sibling does not.	4.00	30	MW 1:30-2:45PM; F 1:30-2:20PM
AS.110.302	01	Q		**Differential Equations and Applications** *Brown, Richard* This is an applied course in ordinary differential equations, which is primarily for students in the biological, physical and social sciences, and engineering. The purpose of the course is to familiarize the student with the techniques of solving ordinary differential equations. The specific subjects to be covered include first order differential equations, second order linear differential equations, applications to electric circuits, oscillation of solutions, power series solutions, systems of linear differential equations, autonomous systems, Laplace transforms and linear differential equations, mathematical models (e.g., in the sciences or economics).	4.00	30	MWF 12:00-12:50PM; T 1:30-2:20PM
AS.110.302	02	Q		**Differential Equations and Applications**	4.00	30	MWF 12:00-12:50PM; T 3:00-3:50PM
AS.110.302	03	Q		**Differential Equations and Applications**	4.00	30	MWF 12:00-12:50PM; Th 3:00-3:50PM
AS.110.302	04	Q		**Differential Equations and Applications**	4.00	30	MWF 12:00-12:50PM; Th 4:30-5:20PM
AS.110.302	05	Q		**Differential Equations and Applications**	4.00	30	T 4:30-5:20PM; MWF 1:30-2:20PM
AS.110.302	06	Q		**Differential Equations and Applications**	4.00	30	Th 1:30-2:20PM; MWF 1:30-2:20PM
AS.110.302	07	Q		**Differential Equations and Applications**	4.00	30	Th 3:00-3:50PM; MWF 1:30-2:20PM
AS.110.302	08	Q		**Differential Equations and Applications**	4.00	30	T 3:00-3:50PM; MWF 1:30-2:20PM
AS.110.304	01	Q		**Elementary Number Theory** *Kong, Jian* The student is provided with many historical examples of topics, each of which serves as an illustration of and provides a background for many years of current research in number theory. Primes and prime factorization, congruences, Euler's function, quadratic reciprocity, primitive roots, solutions to polynomial congruences (Chevalley's theorem), Diophantine equations including the Pythagorean and Pell equations, Gaussian integers, Dirichlet's theorem on primes.	4.00	30	TTh 9:00-10:15AM
AS.110.306	01	Q		**Honors Differential Equations** *Gell-redman, Jesse* This course includes the material in 110.302 Differential Equations but with a strong emphasis on theory and proofs. Recommended only for mathematics majors or mathematically able students majoring in physical science or engineering.	4.00	30	MW 12:00-1:15PM; F 12:00-12:50PM
AS.110.311	01	Q		**Methods of Complex Analysis** *Staff*	4.00	30	TTh 12:00-1:15PM

Mathematics

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course is an introduction to the theory of functions of one complex variable. Its emphasis is on techniques and applications, and it serves as a basis for more advanced courses. Functions of a complex variable and their derivatives; power series and Laurent expansions; Cauchy integral theorem and formula; calculus of residues and contour integrals; harmonic functions.			
AS.110.328	01	Q		**Non-Euclidean Geometry** *Merling, Mona* For 2,000 years, Euclidean geometry was the geometry. In the 19th century, new, equally consistent but very different geometries were discovered. This course will delve into these geometries on an elementary but mathematically rigorous level.	4.00	40	TTh 1:30-2:45PM
AS.110.401	01	Q		**Advanced Algebra I** *Merling, Mona* An introduction to the basic notions of modern algebra. Elements of group theory: groups, subgroups, normal subgroups, quotients, homomorphisms. Generators and relations, free groups, products, commutative (Abelian) groups, finite groups. Groups acting on sets, the Sylow theorems. Definition and examples of rings and ideals. Introduction to field theory. Linear algebra over a field. Field extensions, constructible polygons, non-trisectability.	4.00	30	MW 12:00-1:15PM; F 12:00-12:50PM
AS.110.405	01	Q		**Introduction to Real Analysis** *Sogge, Christopher* This course is designed to give a firm grounding in the basic tools of analysis. It is recommended as preparation (but may not be a prerequisite) for other advanced analysis courses. Real and complex number systems, topology of metric spaces, limits, continuity, infinite sequences and series, differentiation, Riemann-Stieltjes integration.	4.00	30	MW 1:30-2:45PM; F 1:30-2:20PM
AS.110.415	01	Q		**Honors Analysis I** *Spruck, Joel* This highly theoretical sequence in analysis is reserved for the most able students. The sequence covers the real number system, metric spaces, basic functional analysis, the Lebesgue integral, and other topics.	4.00	30	MW 1:30-2:45PM; F 1:30-2:20PM
AS.110.439	01	Q		**Introduction To Differential Geometry** *Zhang, Yingying* Linear Algebra Theory of curves and surfaces in Euclidean space: Frenet equations, fundamental forms, curvatures of a surface, theorems of Gauss and Mainardi-Codazzi, curves on a surface; introduction to tensor analysis and Riemannian geometry; theorema egregium; elementary global theorems.	4.00	30	TTh 1:30-2:45PM
AS.110.443	01	Q		**Fourier Analysis** *Staff*	4.00	30	TTh 10:30-11:45AM

Mathematics

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time

An introduction to the Fourier transform and the construction of fundamental solutions of linear partial differential equations. Homogeneous distributions on the real line: the Dirac delta function, the Heaviside step function. Operations with distributions: convolution, differentiation, Fourier transform. Construction of fundamental solutions of the wave, heat, Laplace and Schrödinger equations. Singularities of fundamental solutions and their physical interpretations (e.g., wave fronts). Fourier analysis of singularities, oscillatory integrals, method of stationary phase.

Medicine, Science and the Humanities

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.060.108	01	H	W	**Time Travel** *Rosenthal, Jesse Karl* Why is time travel such a consistent and perplexing them in literature and film over the last 150 years? Why is modernity so concerned with peeking backwards or forwards? This course will examine the history of time-travel fiction, from its beginning in utopian fiction through its box-office dominance in the 1980s, and into today. Writers will likely include Mark Twain, Edward Bellamy, Harold Steele Mackay, Ray Bradbury, Robert Heinlein, and Philip K. Dick. Movies will include *The Terminator*, *Back to the Future*, and *Primer*.	3.00	18	TTh 10:30-11:45AM
AS.060.123	01	H	W	**Freshman Seminar: Prophecy After Science** *Miller, William J* This course explores the history of prophecy from ancient Greek and Judaic sources to current intimations of technological singularity and ecological doom. We will focus on the influence of prophecy on the rise of science (and vice-versa). Readings will include texts by William Shakespeare, Francis Bacon, Mary Shelley, and Philip K. Dick.	3.00	18	M 4:00-7:00PM
AS.060.127	01	H	W	**Muslim Science Fiction** *Hashem, Noor* This course will explore the wondrous and mysterious world of Islamic Sci-Fi. Writers of Muslim Sci-Fi have asserted a long tradition of speculative fiction and fantasy dating back to the 13th century. We will look into this literary history, beginning with earlier texts like The Arabian Nights, al-Qizwini's alien story Awaj bin Anfaq and Roquia Hussain's Sultana's Dream all the way through to modern texts like G. Willow Wilson's Alif the Unseen and Saladin Ahmed's Throne of the Crescent Moon. We will ask how this genre, as opposed to realism, might enable these writers to productively tackle themes of history, science, belief, and the politics of belonging and difference. We will pair our Muslim readings with more canonical science fiction works, such as Mary Shelley's Frankenstein, H.G. Wells' The Time Machine, and more recently, Kazuo Ishiguro's Never Let Me Go, to think through the relationship of the SF writer to a particular cultural moment. We will also look at writers of afrofuturism and magical realism, like Octavia Butler and Gabriel García Márquez, to think about how other writers of color have employed fantasy and the fantastical, and to what ends.	3.00	18	TTh 9:00-10:15AM
AS.140.105	01	HS		**History of Medicine** *Pomata, Gianna* Course provides an overview of the medical traditions of six ancient cultures; the development of Greek and Islamic traditions in Europe; and the reform and displacement of the Classical traditions during the Scientific Revolution.	3.00	20	MW 10:00-10:50AM; F 10:00-10:50AM
AS.140.105	02	HS		**History of Medicine**	3.00	20	MW 10:00-10:50AM; F 10:00-10:50AM
AS.140.105	03	HS		**History of Medicine**	3.00	20	MW 10:00-10:50AM; F 10:00-10:50AM

Medicine, Science and the Humanities

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.140.115	01	HS	W	**Freshman Seminar: Artificial Humans** *Frumer, Yulia* Looking at the history of attempts to augment or construct human beings, the course will explore the role of technology in molding human existence and shaping the defination of humanity.	3.00	14	TTh 10:30-11:45AM
AS.140.163	01	HS		**Jungle Doctors: Medical Missions in Africa from David Livingston to Paul Farmer** *Cummiskey, Julia Ross* Freshman seminar using a variety of primary and secondary sources, students will explore the motivations and activities of expatriates practicing medicine in Africa from the 19th century to the present.	3.00	18	TTh 9:00-10:15AM
AS.140.165	01	HS	W	**Enlightenment Science Through Brilliant Books** *Richard, Jean-Olivier* Course explores the brilliant scientific and philosophic achievements of the 18th-century intellectual movement known as the Enlightenment through the reading of a selection of key authors (Voltaire, Franklin, the great Encyclopedists...). Includes introduction to research method and writing in the humanities.	3.00	15	MW 3:00-4:15PM
AS.140.321	01	HS		**Scientific Revolution** *Portuondo, Maria M* Explore how the Western understanding of nature changed between 1500 and 1720 through the works of astronomers and astrologers, naturalists and magi, natural philosophers and experimentalists, doctors and alchemists & others.	3.00	20	MW 10:00-10:50AM; F 10:00-10:50AM
AS.140.321	02	HS		**Scientific Revolution**	3.00	20	MW 10:00-10:50AM; F 10:00-10:50AM
AS.140.343	01	HS		**What it Means to be Human: Perspectives in the History of Anthropology, 1860-1995** *Link, Adrianna Halina* This course explores the changing scientific, social, and cultural ideas that shaped how anthropologists and other scholars approached the study of human beings from the mid-nineteenth through the twentieth centuries.	3.00	15	MW 1:30-2:45PM
AS.140.345	01	HS		**Animal Minds: Beyond the Black Box** *Nash, Richard Stephen* How do migratory birds and fish find their way home? Do honeybees communicate using a “dance language”? Do chimpanzees have mental lives akin to those of human beings? How do scientists attempt to answer such questions, and why was the “animal mind” a taboo for over 50 years in American science? Focusing on ethology and psychology from Darwin to the present, this course examines the history of the study of animal cognition and behavior. A major emphasis throughout the course will be on the question of animal consciousness from the late-19th through the 20th century.	3.00	12	W 3:00-5:20PM
AS.140.346	01	HS		**History of Chinese Medicine** *Hanson, Marta*	3.00	20	MWF 9:00-9:50AM

Medicine, Science and the Humanities

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Students will study the most recent anthropological, philosophical, and historical scholarship on medicine in traditional and modern Chinese society. They will approach the topic from several angles including medical pluralism, the range of healers, domestic and literate medicine, gender, emergence of new disciplines, public health and the history of disease. The course relies on secondary sources and primary sources in English translation. Cross-listed with East Asian Studies.			
AS.140.382	01	HS	W	**Plagues and Societies in World History** *Arner, Katherine Elizabeth* This course examines some of the most notable epidemics in world history from the Black Death to Ebola in 2014. Topics include the origins of epidemic diseases; the relations between epidemics and warfare, empires, and trade; and the sociocultural underpinnings of disease response.	3.00	20	TTh 9:00-10:15AM
AS.140.398	01	HS	W	**Godzilla and Fukushima: Japanese Environment in History and Films** *Frumer, Yulia* Juxtaposing Japanese environmental history and its reflection in popular media, the course will explore the intersection between technology, environment, and culture. The course will be accompanied by relevant movie screenings.	3.00	18	T 3:00-5:20PM
AS.140.411	01	HS		**Senior Research Seminar** *Frumer, Yulia* For majors pursuing independent research.	2.00	20	TBA
AS.140.447	01	HS		**Science and the City** *Kargon, Robert H* This seminar explores the nature and growth of urban scientific communities from Victorian Manchester, through geographic growth clusters such as Silicon Valley and Route 128, to new eco-cities in China and Abu Dhabi.	3.00	15	T 1:30-3:50PM
AS.145.101	01			**Death and Dying in Art, Literature, and Philosophy:Introduction to Medical Humanities** *Lisi, Leonardo* This team-taught course offers an introduction to the new concentration in medicine, science, and humanities by approaching the topic of death and dying from historical, anthropological, philosophical, theological, literary and art historical perspectives.	3.00	19	T 10:30-11:45AM; Th 10:30-11:45AM
AS.145.101	02			**Death and Dying in Art, Literature, and Philosophy:Introduction to Medical Humanities** *Strowick, Elisabeth*	3.00	19	T 10:30-11:45AM; Th 10:30-11:45AM
AS.145.101	03			**Death and Dying in Art, Literature, and Philosophy:Introduction to Medical Humanities** *Merback, Mitchell*	3.00	19	T 10:30-11:45AM; Th 10:30-11:45AM
AS.150.219	01	HS	W	**Intro to Bioethics** *Bok, Hilary*	3.00	18	F 12:00-12:50PM; MW 12:00-12:50PM

Medicine, Science and the Humanities

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Introduction to a wide range of moral issues arising in the biomedical fields, e.g. physician-assisted suicide, human cloning, abortion, surrogacy, and human subjects research. Cross-listed with Public Health Studies.			
AS.150.219	02	HS	W	**Intro to Bioethics**	3.00	18	F 12:00-12:50PM; MW 12:00-12:50PM
AS.150.219	03	HS	W	**Intro to Bioethics**	3.00	18	W 1:30-2:20PM; MW 12:00-12:50PM
AS.150.219	04	HS	W	**Intro to Bioethics**	3.00	18	W 1:30-2:20PM; MW 12:00-12:50PM
AS.150.219	05	HS	W	**Intro to Bioethics**	3.00	18	F 12:00-12:50PM; MW 12:00-12:50PM
AS.150.219	06	HS	W	**Intro to Bioethics**	3.00	18	F 1:30-2:20PM; MW 12:00-12:50PM
AS.150.219	07	HS	W	**Intro to Bioethics**	3.00	18	W 2:00-2:50PM; MW 12:00-12:50PM
AS.150.219	08	HS	W	**Intro to Bioethics**	3.00	18	W 2:00-2:50PM; MW 12:00-12:50PM
AS.150.219	09	HS	W	**Intro to Bioethics**	3.00	18	F 2:00-2:50PM; MW 12:00-12:50PM
AS.150.219	10	HS	W	**Intro to Bioethics**	3.00	18	F 2:00-2:50PM; MW 12:00-12:50PM
AS.150.219	11	HS	W	**Intro to Bioethics**	3.00	18	F 12:00-12:50PM; MW 12:00-12:50PM
AS.150.219	12	HS	W	**Intro to Bioethics**	3.00	18	W 2:00-2:50PM; MW 12:00-12:50PM
AS.150.245	01	H		**Introduction to Philosophy of Mind** *Williams, Meredith* This is an introduction to the central problems of philosophy of mind: the mind-body problem and the problem of self-knowledge. Of particular interest in contemporary work is the relation of mind and brain and whether, or how, we acquire self-knowledge.	3.00	15	MW 9:00-9:50AM; F 9:00-9:50AM
AS.150.245	02	H		**Introduction to Philosophy of Mind**	3.00	15	MW 9:00-9:50AM; F 10:00-10:50AM
AS.150.245	03	H		**Introduction to Philosophy of Mind**	3.00	15	MW 9:00-9:50AM; F 11:00-11:50AM
AS.150.245	04	H		**Introduction to Philosophy of Mind**	3.00	15	MW 9:00-9:50AM; F 12:00-12:50PM
AS.150.454	01	H		**The Value of Humanity** *Theunissen, L Nandi*	3.00		F 9:00-10:00AM

Medicine, Science and the Humanities

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Are human beings distinctively valuable? What makes us valuable? And how should we respond to the value of human beings? The course is divided into four parts. The first part takes up questions about the basis of human value. We consider various proposals, including Kant's, about the valuable feature or capacity of human beings. Are we valuable in virtue of having a good will, in virtue of being agents, in virtue of being valuers, or something further? The second part takes up questions about the explanation of the value of human beings. Does the proposed feature make us valuable because it instantiates a simple value property, making us valuable in ourselves, or simpliciter? We consider whether the notion of value simpliciter is a notion we fully understand, or need. Does the proposed feature make us valuable because it makes us good-for something or someone? Who or what does it make us good-for? Or again, does the proposed feature make us such that we are objects of an appropriate attitude or practical stance? If so, what is the attitude or stance? The third part of the course takes up normative questions about the appropriate mode of responding to human beings. We consider whether it makes sense to say that human beings are "ends-in-themselves," and what it would mean to treat a person as an end-in-itself. We also consider various accounts of respect. A guiding question is whether human beings are the only appropriate objects of respect, or whether we can respect other beings, and even artifacts. The fourth part of the class applies what we have learned so far to related topics: to the question of whether human life or existence is valuable, and conversely, whether death is disvaluable. We consider, albeit briefly, the value of human beings in relation to the value of animals. And we ask about the role of Kantian notions like dignity in applied contexts, so that highly philosophical considerations about value are shown to have real-world bearing.			
AS.150.474	01	H		**Justice and Health** *Bok, Hilary* Course will consider the bearing of theories of justice on health care. Topics will include national health insurance, rationing and cost containment, and what justice requires of researchers in developing countries.	3.00	25	F 1:30-3:50PM
AS.150.476	01	HNS		**Philosophy and Cognitive Science** *Gross, Steven*	3.00	15	M 1:30-3:50PM

Medicine, Science and the Humanities

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This year's topic: Temporal Experience. Do we perceive time? If so, through what sense(s)? How long is the conscious "now"? Does the temporal order of our perceptions mirror the temporal order of what we perceive? Must the experience of a temporal duration itself be extended in time? What is the relation between the expereince of time (for example, the experience of time's passage) and memory? Does our experience of time accurately represent temporal features of reality, or it is actually illusory? How does attending to time's passage affect its perceived rate of passage (and what is it to attend to time's passage)? We will explore these and other questions through an examination of both psychological and philosophical work. [This course meets jointly with Professor Flombaum's AS.200.316 and AS.200.616.]. Permission of instructor required to enroll.			
AS.210.313	01	H		**Medical Spanish** *Staff* Medical Spanish is a comprehensive examination of vocabulary and grammar for students who either work or intend to work in medicine and health-related fields in Spanish-speaking environments. The student will be able to participate in conversations on topics such as contrasting health systems, body structures, disorders and conditions, consulting your doctor, physical and mental health, first-aid, hospitalization and surgery on completion of this course. In completing the course's final project students will apply, synthesize, and reflect on what has been learned in the class by creating a professional dossier individualized to their professional interests. May not be taken satisfactory/unsatisfactory. Not open to native speakers of Spanish. No new enrollments permitted after September 13th.	3.00	15	TTh 10:30-11:45AM
AS.210.313	02	H		**Medical Spanish**	3.00	15	TTh 12:00-1:15PM
AS.212.469	01	H		**Limit-Experience, Limit-Texts** *Schilling, Derek* Why tell stories? What power do writers wield against the disorder of life? How do literary narratives measure up to experiences that usher us beyond the limits of the imaginable? In this course we will examine modern and contemporary works in French that engage with such limit states and situations as combat, imprisonment, madness, terminal illness, and corporeal transformation. Authors to be considered include Carrère, Chevillard, Darrieussecq, Delbo, Duras, Guibert, and Volodine.	3.00	15	TTh 10:30-11:45AM
AS.213.345	01	H		**Healing and Health Beyond Theology** *Tobias, Rochelle*	3.00	20	T 1:30-4:00PM

Medicine, Science and the Humanities

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Nietzsche argues in The Gay Science that to bring about a new day we need a new health—"great health," as he calls it, that enables us to surmount the sickness of our age and transcend ourselves. However much of an iconoclast Nietzsche considered himself to be, his idea of "great health" fits squarely within a theological tradition that claims that the condition for becoming a member of the ecclesia is faith, which cleanses the individual of sin and restores him to his original state. This course will examine the theological inheritance that has and continues to shape the notion of sickness and health dominant even in secular contexts, where well-being would seem to be regarded as a condition of the body rather than of the spirit. Reading to include works by Nietzsche, Kierkegaard, Augustine, Tillich, Heidegger, Scholem, Tolstoy, Büchner, Flaubert, and Kafka. Taught in English.			
AS.214.477	01	H	W	**Magic, Marvel, and Monstrosity in the Renaissance** *Stephens, Walter E* Magic, Monstrosity,and Marvels or Wonders call into question what we see and experience: what is reality, what is illusion; what's natural and what's supernatural? What's human and what's more, or less, than human? During the Renaissance, ideas about the nature of reality were bound up with questions and issues very different from those of our time. With the exact sciences still being invented, the nature of the world was much less hard and fast for Renaissance people than it is for the modern educated person. The literary masterpieces of the Italian Renaissance provide vivid illustrations of the early modern sense of wonder. Foremost among these are the theatrical comedies which Italian authors revived in imitation of the ancients, and the romances, especially Ariosto's Orlando furioso (1532) and Tasso's Gerusalemme liberata (1581). These and other works influenced ideas about magical and marvelous phenomena across Europe for centuries to come. Works will be read and discussed in English. Italian majors and graduate students (who should enroll in section 2) will attend a weekly supplemental discussion in Italian and compose their written work in Italian.	3.00	12	TTh 1:30-2:45PM
AS.214.477	02	H	W	**Magic, Marvel, and Monstrosity in the Renaissance**	4.00	8	TTh 1:30-2:45PM
AS.220.206	01	H	W	**Writing About Science I** *Grimm, David*	3.00	15	F 4:00-6:20PM

Medicine, Science and the Humanities

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course is designed to teach students the skills of daily science news reporting. The focus is on turning complex scientific information into lively prose for the general public. Lectures will cover such topics as how to compose news "ledes," how to get great quotes, how to find stories, and how best to interact with researchers and outside experts. Scientists from Johns Hopkins, University of Maryland, and other local institutions will present their latest research to the class. Students will ask questions, as journalists would, at a news conference. Students will convert these talks into news stories, which will be critiqued in class. As a final project, students will be asked to write a daily news story of their own devising. Please note that a brief writing test is required for this course. To schedule this test, please contact the instructor at dgrimm5@jhu.edu .			
AS.220.210	01	H	W	**Introduction to Non-Fiction: Science as a Social Activity** *Biddle, Wayne* Using the political and economic milieu of science and technology as a context for our writing, we will study how social factors such as government, money, secrecy, and ethics affect the conduct and public presentation of scientific and medical research. Controversies from 20th century history as well as current events will be discussed. Writing assignments to satisfy the W requirement will consist of short papers derived from classroom topics.	3.00	15	T 1:30-3:50PM
AS.220.309	01	H	W	**Writing Healthy Baltimore** *Masterson, Karen* Students will explore public health issues in Baltimore and then write about them first in short pieces, and then in longer, polished works. The framework will be the mayor's Healthy Baltimore 2015 initiative – launched in 2011 to address the city's top-10 public health problems, including obesity, smoking, drug and alcohol abuse, STDs, cancer, and environmental health hazards. Students will study the initiative and its historical context; examine data sets; explore where and how the initiative intersects with public health practitioners and advocacy groups at the neighborhood level; and write what they learn in different formats, including essays, breaking news, and substance analysis. Students will then "workshop" each other's papers.	3.00	8	T 10:00AM-12:30PM
AS.220.309	02	H	W	**Writing Healthy Baltimore**	3.00	7	T 10:00AM-12:30PM
AS.300.139	01	H		**Introduction to Intellectual History** *Marrati, Paola* This course offers a conceptual and historical introduction to Intellectual History. What makes the "history of ideas" different from the history of other objects? What, if anything, distinguishes the history of ideas from the history of philosophy? What is it exactly that we call "ideas"? In what sense do they have a history? These are examples of the kind of questions addressed in the course.	3.00	25	TTh 12:00-1:15PM
AS.300.143	01	H		**Introduction to Comparative Literature**	3.00	25	Th 1:30-4:00PM

Medicine, Science and the Humanities

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Lisi, Leonardo This course offers an introduction to the history, theory, and praxis of comparative literature. We will read texts from some of the founding figures of the discipline and look at the most recent debates in the field, including translation studies, literary theory, and world literature, among others. Particular attention will be given to the methodologies and problems of studying literatures in different linguistic traditions and the relation between literature and other areas of thought and culture, such as philosophy, art history, and psychoanalysis. Case studies in comparative approaches to literature will provide concrete examples to our discussions.			
AS.300.333	01	H		**Melancholy in Science, Literature, and Film** *Fabietti, Elena* This course explores the manifold nature of melancholy from an interdisciplinary perspective that combines sciences, history of medicine, and the arts. Defined by Greek medicine as the excess of black bile, melancholy, in its long history, has been seen as disease of the soul, state of intellectual grace, or psychological condition. The course will examine chronologically the development and variety of the meanings of melancholy between medical texts, visual representations, poetry, psychoanalytic theory, and films. The works analyzed will include, among others, those by Galen, Robert Burton, Albrecht Dürer, Shakespeare, Cervantes, Baudelaire, Freud, Lars von Trier.	3.00	12	Th 1:30-4:00PM
AS.300.371	01	H		**The Modernist Novel: James, Woolf, and Joyce** *Ong, Yi-Ping* The purpose of this course is to survey works by three of the greatest, most relentless innovators of the twentieth century – Henry James, Virginia Woolf, and James Joyce -- who explored and exploded narrative techniques for depicting what Woolf called the “luminous halo” of life. Selected works include: "The Beast in the Jungle," The Portrait of a Lady, Jacob’s Room, Mrs. Dalloway, To the Lighthouse, A Portrait of the Artist as a Young Man, and Ulysses.	3.00	20	MW 12:00-1:15PM
AS.300.383	01	H		**History of Madness from the Bible to DSM-V** *Ophir, Orna*	3.00	15	F 1:30-4:00PM

Medicine, Science and the Humanities

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Madmen, lunatics or the insane, have seen an extraordinary variety of responses and attitudes across the centuries. Whether seen as a “true” phenomenon or as socially constructed “madness” was defined and treated, examined and controlled, diagnosed and “cured” according to the spirit of the time. This course will follow the varied social imageries of “madness” throughout Western history, from the Bible to the contemporary and controversial Diagnostic Statistical Manual (DSM) in its most recent 5th edition. Alongside primary texts by Hippocrates, Avicenna, Pinel, and Freud and secondary texts by Michel Foucault, Ian Hacking, Edward Shorter, and Elaine Showalter, among others, we will acquaint ourselves with first-person accounts of “madness” and its different forms of treatment, ranging from lunatic asylum, through electric-shock treatments and lobotomies to psychoanalysis. The course will explore the interaction between the historical and social, scientific and political as well as economical factors that have shaped the views of “madness” and its treatment.			
AS.300.427	01	H		**Reading Freud** *Ophir, Orna* Sigmund Freud was one of the most influential thinkers of the 20th century. Psychoanalysis, which was his theory of mind, a research method, and a therapeutic technique, offered concepts that pervade Western culture and the humanities. In this seminar which is designed for students from all fields of knowledge, we will closely and chronologically read Freud’s major works, follow his developing theories, and become familiar with psychoanalytic concepts such as the unconscious, the uncanny, instincts, sexuality and aggression, which illuminated mysteries in other fields, from literature to anthropology, from political science to religious studies, and from philosophy to the arts.	3.00	30	TTh 12:00-1:15PM
AS.389.353	01	H	W	**Revolutions of the Book: Material Culture & the Transformation of Knowledge from Antiquity to the Renaissance** *Havens, Earle* Explores the material culture of knowledge through transformations in the technologies and arts of communication, taught entirely from rare books, manuscripts, and artifacts in JHU libraries and museum collections.	3.00	15	T 3:00-5:30PM

Military Science

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.374.101	01			**Leadership and Management, ROTC 101** *Yi, David W.* This is an introductory course in basic leadership and management concepts, theories and principles of decision making for application to any professional environment. This course is recommended for those who have leadership aspirations or are currently in student leadership positions. This course is intended to provide a foundation for those desiring to establish and improve their personal leadership philosophy. It establishes a baseline understanding of the US Army's leadership and management principles. This course is taught through a series of lectures and small group discussions. Students are required to conduct research in the areas of leadership and management and present their findings in an oral presentation or written report to their small group. In addition to learning the foundations of leadership, students will learn about the corporate and non-corporate aspects and operations of the US Army, time management, ethics, values, mission statements and goal setting. Corequisite: AS.374.110 for ROTC students; none for non-ROTC students.	2.00	30	W 1:30-3:20PM
AS.374.101	02			**Leadership and Management, ROTC 101**	2.00	30	Th 1:30-3:20PM
AS.374.110	01			**Basic Leadership Laboratory, ROTC 101** *Louden, Joyce* These introductory courses in a laboratory environment are designed to expose students to practical experiences, challenges and individual learning opportunities in a small group. Students learn the fundamentals of an organization and apply principles of leadership and management at the foundation level. Students develop military courtesy, organizational discipline, communication and basic leadership and management skills. Ultimately, students understand how to facilitate and lead a small group of four to five people as an integral part of a larger organization of 75-100 people through situational training opportunities in a variety of conditions. As a leadership practicum, students have the opportunity to serve in leadership positions and receive tactical and technical training. In addition to learning to lead groups of five to 100 people, students will also be exposed to training on first aid, operating Army equipment, Army activities such as rappelling and drill and ceremony. These laboratories are required for enrolled ROTC participants who desire to be considered for a commission in the Army. Corequisite: AS.374.101-AS.374.102.	1.00	50	Th 4:00-5:50PM
AS.374.201	01			**Leadership & Teamwork I** *ONeil, Timothy*	2.00	25	Th 1:30-3:20PM

Military Science

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				The focus of this course is on developing leadership and communication skills. Case studies will provide a tangible context for learning and applying aspects of team building, values, the Army Warrior Ethos, and principles of war as they apply in the contemporary operating environment. The key objective of this course is to develop knowledge of the Army's leadership philosophies and integrate this knowledge into personal skills and team development. At the end of this course, students will be able to describe and perform tasks during the four basic phases of team building; demonstrate the types and elements of interpersonal communication; illustrate, explain, and apply the Principles of War; identify and apply problem solving steps, and apply basic leadership procedures in simple and complex situations. Corequisite: AS.374.210 for ROTC students; none for non-ROTC students.			
AS.374.201	02			**Leadership & Teamwork I**	2.00	25	W 1:30-3:20PM
AS.374.210	01			**Basic Team Leadership** *ONeil, Timothy* Students lead and assist in leading 4-5 person teams through a variety of training opportunities. They learn the troop-leading procedures, basic problem solving, and tactical skills aimed at military leadership. Students will mentor and assist members of their team with improving their own skills and leadership as well. Corequisite: AS.374.201.	1.00	50	Th 4:00-5:50PM
AS.374.301	01		W	**Leadership and Tactical Theory I** *Normand, David* Students will be introduced to the tenets of Army leadership, officership, Army values, ethics and personal development. Students will learn the fundamentals of physical training, land navigation, orders production, and small unit tactics at the squad and platoon level. Each student will be given multiple opportunities to plan and lead squad level tactical missions in the classroom and during Leadership Laboratories. Corequisite: AS.374.310. Recommended Course Background: Basic Course completion.	2.00	25	T 3:30-5:20PM
AS.374.301	02		W	**Leadership and Tactical Theory I**	2.00	25	W 3:30-5:20PM
AS.374.307	01		W	**Leadership in Military History** *Normand, David* This course provides students with a historical perspective to decisions made by American military leaders: battlefield complexity, resource limitations, and teamwork deficiencies. Students cover major military engagements from the colonial period through the current operating environment. Students examine how leaders motivated their men, devised battle strategies, implemented rules of engagement, and managed supplies, transportation, and logistics for their troops. Prerequisite: permission of the Director of Military Science. Registration restricted to contracted ROTC cadets only.	2.00	25	Th 9:00-10:50AM
AS.374.310	01			**Basic Tactical Leadership Lab** *Normand, David*	1.00	50	Th 3:00-5:50PM

Military Science

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				In Leadership Laboratory, students are given the opportunity to apply what they have learned in the classroom, in a tactical or field environment. Students learn and demonstrate the fundamentals of leadership by planning, coordinating, navigating, motivating, and leading squads in the execution of both garrison and tactical missions. Students are evaluated as part of the Leadership Development Program and FM 6-22, Army Leadership. Ultimately, prepares students to excel at the four-week National Leadership Development and Assessment Course at Fort Lewis, WA. Corequisite: AS.374.301.			
AS.374.401	01			**Adaptive Leadership** *Carroll, Paul* Students are assigned the duties and responsibilities of an Army battalion staff officer and must apply the fundamentals of principles of training, the training management, the Army writing style and military decision making to weekly training meetings. Students plan, execute and assess ROTC training and other Mission Essential Tasks. Students will study how Army values and leader ethics are applied in the Contemporary Operating Environment and how these values and ethics are relevant to everyday life. The student will study the Army officer's role in developing subordinates via counseling and administrative actions, as well as managing their own career. Students will be given numerous opportunities to train, mentor and evaluate underclass students enrolled in the ROTC Basic Course while being mentored and evaluated by experienced ROTC cadre. Corequisite: AS.374.410. Recommended Course Background: AS.374.301-AS.374.302, AS.374.310-AS.374.320 and the Basic Course.	2.00	20	T 3:30-5:20PM
AS.374.407	01			**Being a Platoon Leader** *Carroll, Paul* This course prepares Cadets for actual challenges not necessarily described in text books that junior officers may face in today's Army. Topics include: serving during war, conflict management, ethical dilemmas, time-constrained planning, and change management. This course also serves as pre-requisite for the Basic Officer Leadership Course "B" phase by providing students with reinforced development on: deployment preparation, the military style of writing, supply management, human resources management, family support and operations management. Students will also learn how the Army's organizational structure and administration affects Soldiers across ranks and over time. Finally, students will learn ways to leverage automation to improve their efficiency and effectiveness of records management and developing presentations for superiors.	1.00	20	TBA
AS.374.410	01			**Advanced Planning & Decision Making I** *Carroll, Paul*	1.00	50	Th 3:00-5:50PM

Military Science

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Students develop a semester-long progression of programmed training activates that support completion of the unit's Mission Essential Task List. The laboratory builds from fall to spring semester as students master advanced problem solving, resource synchronization and executive decision making. Students evaluate, mentor and develop subordinate leaders as part of the Leadership Development Program and FM 6-22, Army Leadership. The course serves as the final evaluation and determination on a student's ability to lead Soldier's as a Second Lieutenant in the US Army. Co-requisite: AS.374.401 -AS.374.402. Recommended Course Background: AS.374.301-AS.374.302, AS.374.310-AS.374.320 and Basic Course.			

Music

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.214.125	01	H		**Freshman Seminar: Dangerous Liasons: Words and Music Through the Ages** *Refini, Eugenio* The seminar explores challenging questions with which men have been dealing for centuries: how do music and words interact? Do words have a priority on music or vice versa? Does music need words to be understood and interpreted? Are words filled with meaning by music? By addressing literary and philosophical writings, as well as musical examples from different periods and contexts, students will be led through a critical reconsideration of the topic. A variety of materials will be discussed, including genres as different as medieval songs, early modern madrigals, Romantic Lieder, opera, the American musical, and contemporary pop music. No musical skills required; strong doses of curiosity most welcome.	3.00	15	W 1:30-4:00PM
AS.376.111	01			**Rudiments of Music Theory and Musicianship** *Crouch, John C.* This course introduces written and aural music fundamentals including notation, scales, intervals, chords, rhythm, meter and sight-singing. Students will compose melodies and short pieces and complete listening projects. Course does not count towards the completion of the minor.	3.00	15	MWF 10:00-10:50AM
AS.376.111	02			**Rudiments of Music Theory and Musicianship**	3.00	15	MWF 12:00-12:50PM
AS.376.111	03			**Rudiments of Music Theory and Musicianship** *Staff*	3.00	15	TTh 10:30-11:45AM
AS.376.211	01			**Music Theory I** *Crouch, John C.* Introduction to basic principles of tonal music through listening, analysis and music making. Students study melody, harmony, voice leading, figured bass and dissonance treatment, and will also undertake short composition projects. Must have taken the qualifying examination or AS.376.111.	3.00	15	MWF 11:00-11:50AM
AS.376.211	02			**Music Theory I** *Staff*	3.00	15	MWF 12:00-12:50PM
AS.376.212	01			**Music Theory II** *Stone, Stephen C* This course continues the written and aural work of the previous course but focuses on chromatic harmony while continuing the study of melody, counterpoint and figured bass. Prerequsite: Music Theory and Musicianship I (AS.376.211). To be taken with AS.376.222, Musicianship II.	3.00	15	MWF 1:30-2:20PM
AS.376.215	01			**Music Theory III - Twentieth Century Music** *Hardaway, Travis* An exploration of the music and analytical tools of the twentieth century. Topics will include set analysis, serial techniques, exotic and synthetic scales, neo-tonality, and geometric proportions. Recommended Course Background: AS.376.212	3.00	15	TTh 10:30-11:45AM
AS.376.221	01			**Musicianship I**	2.00	15	TTh 1:30-2:20PM

Music

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Wile, Kip Douglas Study in the basic skills of reading and hearing music. To be taken concurrently with AS.376.211, Music Theory I.			
AS.376.221	02			**Musicianship I**	2.00	15	TTh 3:00-3:50PM
AS.376.222	01			**Musicianship II** *Wile, Kip Douglas* Further studies in the basic skills of reading and hearing music. To be taken concurrently with AS.376.212, Music Theory II.	2.00	15	TTh 4:30-5:20PM
AS.376.242	01	H		**Introduction to Popular Music** *Smooke, David* A survey of the stylistic features and social contexts of American popular music since the 1950s.	3.00	20	MW 3:00-3:50PM; F 3:00-3:50PM
AS.376.242	02	H		**Introduction to Popular Music**	3.00	20	F 3:00-3:50PM; MW 3:00-3:50PM
AS.376.242	03	H		**Introduction to Popular Music**	3.00	20	F 3:00-3:50PM; MW 3:00-3:50PM
AS.376.250	01	H		**Introduction to Computer Music** *Burt, Samuel B* Introduction to Computer Music is an opportunity for people with no specialized training in music to explore electronic art music as a long-standing, if obscure, body of art, then to participate in creative work in the style. Participants will gain a heuristic understanding of forms of musical composition that operate outside the conventions of regular rhythm and harmony as they record and manipulate sound to sculpt it into original musical works. The lecture portion combines an historical overview of electronic music, rudiments of acoustics and musical perception, and instruction in compositional techniques and in using computers as creative musical tools. The laboratory portion, given at the Digital Media Center, serves as a workshop for creative exploration and for the completion of assigned creative projects including original works of digital sound art.	3.00	14	MW 9:00-9:50AM; F 9:00-9:50AM
AS.376.252	01	H		**Jazz History** *Sims, Ian Kristopher* Survey, investigation, and study of Jazz music and how it shaped American history from it's origins to current times.	3.00	20	MW 1:30-2:50PM
AS.376.303	01	H	W	**Musical Theater from Aristophanes to Leonard Bernstein** *Weiss, Susan Forscher*	3.00	20	T 4:30-6:50PM

Music

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course examines the birth of musical theatre from Greek tragedy through the liturgical and secular plays of the middle ages and Renaissance, to the classical and romantic singspiels, operettas, and zarzuelas of the modern era, by such figures as Aristophanes, Adam de la Halle, Hildegard of Bingen, Angelo Poliziano, Juan del Encina, Wolfgang Amadeus Mozart, Gilbert and Sullivan, Ernesto Lecuona, Igor Stravinsky, and Kurt Weill. These will serve as a backdrop for a closer examination of the musicals of Jerome Kern, Cole Porter, George Gershwin, Irving Berlin, Richard Rodgers, Harold Arlen, Frank Loesser, Leonard Bernstein and others. In addition to studying and placing the works of these Broadway giants into a social, political, and economic context, we will study and perform from representative musicals and attend a performance at the Lyric Theatre. Student will be expected to write a capstone project.			
AS.376.309	01	H	W	**Exploring American Music Through a Culture Lens** *Kafka, Laura G* This course explores the richness of our American musical heritage through a cultural lens. A wide breadth of musical genres will be discussed such as jazz, r&b, rock, rap, pop, country, spirituals, gospel, polka, folk, and classical, as well as the role of music in mass socio-political movements. A spotlight will be given to artists who have successfully crossed genres in their careers such as Winton Marsallis, Louis Moreau Gottschalk, William Grant Still, Scott Joplin, and Gunther Schuller, among others.	3.00	20	Th 1:30-3:50PM
AS.376.371	01	NS		**Topics in Music Cognition I** *Lopez-Gonzalez, Monica* What underlies our aesthetic response to music? How and why are we able to identify certain sounds as music? To what extent are music and natural language similar? What is it about music that evokes such powerful emotions such as happiness and sadness? What is unique to musical creativity? Examining such questions from cognitive science, neuroscience, psychology, and philosophical perspectives, this course explores relevant research and theory in the emerging domain of music perception and cognition. Students will complete a final research paper on the topic of their choice that integrates the course material.	3.00	15	Th 4:30-6:50PM

Near Eastern Studies

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.010.105	01	H		**Art of the Ancient Americas** *Deleonardis, Lisa* Surveys the art of Olmec, West Mexico, Teotihuacan, Maya, and Aztec.	3.00	25	TTh 10:30-11:45AM
AS.010.236	01	H		**Palaces, Temples and Tombs in Mesopotamia** *Feldman, Marian* Mesopotamia, the “land between the rivers,” is considered the cradle of civilization. Its earliest urban centers appeared by 3500 BCE in the region of modern-day Iraq, Iran, and Syria. Along with urbanism came the emergence of temples and palaces as large-scale elite institutions (replete with written records). Their arts manifest some of the earliest complex representations. This course explores the art and architecture within the social, political and cultural context of Mesopotamia (ancient Sumer, Babylonia and Assyria) from 3500 to 330 BCE.	3.00	25	TTh 10:30-11:45AM
AS.010.389	01	H	W	**The Stone and the Thread** *Deleonardis, Lisa* This course examines the built environment of the Inka and considers architecture in its social, historical, and cultural contexts. Shared forms and ideas implicit in the fiber arts offer comparative points for analysis and discussion.	3.00	25	TTh 1:30-2:45PM
AS.040.366	01	H	W	**The Archaeology of Ancient Cyprus: Investigating a Mediterranean Island World in the JHU Museum** *Anderson, Emily S.K.* This course explores the visual and material worlds of ancient Cyprus from the earliest human evidence through the Iron Age. Class involves regular analysis of artifacts based in the Archaeological Museum.	3.00	12	T 1:30-4:00PM
AS.100.383	01	HS	W	**Conversion and Apostasy in the Middle Ages** *Staff* Compares religious transformation in medieval Europe and the Middle East (ca. 600-1500), including conquest and conversion; conversion narratives; apostasy, martyrdom and other encounters between medieval Jews, Christians, and Muslims.	3.00	18	TTh 12:00-1:15PM
AS.130.102	01	H	W	**From the Neanderthals to the Neolithic** *McCarter, Susan* Emphasizing theories about human biological and cultural development, this course consists of an in-depth survey of Neanderthal morphology and culture, a brief discussion of evolutionary theory and our fossil ancestors, and concludes with an exploration of the mechanisms and results of the shift from hunting and gathering to farming. (Course formerly known as Introduction: Human Prehistory.) Cross-listed with Anthropology.	3.00	50	TTh 1:30-2:45PM

Near Eastern Studies

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.130.109	01	H		**Freshman Seminar: Ancient Homes and Houses** *Swerida, Jennifer Lee* What will your bedroom tell future archaeologists? What can ancient houses tell archaeologists of past societies? This course explores methods/theories of Household Archaeology in the Near East and beyond.	3.00	18	TTh 3:00-4:15PM
AS.130.110	01	HS		**Introduction To Archaeology** *Schwartz, Glenn M* An introduction to archaeology and to archaeological method and theory, exploring how archaeologists excavate, analyze, and interpret ancient remains in order to reconstruct how ancient societies functioned. Specific examples from a variety of archaeological projects in different parts of the world will be used to illustrate techniques and principles discussed. Cross-listed with Anthropology.	3.00	80	TTh 10:30-11:45AM
AS.130.116	01	H		**Freshman Seminar: Ritual and Magic in Ancient Egypt** *Fraser, Meredith Anne* This course will serve to introduce students to the study of religion, ritual and magic through the lens of a specific culture: ancient Egypt. Throughout the course students will be introduced to ancient Egyptian culture and will interact with Egyptian texts and artifacts, including those found in the collections of the Johns Hopkins Archaeological Museum, in order to illustrate key concepts.	3.00	15	MW 1:30-2:45PM
AS.130.122	01	H		**Freshman Seminar: The Archaeology of Death, Burial, and the Human Skeleton** *Brinker, Christopher Daniel* This course will introduce students to the archaeological investigation of past human populations through their mortuary and physical human remains. To this end, major theories and methodologies will be introduced, along with pertinent case studies for discussion.	3.00	18	MW 3:00-4:15PM
AS.130.177	01	HS		**World Prehistory** *Harrower, Michael James* How and why did our nomadic hunting and gathering ancestors become farmers? What led agricultural societies to build cities, develop writing, religious institutions, wage war, and trade for exotic goods? This course surveys prehistory and ancient history from the origins of human culture to the emergence civilization. Although prehistory and ancient history yield evidence of tremendous cultural diversity this course emphasizes common elements of past human experience, culture, and culture change. These include the origins of modern humans and their adjustment to a variety of post-ice age environments, shifts from hunting and gathering to agricultural lifeways, and the initial development of the world's earliest cities and civilizations.	3.00	35	TTh 12:00-1:15PM
AS.130.203	01	H		**Archaeology of Africa: From Human Origins to the Emergence of Civilizations** *Harrower, Michael James*	3.00	17	TTh 9:00-10:15AM

Near Eastern Studies

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course examines Africa's ancient past from the emergence of biologically modern humans, ancient hunter-gatherers, the earliest animal herding and farming populations, to cities and civilizations. While Egypt plays an undeniably central role in world history, this course concentrates in particular on ancient geographies other than Egypt.			
AS.130.213	01	H		**Introduction to Ancient Egyptian Art** *Bryan, Betsy Morrell* This class is a combination of illustrated lecture and discussion, punctuated with visits to museums with Egyptian collections. Participants must be able to join at least one overnight trip to New York and/or Boston (weekend) and be available for two half day visits to Philadelphia and Washington, D.C . or elsewhere (TBA as best for participants) , in addition to visiting Baltimore institutions with the class as part of the course. Discussion of sculpture will take place in front of the objects, so attendance is important for the visits.	3.00	15	MW 12:00-1:15PM
AS.130.301	01	H		**History of Ancient Syria-Palestine** *McCarter, P Kyle, Jr.* A survey of the history of Ancient Syria and Cannan, including Ancient Israel.	3.00	25	MW 12:00-1:15PM
AS.130.330	01	H		**The Garden of Eden** *Robbins, Ellen Ann* The story of the Garden of Eden remains an archetype in popular culture. Find out about the real biblical story and how it developed into the one we think we know. The only requirements are an open mind and a strong desire to learn.	3.00	10	TTh 3:00-4:15PM
AS.130.335	01	H		**The Pharaohs: Power and Authority in Ancient Egypt** *Bryson, Karen Margaret* This course will introduce students to the triumphs and struggles of the men (and women) who ruled ancient Egypt, comparing Egyptian kingship to other ancient and modern systems of political power and authority.	3.00	15	MW 1:30-2:45PM
AS.130.348	01	H		**Religious Law Wrestles With Change: The Case of Judaism** *Katz, David* Description: "How does a religious system which defines its ancient laws as God-given and unchangeable apply them to radically different and changing social, political and intellectual situations? This course explores the literature of "Questions and Answers"(She'elot u-Teshuvot), the Jewish legal responsa which have struggled to match Jewish religious law to modern life for fifteen centuries. A sweeping survey of Jewish history as revealed by one of its most impenetrable yet fascinating sources. Cross-listed with Jewish Studies.	3.00	25	TTh 9:00-10:15AM
AS.130.369	01	H		**Law in the Ancient Middle East** *Lauinger, Jacob*	3.00	15	MW 12:00-1:15PM

Near Eastern Studies

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				The Middle East offers the earliest and most abundant source material for reconstructing ancient legal systems. From stone monuments like the Code of Hammurabi to clay tablets the size of postage stamps, the cuneiform record provides a window into not just legal thought but actual legal practice in the ancient Middle East. Surveying a span of more than two thousand years, we will explore the law in both its deep structure and its regional and temporal diversity. Specific topics will include homicide and personal injury law, family law, the legal status of women, codes and codification, and ancient Israelite law in its Middle Eastern context. No background is required and all texts are read in translation, but every enrolled student is expected to actively participate in this seminar-style course.			
AS.130.376	01	H		**Ancient Ritual** *Delnero, Paul* This course will introduce students to the vast body of rituals that were practiced and performed in antiquity, with a particular emphasis on rituals from ancient Mesopotamia, Egypt, and the Hebrew Bible. In addition to examining rituals from a comparative perspective, anthropological and sociological studies of ritual will be read and discussed to shed light on the social, cultural, and political significance of ritual in the ancient world and beyond.	3.00	30	MW 3:00-4:15PM
AS.130.377	01	H		**Creating an Egyptian Temple** *Bryan, Betsy Morrell* This class will challenge every participant to plan a temple environment for a particular deity. The readings, lectures, and discussions will cover the mythology around specific gods and how it influenced temple architecture, location, ritual, and festivals. It will survey the history of temple building in Egypt, the role of architecture and art -- particularly wall reliefs -- in communicating the functions of particular parts of temples. The aim is to help students understand what requirements an Egyptian temple needed to fulfill. Then each student will plan a temple for a chosen deity and explain to peers how it meets the ancient requirements.	3.00	12	T 2:00-4:30PM
AS.130.442	01	H		**Readings - Hebrew Prose** *Staff* Reading of biblical Hebrew prose, especially from the Pentateuch, Joshua, Judges, Samuel, and Kings. Cross-listed with Jewish Studies.	3.00	25	TBA
AS.193.304	01	S		**Poetry of Ordinary People: Jewish Poetic Expression in Ghettos and Camps** *Trinh, Miriam*	3.00	15	W 5:30-7:50PM

Near Eastern Studies

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				The course aims to encourage knowledge of a relatively unknown mass phenomenon - poetic creativity by Jews under Nazi Rule, in the Ghettos and Camps. The study of multi-lingual texts, written by non-professional writers, will enable to better understand the complexity of immediate Jewish reaction to Holocaust reality, in its multi-cultural contexts. Texts from selected ghettos and camps, originally written in Yiddish, Polish, German and Hebrew will be read in English translation and analyzed. Emphasis will be put on the differences and similarities between Eastern and Western European Jewry.			
AS.270.205	01	EN		**Introduction to Geographic Information Systems and Geospatial Analysis** *Chen, Xin* The course provides a broad introduction to the principles and practice of Geographic Information Systems (GIS) and related tools of Geospatial Analysis. Topics will include history of GIS, GIS data structures, data acquisition and merging, database management, spatial analysis, and GIS applications. In addition, students will get hands-on experience working with GIS software.	3.00	25	M 1:30-4:00PM

Neuroscience

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.050.102	01	NS		**Language and Mind** *Omaki, Akira* Introductory course dealing with theory, methods, and current research topics in the study of language as a component of the mind. What it is to "know" a language: components of linguistic knowledge (phonetics, phonology, morphology, syntax, semantics) and the course of language acquisition. How linguistic knowledge is put to use: language and the brain and linguistic processing in various domains. This course is restricted to freshmen and sophomores. Juniors and seniors must seek instructor approvel to enroll. Cross-listed with Neuroscience and Psychology.	3.00	50	MW 12:00-1:15PM
AS.050.105	01	NS		**Intro to Cognitive Neuropsychology** *McCloskey, Michael E* When the brain is damaged or fails to develop normally, even the most basic cognitive abilities (such as the ability to understand words, or perceive objects) may be disrupted, often in remarkable ways. This course explores a wide range of cognitive deficits, focusing on what these deficits can tell us about how the normal brain works. Topics include brain anatomy and causes of brain damage, reading and spelling deficits, unilateral spatial neglect, hemispheric disconnection, cortical plasticity, and visual perception of location and orientation. Students read primary sources: journal articles that report deficits and discuss their implications. Cross-listed with Neuroscience.	3.00	125	TTh 1:30-2:45PM
AS.050.312	01	NS		**Cognitive Neuroimaging Methods in High-Level Vision** *Park, Soojin* This course is an advanced seminar and research practicum course. It will provide the opportunity to learn about fMRI methods used in the field of vision science and for students to have hands-on experience to develop, design and analyze a research study on topics in the cognitive neuroscience field of high-level vision. In the first part of the course students will read recent fMRI journal papers and learn about common fMRI designs and analysis methods; in the second part of the course students will conduct a research study as a group to address a research question developed from readings. Students are expected to write a paper in a journal article format at the end of the course and to present their results in front of the class. Research topics will vary but with special focus on topics in object, scene and space recognition. Cross-listed with Neuroscience and Psychology. instructor's permission required.	3.00	15	T 3:00-5:30PM
AS.050.332	01	NS		**Developmental Cognitive Neuroscience** *Landau, Barbara* In-depth examination of the current literature on cognitive development in the context of development cognitive neuroscience. Please see course prerequisites. Meets with AS.050.632.	3.00	20	MW 1:30-2:45PM
AS.080.105	01	N		**An Introduction to Neuroscience**	3.00	125	MWF 4:30-5:20PM

Neuroscience

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Hendry, Stewart H Our knowledge of brain function from the level of single molecules to human behavior continues to expand at something approaching light speed. That knowledge invades our lives every day. And decisions are made based on that knowledge from every corner of life…from physician to politician and every stop in between. This course is meant to provide a fundamental understanding of how the cells and molecules as well as the regions and systems of the brain work to have you see and hear and move and remember. The course is divided into four sections that progress from the cells of the brain and spinal cord to circuits then systems and finally behaviors. Introduction to Neuroscience is designed for any college student who has an interest in the range of disciplines we call neuroscience.			
AS.080.250	01	NS		**Neuroscience Laboratory** *Gorman, Linda K* This course will give students the "hands-on" experience of the inter-disciplinary nature of neuroscience. Students will use anatomical and neuro-physiological techniques to understand the basic underlying principles of neuroscience.	3.00	18	T 1:30-4:20PM
AS.080.250	02	NS		**Neuroscience Laboratory**	3.00	18	Th 1:30-4:20PM
AS.080.250	03	NS		**Neuroscience Laboratory**	3.00	18	F 1:30-4:20PM
AS.080.305	01	N		**The Nervous System I** *Hendry, Stewart H* The Nervous System is a fully integrated, two-semester course that surveys the cellular and molecular biology of neurons as well as the structure and function of the nervous system. Cross-listed with Biology. No Freshmen.	3.00	196	TTh 1:30-2:45PM
AS.080.308	01	N		**Neuroeconomics** *Trageser, Jason* Every day decisions often require us to weigh the costs and benefits of engaging in a particular course of action in order to obtain some expected outcome. Unfortunately, we often lack the information necessary to obtain our desired goal with complete certainty. Economists have long been interested in understanding human decision-making under these circumstances. In parallel, neuroscientists have made great strides at describing the underlying neural basis of simple decision-making. However, despite much progress in both fields, our understanding of how the brain makes decisions is incomplete. In order to strengthen and further research in both fields, the interdisciplinary field of Neuroeconomics arose. This course will survey the field of Neuroeconomics focusing on theoretical concepts developed by economists and the role these theories are playing in guiding current experimental neuroscience. Recommended Course Background: AS.080.305 and AS.080.306 or AS.020.312 and AS.020.306 or AS.200.141 and AS.020.306 or permission.	3.00	19	WF 12:00-1:15PM
AS.080.310	01	N		**Synaptic Function and Plasticity** *Kirkwood, Alfredo*	3.00	20	WF 3:00-4:15PM

Neuroscience

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				The function of the nervous system is based on synaptic transmission between neurons. Synapses are not static structures, but dynamically change with experience. Experience-dependent synaptic plasticity not only allows proper development of the nervous system in tune with the environment, but also is the basis for learning and memory. This course will cover the structure and function of synapses, and how they are altered by experience to encode information.			
AS.080.330	01	N	W	**Brain Injury & Recovery** *Gorman, Linda K* This course investigates numerous types of brain injuries and explores the responses of the nervous system to these injuries. The course's primary focus is the cellular and molecular mechanisms of brain injury and the recovery of function. Discussions of traumatic brain injury, stroke, spinal cord, and tumors, using historical and recent journal articles, will facilitate students' understanding of the current state of the brain injury field. Cross-listed with Psychological and Brain Sciences and Behavioral Biology.	3.00	15	WF 12:00-1:15PM
AS.080.345	01	N		**Great Discoveries in Neuroscience** *Baraban, Jay M* This course examines the historical and intellectual context of selected, key advances in neuroscience, how they were made and the impact they had on an understanding of the nervous system. Particular attention will be paid to advances in cellular and molecular neuroscience. Among the topics covered will be the discovery of monoamine neurotransmitters and of endocannabinoids, the role of neurotrophins in neural development, and prion-based diseases of the brain.	3.00	30	TTh 3:00-4:15PM
AS.080.355	01	N		**Visual System** *Hendry, Stewart H* From outer segments of photoreceptors to the Fusiform Face Area of the cerebral cortex we have come to understand how the visual system works at each of many fundamental levels. This course examines the basis for perception of visible objects at each of these levels. We will use the secondary literature (scientific reviews) to accent the hard-won truths about visual system functional organization and to highlight ongoing controversies. Students will be lead through carefully chosen reviews in a series of lectures and written summaries prepared by faculty. Three exams and a final exam will test students not on their memorization of minutiae but on their understanding of fundamental principles.	3.00	30	TTh 10:30-11:45AM
AS.080.360	01	N		**Diseases & Disorders of the Nervous System** *Mckhann, Guy Mead*	3.00	100	TTh 4:30-5:45PM

Neuroscience

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Prereq: (580.421 and 580.422) or (020.305 and 020.306) or (080.305 and 080.306) or by permission. This class will use lectures, readings and presentations of filmed clinical examinations to outline the causes and treatments of neurological diseases and disorders. We will begin with diseases of the peripheral nervous system and proceed in steps to examining various forms of mental retardation and a variety of neuropsychiatric disorders.			
AS.080.366	01	NS	W	**Neuroscience of Pain** *Adwanikar, Hita M* This course is a systems-oriented course focusing on the basic neural processing of pain signals in both the spinal cord and the brain. Class lectures will cover the anatomical and molecular basis for the transmission and perception of pain signals, basic concepts such as allodynia, hyperalgesia, peripheral and central sensitization, remodeling, the pathophysiology of chronic pain disorders and the cognitive and emotional aspects of pain. We will also discuss the regulation of pain signals by descending systems, and current practices and new advances in the treatment of pain.	3.00	30	TTh 10:30-11:45AM
AS.080.400	01	NS		**Research Practicum: Language Disorders** *Rapp, Brenda C* This course provide the opportunity to learn about adult aphasias; language disorders which are one of the most common consequence of stroke. You will receive training in Supportive Communication Techniques and work as a communication partner with an individual with aphasia for two hours per week. Three class meetings for orientation and reading assignments will be held on campus; training and practicum will be conducted at a local aphasia support center. Transportation required. A valid driver's license for zip car usage is needed.Students may only take this course 1 time.	2.00	2	TBA
AS.080.401	01			**Research Practicum: KEEN (Kids Enjoying Exercise Now)** *Gorman, Linda K*	1.00 - 3.00	19	S 11:15AM-4:15PM

Neuroscience

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				VAN CERTIFICATION SUGGESTED KEEN (Kids Enjoying Exercise Now) This is a one (1)- three (3) credit S/U course, organized by the Undergraduate Neuroscience Program Committee. This course has an option for variable credits. Therefore, 1 credit equals 3 visits, 2 credits equals 6 visits and 3 credits equals 9 visits. This course provides the opportunity to learn and interact with children who have neurological disabilities, including autism, cerebral palsy and Down syndrome in weekend exercise and recreational activities. You will receive a profile for the KEEN athlete that you will be paired with during a session. You will receive initial training and then volunteer for the number of credits registered for; during consecutive Sundays during the first or second half of the semester. One class meeting for orientation will be held on campus; one exit meeting will be held on campus; practicum will take place at KEEN centers in Maryland. Transportation will be either a zip car (you will need a driver's license), OR JHU van. Neuroscience and Behavioral Biology Majors ONLY.			
AS.080.401	02			**Research Practicum: KEEN (Kids Enjoying Exercise Now)**	1.00 - 3.00	19	S 11:15AM-4:15PM
AS.080.402	01			**Teaching Practicum: Making Neuroscience Fun (MNF)** *Gorman, Linda K* This is a one (1) credit S/U course organized by the Undergraduate Neuroscience Program Committee. Making Neuroscience Fun (MNF) is a community outreach program which brings age-appropriate interactive presentations about the brain and nervous system to Baltimore City and County elementary school students. MNF is an effort aimed at fostering appreciation for science in general, emphasizing the importance of the brain and the nervous system in everyday life, and enhancing the science curriculum in Baltimore's City and County schools. You will receive initial training and then volunteer for 3 visits during the semester. There will be one (1) class meeting for Orientation and one (1) class for an Exit Meeting that will be held on campus; the practicum will take place at Baltimore City and County Schools. Specific days and times will be discussed at the Orientation Meeting. Students are encouraged to become ZipCar certified through the Neuroscience & Behavioral Biology Program Office by contacting Allie DiGioia.	1.00 - 3.00	19	TBA
AS.080.402	02			**Teaching Practicum: Making Neuroscience Fun (MNF)**	1.00 - 3.00	19	TBA
AS.080.403	01			**Research Practicum: HopKids - Kennedy Krieger Institute** *Gorman, Linda K*	1.00	19	TBA

Neuroscience

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course provides the opportunity to learn and interact with children recovering from brain, spinal, and musculoskeletal injuries. You will travel to the Kennedy Krieger Institute to volunteer in the Child Life Department where you will participate in a variety of therapeutic activities including playing with the children and helping them achieve goals. Students will gain valuable clinical experience while learning patient empathy. You must attend (3) three sessions per semester either from 2-4 on Fridays, or 2-4 on the first Saturday of each month.			
AS.080.404	01			**Teaching Practicum: HopKids-Children's Center** *Gorman, Linda K* This practicum provides students the opportunity to learn, play and interact with children receiving treatment in over 20 different specialties including dermatology, endocrine, GI, immunology, urology, plastics, hematology among others. Students will travel to an outpatient building at the John's Hopkins Children's center where they will participate in a variety of therapeutic activities including doing art projects and making the children feel comfortable. Students will gain valuable clinical experience and be exposed to a wide range of children with a variety of diseases/illnesses. You must attend (3) three sessions per semester either from 10-12 on Tuesdays or 10-12 on Thursdays of each month. Transportation is provided by the JHU shuttle.	1.00 - 3.00	50	TBA
AS.080.411	01	N		**Advanced Seminar:Neuroscience I** *Baraban, Jay M* For students in the first semester of the BA/MS Program. Permission Required.	3.00	10	TBA
AS.080.412	01	N		**Advanced Seminar:Neuroscience II** *Baraban, Jay M* For students in the 2nd semester of the BA/MS Program. Permission Required.	3.00	10	TBA
AS.080.413	01	N		**Advanced Seminar: Neuroscience III** *Baraban, Jay M* For students in the 3rd semester of the BA/MS Program. Permission Required.	3.00	10	TBA
AS.200.141	01	NS		**Foundations of Brain, Behavior and Cognition** *Gorman, Linda K* Formerly listed as Introduction to Physiopsychology. A survey of neuropsychology relating the organization of behavior to the integrative action of the nervous system. Cross-listed with Behavioral Biology and Neuroscience.	3.00	250	TTh 9:00-10:15AM

Philosophy

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.150.106	01	H		**The Epicurians, the Stoics, & the Skeptics on How to Live** *Stojanovic, Pavle* The question “How to live?” is eternal. The Epicureans said that pleasure is the goal of life that is to be pursued, thus paving the way to modern Utilitarianism. The Stoics argued that the goal of life is virtue, which consists in living in agreement with nature; in this, they anticipated contemporary virtue ethics. Both schools thought that although we live in a material and causally determined universe, our moral actions and characters are nevertheless “up to us” and that we have moral freedom and responsibility. The Skeptics, on the other hand, tried to demonstrate that no moral principles have sufficient rational justification and that, because of this, the only option is some kind of moral relativism and the pursuit of freedom from emotional disturbance. In this, they anticipated moral relativism and moral nihilism. By examining of the arguments of the Epicureans, the Stoics, and the Skeptics in this course, you will not only learn about them, but also have an opportunity to do philosophy yourself, and perhaps clarify how you should live your own life.	3.00	18	TTh 10:30-11:45AM
AS.150.114	01	H		**Philosophy of Human Rights** *Wilk, Thomas Michael* From domestic debates about abortion and health care to international dialogue about women’s rights, genital mutilation and genocide, human rights claims have become increasingly common, and we've come to rely on the discourse of human rights to assess the way human beings are treated by one another and by states. But what are human rights? How are human rights claims justified? Are human rights really objective and universal or are they contingent and relative to particular cultures? Where did the human rights culture begin, and how has it become so important? This course aims to explore these questions by examining foundational human rights documents, historical works on human rights and contemporary philosophical inquiry into their foundations (or lack thereof).	3.00	18	TTh 10:30-11:45AM
AS.150.118	01	HQ		**Introduction to Formal Logic** *Achinstein, Peter* "An introduction to symbolic logic and probability. In the first two parts of the course we study formal ways of determining whether a conclusion of an argument follows from its premises. Included are truth-functional logic and predicate logic. In the third part we study the basic rules of probability, and learn how to make probability calculations and decisions in life." Co-listed with AS.150.632 (for graduate students) (01-F 11:00-11:50am).	3.00	20	MW 11:00-11:50AM; F 11:00-11:50AM
AS.150.118	02	HQ		**Introduction to Formal Logic**	3.00	20	MW 11:00-11:50AM; F 11:00-11:50AM
AS.150.118	03	HQ		**Introduction to Formal Logic**	3.00	20	MW 11:00-11:50AM; F 11:00-11:50AM
AS.150.118	04	HQ		**Introduction to Formal Logic**	3.00	20	MW 11:00-11:50AM; F 11:00-11:50AM
AS.150.141	01	H		**Freshman Seminar: African Philosophy** *Koll, Sandy Gillian*	3.00	18	T 3:00-5:30PM

Philosophy

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course surveys some distinctively Sub-Saharan African contributions to major areas of philosophical inquiry, including metaphysics, epistemology, ethics and political philosophy.			
AS.150.194	01	H		**Freshman Seminar: Skepticism Ancient and Modern** *Williams, Michael* Can we gain knowledge of reality, or is everything a matter of opinion? Does it matter? Why do we want (or need) knowledge anyway? Questions like this have been the stock in trade of philosophical skeptics throughout the entire history of our Western philosophical tradition. This class will involve close readings of some classic works on the topic of skepticism with a view to understanding some of the main arguments for (and against) skepticism: how they work and how they may have changed over time. Readings include selections from Sextus Empiricus, Descartes, Hume and Wittgenstein.	3.00	15	MW 1:30-2:45PM
AS.150.201	01	H		**Introduction to Greek Philosophy** *Bett, Richard* A survey of the earlier phase of Greek philosophy. Socrates, Plato, and Aristotle will be discussed, as well as two groups of thinkers who preceded them, usually known as the pre-Socratics and the Sophists.	3.00	25	F 10:00-10:50AM; MW 10:00-10:50AM
AS.150.201	02	H		**Introduction to Greek Philosophy**	3.00	15	MW 10:00-10:50AM; W 2:00-2:50PM
AS.150.201	03	H		**Introduction to Greek Philosophy**	3.00	25	F 10:00-10:50AM; MW 10:00-10:50AM
AS.150.201	04	H		**Introduction to Greek Philosophy**	3.00	15	MW 10:00-10:50AM; W 3:00-3:50PM
AS.150.219	01	HS	W	**Intro to Bioethics** *Bok, Hilary* Introduction to a wide range of moral issues arising in the biomedical fields, e.g. physician-assisted suicide, human cloning, abortion, surrogacy, and human subjects research. Cross-listed with Public Health Studies.	3.00	18	F 12:00-12:50PM; MW 12:00-12:50PM
AS.150.219	02	HS	W	**Intro to Bioethics**	3.00	18	F 12:00-12:50PM; MW 12:00-12:50PM
AS.150.219	03	HS	W	**Intro to Bioethics**	3.00	18	W 1:30-2:20PM; MW 12:00-12:50PM
AS.150.219	04	HS	W	**Intro to Bioethics**	3.00	18	W 1:30-2:20PM; MW 12:00-12:50PM
AS.150.219	05	HS	W	**Intro to Bioethics**	3.00	18	F 12:00-12:50PM; MW 12:00-12:50PM
AS.150.219	06	HS	W	**Intro to Bioethics**	3.00	18	F 1:30-2:20PM; MW 12:00-12:50PM
AS.150.219	07	HS	W	**Intro to Bioethics**	3.00	18	W 2:00-2:50PM; MW 12:00-12:50PM
AS.150.219	08	HS	W	**Intro to Bioethics**	3.00	18	W 2:00-2:50PM; MW 12:00-12:50PM
AS.150.219	09	HS	W	**Intro to Bioethics**	3.00	18	F 2:00-2:50PM; MW 12:00-12:50PM
AS.150.219	10	HS	W	**Intro to Bioethics**	3.00	18	F 2:00-2:50PM; MW 12:00-12:50PM
AS.150.219	11	HS	W	**Intro to Bioethics**	3.00	18	F 12:00-12:50PM; MW 12:00-12:50PM
AS.150.219	12	HS	W	**Intro to Bioethics**	3.00	18	W 2:00-2:50PM; MW 12:00-12:50PM
AS.150.235	01	H		**Philosophy of Religion** *Gross, Steven* Can one prove or disprove the existence of God? What is the relation between reason and faith? Are science and religion at odds with one another? We will consider historically significant discussions of these questions as well as important contemporary writings.	3.00	20	F 11:00-11:50AM; MW 11:00-11:50AM

Philosophy

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.150.235	02	H		**Philosophy of Religion**	3.00	20	F 11:00-11:50AM; MW 11:00-11:50AM
AS.150.235	03	H		**Philosophy of Religion**	3.00	20	F 12:00-12:50PM; MW 11:00-11:50AM
AS.150.235	04	H		**Philosophy of Religion**	3.00	20	F 12:00-12:50PM; MW 11:00-11:50AM
AS.150.245	01	H		**Introduction to Philosophy of Mind** *Williams, Meredith* This is an introduction to the central problems of philosophy of mind: the mind-body problem and the problem of self-knowledge. Of particular interest in contemporary work is the relation of mind and brain and whether, or how, we acquire self-knowledge.	3.00	15	MW 9:00-9:50AM; F 9:00-9:50AM
AS.150.245	02	H		**Introduction to Philosophy of Mind**	3.00	15	MW 9:00-9:50AM; F 10:00-10:50AM
AS.150.245	03	H		**Introduction to Philosophy of Mind**	3.00	15	MW 9:00-9:50AM; F 11:00-11:50AM
AS.150.245	04	H		**Introduction to Philosophy of Mind**	3.00	15	MW 9:00-9:50AM; F 12:00-12:50PM
AS.150.323	01	H	W	**Undergraduate Seminar: Topics in Meta-Ethics** *Theunissen, L Nandi* This is a seminar on theoretical topics in ethics. We focus on debates over cognitivism and non-cognitivism; realism and anti-realism: reasons internalism and externalism; relativism and pluralism. We read contemporary classics by Sharon Street, T.M. Scanlon, Joseph Raz, Bernard Williams, Allan Gibbard, and others.	3.00	10	M 1:30-4:00PM
AS.150.411	01	H		**Arabic-Islamic Philosophy** *Staff* Introduction to major philosophers of the Arabic-Islamic tradition, including Avicenna, al-Ghazali, and Averroes. Topics addressed include the existence of God, metaphysics (e.g., causality), human freedom and knowledge, revelation and reason.	3.00	20	TTh 12:00-1:15PM
AS.150.415	01	H		**Schelling's System of Transcendental Idealism** *Forster, Eckart* Schelling's System of Transcendental Idealism is one of the key texts in the transition from Kant to Hegel. It is also one of Schelling's clearest and most successful publications, and one of the best introductions to his philosophy. This course offers a close examination of the System of Transcendental Idealism against the background of Kant and Fichte.	3.00		Th 1:00-3:30PM
AS.150.419	01	H		**Kant's Critique/Judgment** *Forster, Eckart* This course will examine closely and in detail the aesthetic and teleological parts of Kant's third masterpiece, The Critique of the Power of Judgment.	3.00		TTh 9:00-10:15AM
AS.150.420	01	HQ		**Mathematical Logic I** *Rynasiewicz, Robert* The development, first, of sentential logic and, then, of first-order predicate logic. Topics covered include formal languages, effective procedures, truth-functional and Tarski semantics, logical entailment, systems of derivation, deductive soundness and completeness, compactness, theories, formalization of mathematics, sizes of models, and interpretations between theories.	3.00		TTh 9:00-10:15AM

Philosophy

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.150.438	01	H		**Spinoza's Ethics** *Melamed, Yitzhak Yohanan* The seminar is an in depth study of Spinoza's major work, The Ethics.	3.00		T 1:30-4:00PM
AS.150.444	01	H		**The Identity of Indiscernibles** *Melamed, Yitzhak Yohanan* Can two things (such as bodies, events, moments, thoughts, or geometrical points) have precisely the same qualities? If so, what makes them different from each other? In this class we will explore the debate about the Principle of the Identity of Indiscrnibles. Readings will include texts by: Leibniz, Clarke, Max Black, Ayer, Ian Hacking, Robert Adams, and Michael Della Rocca.	3.00		TTh 10:30-11:45AM
AS.150.454	01	H		**The Value of Humanity** *Theunissen, L Nandi* Are human beings distinctively valuable? What makes us valuable? And how should we respond to the value of human beings? The course is divided into four parts. The first part takes up questions about the basis of human value. We consider various proposals, including Kant's, about the valuable feature or capacity of human beings. Are we valuable in virtue of having a good will, in virtue of being agents, in virtue of being valuers, or something further? The second part takes up questions about the explanation of the value of human beings. Does the proposed feature make us valuable because it instantiates a simple value property, making us valuable in ourselves, or simpliciter? We consider whether the notion of value simpliciter is a notion we fully understand, or need. Does the proposed feature make us valuable because it makes us good-for something or someone? Who or what does it make us good-for? Or again, does the proposed feature make us such that we are objects of an appropriate attitude or practical stance? If so, what is the attitude or stance? The third part of the course takes up normative questions about the appropriate mode of responding to human beings. We consider whether it makes sense to say that human beings are "ends-in-themselves," and what it would mean to treat a person as an end-in-itself. We also consider various accounts of respect. A guiding question is whether human beings are the only appropriate objects of respect, or whether we can respect other beings, and even artifacts. The fourth part of the class applies what we have learned so far to related topics: to the question of whether human life or existence is valuable, and conversely, whether death is disvaluable. We consider, albeit briefly, the value of human beings in relation to the value of animals. And we ask about the role of Kantian notions like dignity in applied contexts, so that highly philosophical considerations about value are shown to have real-world bearing.	3.00		F 9:00-10:00AM
AS.150.461	01	H		**Russell, Frege, Wittgenstein: Foundations of Analytic Philosophy** *Williams, Meredith*	3.00	12	MW 4:30-5:45PM

Philosophy

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Russel, Frege, and Wittgenstein (in Tractus) provided much of the philosophical foundation for 20th C.analytic philosophy. Their influence continues to be felt, especially in their conception of philosophical problems and the methods by which they can be solved.			
AS.150.474	01	H		**Justice and Health** *Bok, Hilary* Course will consider the bearing of theories of justice on health care. Topics will include national health insurance, rationing and cost containment, and what justice requires of researchers in developing countries.	3.00	25	F 1:30-3:50PM
AS.150.476	01	HNS		**Philosophy and Cognitive Science** *Gross, Steven* This year's topic: Temporal Experience. Do we perceive time? If so, through what sense(s)? How long is the conscious "now"? Does the temporal order of our perceptions mirror the temporal order of what we perceive? Must the experience of a temporal duration itself be extended in time? What is the relation between the expereince of time (for example, the experience of time's passage) and memory? Does our experience of time accurately represent temporal features of reality, or it is actually illusory? How does attending to time's passage affect its perceived rate of passage (and what is it to attend to time's passage)? We will explore these and other questions through an examination of both psychological and philosophical work. [This course meets jointly with Professor Flombaum's AS.200.316 and AS.200.616.]. Permission of instructor required to enroll.	3.00	15	M 1:30-3:50PM
AS.300.435	01	H		**Emmanuel Levinas: Essential Works, Guiding Concepts, Lasting Influence** *de Vries, Hent* This seminar will address the major writings and guiding concepts of Emmanuel Levinas and investigate his increasing critical role as a touchstone and dividing line in the formation of twentieth century and contemporary schools of thought (phenomenology, pragmatism, post-analytic philosophy, literary, feminist, and political theory, anthropology). Additional readings will include Stanley Cavell, Jacques Derrida, Vasily Grossman, Jean-François Lyotard, and Hilary Putnam.	3.00	15	W 4:00-6:00PM

Physics & Astronomy

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.171.101	01	EN		**General Physics:Physical Science Major I** *Swartz, Morris* First semester of two-semester sequence. In this term, the topics covered include the basic principles of classical mechanics and fluids as well as an introduction to wave motion. Recommended Corequisites: (AS.173.111) AND (AS.110.106 or AS.110.108 or AS.110.113). Midterm exams are given at 8am Fridays, so students must leave their schedules open at this time in order to be able to take these exams	4.00	24	F 8:00-8:50AM; TTh 10:30-11:45AM
AS.171.101	02	EN		**General Physics:Physical Science Major I**	4.00	24	TTh 10:30-11:45AM; F 8:00-8:50AM
AS.171.101	03	EN		**General Physics:Physical Science Major I**	4.00	24	F 9:00-9:50AM; TTh 10:30-11:45AM
AS.171.101	04	EN		**General Physics:Physical Science Major I**	4.00	24	F 9:00-9:50AM; TTh 10:30-11:45AM
AS.171.101	05	EN		**General Physics:Physical Science Major I**	4.00	24	F 10:00-10:50AM; TTh 10:30-11:45AM
AS.171.101	06	EN		**General Physics:Physical Science Major I** *Barnett, Bruce A*	4.00	24	F 10:00-10:50AM; TTh 10:30-11:45AM
AS.171.101	07	EN		**General Physics:Physical Science Major I** *Swartz, Morris*	4.00	24	F 11:00-11:50AM; TTh 10:30-11:45AM
AS.171.101	08	EN		**General Physics:Physical Science Major I**	4.00	24	F 11:00-11:50AM; TTh 10:30-11:45AM
AS.171.101	09	EN		**General Physics:Physical Science Major I**	4.00	24	F 12:00-12:50PM; TTh 10:30-11:45AM
AS.171.101	10	EN		**General Physics:Physical Science Major I**	4.00	24	F 12:00-12:50PM; TTh 10:30-11:45AM
AS.171.102	01	EN		**General Physics: Physical Science Majors II** *Maksimovic, Petar* Second semester of two-semester sequence. In this term, the topics covered include wave motion, electricity and magnetism, optics, and modern physics. Recommended Corequisites: (AS.173.112) AND Calculus (AS.110.107 or AS.110.109 or AS.110.113). Midterm exams are given at 8am Thursdays, so students must leave their schedules open at this time in order to be able to take these exams	4.00	24	MWF 11:00-11:50AM; Th 8:00-8:50AM
AS.171.102	02	EN		**General Physics: Physical Science Majors II**	4.00	24	MWF 11:00-11:50AM; Th 9:00-9:50AM
AS.171.102	03	EN		**General Physics: Physical Science Majors II**	4.00	24	MWF 11:00-11:50AM; Th 10:30-11:20AM
AS.171.102	04	EN		**General Physics: Physical Science Majors II**	4.00	24	MWF 11:00-11:50AM; Th 10:30-11:20AM
AS.171.102	05	EN		**General Physics: Physical Science Majors II**	4.00	24	MWF 11:00-11:50AM; Th 12:00-12:50PM
AS.171.102	06	EN		**General Physics: Physical Science Majors II**	4.00	24	MWF 11:00-11:50AM; Th 12:00-12:50PM
AS.171.103	01	EN		**General Physics I for Biological Science Majors** *Broholm, Collin* First-semester of two-semester sequence in calculus-based general physics, tailored to students majoring in one of the biological sciences. In this term, the topics covered include the basic principles of classical mechanics and fluids as well as an introduction to wave motion. Recommended Corequisites: (AS.173.111) AND (AS.110.106 or AS.110.108 or AS.110.113). Midterm exams are given at 8am Tuesdays, so students must leave their schedules open at this time in order to be able to take these exams	4.00	24	MWF 9:00-9:50AM; T 8:00-8:50AM

Physics & Astronomy

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.171.103	02	EN		**General Physics I for Biological Science Majors**	4.00	24	MWF 9:00-9:50AM; T 9:00-9:50AM
AS.171.103	03	EN		**General Physics I for Biological Science Majors**	4.00	24	MWF 9:00-9:50AM; T 9:00-9:50AM
AS.171.103	04	EN		**General Physics I for Biological Science Majors**	4.00	24	MWF 9:00-9:50AM; T 10:30-11:20AM
AS.171.103	05	EN		**General Physics I for Biological Science Majors**	4.00	24	MWF 9:00-9:50AM; T 10:30-11:20AM
AS.171.103	06	EN		**General Physics I for Biological Science Majors**	4.00	24	MWF 9:00-9:50AM; T 10:30-11:20AM
AS.171.103	07	EN		**General Physics I for Biological Science Majors**	4.00	24	MWF 9:00-9:50AM; T 12:00-12:50PM
AS.171.103	08	EN		**General Physics I for Biological Science Majors**	4.00	24	MWF 9:00-9:50AM; T 12:00-12:50PM
AS.171.103	09	EN		**General Physics I for Biological Science Majors**	4.00	24	MWF 9:00-9:50AM; T 12:00-12:50PM
AS.171.103	10	EN		**General Physics I for Biological Science Majors**	4.00	24	MWF 9:00-9:50AM; T 4:30-5:20PM
AS.171.105	01	EN		**Classical Mechanics I** *Reich, Daniel H* An in-depth introduction to classical mechanics intended for physics majors/minors and other students with a strong interest in physics. This course treats fewer topics than AS.171.101 and AS.171.103 but with greater mathematical sophistication. It is particularly recommended for students who intend to take AS.171.201 -AS.171.202 or AS.171.309-AS.171.310. Recommended Corequisites: AS.173.115 and AS.110.108	4.00	17	MWF 11:00-11:50AM; Th 10:30-11:20AM
AS.171.105	02	EN		**Classical Mechanics I**	4.00	18	MWF 11:00-11:50AM; Th 10:30-11:20AM
AS.171.107	01	EN		**General Physics for Physical Sciences Majors (AL)** *Leheny, Robert L* This two-semester sequence in general physics is identical in subject matter to AS.171.101 -AS.171.102, covering mechanics, heat, sound, electricity and magnetism, optics, and modern physics, but differs in instructional format. Rather than being presented via lectures and discussion sections, it is instead taught in an "active learning" style with most class time given to small group problem-solving guided by instructors. Midterm exams for every section are given during the 8 AM section time! Accordingly, students registering for sections at times other than 8 AM must retain availability for 8 AM sections as needed. Recommended Corequisites: (AS.173.111) AND (AS.110.106 or AS.110.108 or AS.110.113) Priority given to Freshman	4.00	21	TTh 9:00-10:15AM; F 8:00-8:50AM
AS.171.107	02	EN		**General Physics for Physical Sciences Majors (AL)**	4.00	21	TTh 9:00-10:15AM; F 9:00-9:50AM
AS.171.107	03	EN		**General Physics for Physical Sciences Majors (AL)**	4.00	21	TTh 9:00-10:15AM; F 10:00-10:50AM
AS.171.107	04	EN		**General Physics for Physical Sciences Majors (AL)**	4.00	21	TTh 9:00-10:15AM; F 11:00-11:50AM
AS.171.113	01	N		**Subatomic World**	3.00	44	MWF 11:00-11:50AM

Physics & Astronomy

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Blumenfeld, Barry J Introduction to concepts of physics of the subatomic world: Symmetries, relativity, quanta, neutrinos, particles, and fields. Emphasis on ideas of modern physics, not on the mathematics. Intended for nonscience majors.			
AS.171.201	01	EN		**Special Relativity/Waves** *Zakamska, Nadia* Course continues introductory physics sequence (begins with AS.171.105 -AS.171.106). Special theory of relativity, forced and damped oscillators, Fourier analysis, wave equation, reflection and transmission, diffraction and interference, dispersion. Meets with AS.171.207.	4.00	20	TTh 10:30-11:45AM; Th 1:30-3:00PM
AS.171.201	02	EN		**Special Relativity/Waves**	4.00	20	TTh 10:30-11:45AM; Th 3:00-4:30PM
AS.171.205	01	NQ		**Introduction to Practical Data Science: Beautiful Data** *Szalay, Sandor* The class will provide an overview of data science, with an introduction to basic statistical principles, databases, fundamentals of algorithms and data structures, followed by practical problems in data analytics. Recommend Course Background: Familiarity with principles of computing.	3.00	30	WF 1:30-2:45PM
AS.171.207	01	N		**Special Relativity** *Zakamska, Nadia* Three-week introduction to special relativity for students who elect to take AS.171.209 in place of AS.171.201.	1.00	20	TTh 10:30-11:45AM; Th 1:30-3:00PM
AS.171.207	02	N		**Special Relativity**	1.00	20	TTh 10:30-11:45AM; Th 3:00-4:30PM
AS.171.301	01	N		**Electromagnetic Theory II** *Gritsan, Andrei* Static electric and magnetic fields in free space and matter; boundary value problems; electromagnetic induction; Maxwell's equations; and an introduction to electrodynamics.	4.00	30	TTh 10:30-11:45AM; F 10:00-10:50AM
AS.171.301	02	N		**Electromagnetic Theory II**	4.00	15	Th 1:30-2:20PM; TTh 10:30-11:45AM
AS.171.303	01	N		**Quantum Mechanics I** *Chien, Chia Ling* Fundamental aspects of quantum mechanics. Uncertainty relations, Schrodinger equation in one and three dimensions, tunneling, harmonic oscillator, angular momentum, hydrogen atom, spin, Pauli principle, perturbation theory (time-independent and time-dependent), transition probabilities and selection rules, atomic structure, scattering theory.	4.00	30	MWF 9:00-9:50AM; T 1:30-2:20PM
AS.171.310	01	N		**Biological Physics** *Robbins, Mark O* Introduces topics of classical statistical mechanics. Additional topics include low-Reynolds number hydrodynamics and E&M of ionic solutions, via biologically relevant examples.	4.00	35	MW 3:00-4:15PM; F 3:00-3:50PM

Physics & Astronomy

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.171.312	01	N		**Statistical Physics/Thermodynamics** *Armitage, Norman* Undergraduate course that develops the laws and general theorems of thermodynamics from a statistical framework.	4.00	30	MF 1:30-2:45PM; W 1:30-2:20PM
AS.171.321	01	EN		**Introduction to Space, Science, and Technology** *McCandliss, Stephan R* Topics include space astronomy, remote observing of the earth, space physics, planetary exploration, human space flight, space environment, orbits, propulsion, spacecraft design, attitude control and communication. Crosslisted by Departments of Earth and Planetary Sciences, Materials Science and Engineering and Mechanical Engineering. Recommended Course Background: AS.171.101-AS.171.102 or similar; AS.110.108 -AS.110.109.	3.00	36	TTh 12:00-1:15PM
AS.171.333	01	EN		**Planets, Life and the Universe** *Norman, Colin* This multidisciplinary course explores the origins of life, planets' formation, Earth's evolution, extrasolar planets, habitable zones, life in extreme environments, the search for life in the Universe, space missions and planetary protection. Meets with AS.171.699.	3.00	10	MWF 11:00-11:50AM
AS.171.405	01	N		**Condensed Matter Physics** *Turner, Ari* Undergraduate course covering basic concepts of condensed matter physics: crystal structure, diffraction and reciprocal lattices, electronic and optical properties, band structure, phonons, superconductivity and magnetism. Co-listed with AS.171.621 Recommended Course Background: AS.171.304, AS.110.201-AS.110.202.	3.00	10	MW 3:00-4:15PM
AS.171.410	01	N		**Physical Cosmology** *Bennett, Charles L* This course provides an overview of modern physical cosmology. Topics covered include: the contents, shape, and history of the universe; the big bang theory; dark matter; dark energy; the cosmic microwave background; Hubble's law; the Friedmann equation; and inflation. Recommended Course Background: (AS.171.101-AS.171.102), or (AS.171.103 -AS.171.104), or (AS.171.105-AS.171.106), or (AS.171.107-AS.171.108), or equivalent.	3.00	28	TTh 10:30-11:45AM
AS.172.203	01	N		**Contemporary Phys Sem** *Drichko, Natalia* This seminar exposes physics majors to a broad variety of contemporary experimental and theoretical issues in the field. Students read and discuss reviews from the current literature, and are expected to make an oral or written presentation. Recommended Course Background: AS.171.101-AS.171.102, AS.171.103-AS.171.104, or AS.171.105 -AS.171.106.	1.00	35	T 1:30-2:20PM
AS.173.111	01	N		**General Physics Laboratory I** *Chien, Chia Ling*	1.00	24	M 1:30-4:20PM

Physics & Astronomy

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Experiments are chosen from both physical and biological sciences and are designed to give students background in experimental techniques as well as to reinforce physical principles.			
AS.173.111	02	N		**General Physics Laboratory I**	1.00	24	M 1:30-4:20PM
AS.173.111	03	N		**General Physics Laboratory I**	1.00	24	M 1:30-4:20PM
AS.173.111	04	N		**General Physics Laboratory I**	1.00	24	T 1:30-4:20PM
AS.173.111	05	N		**General Physics Laboratory I**	1.00	24	T 1:30-4:20PM
AS.173.111	06	N		**General Physics Laboratory I**	1.00	24	T 1:30-4:20PM
AS.173.111	07	N		**General Physics Laboratory I**	1.00	24	W 1:30-4:20PM
AS.173.111	08	N		**General Physics Laboratory I**	1.00	24	W 1:30-4:20PM
AS.173.111	09	N		**General Physics Laboratory I**	1.00	24	W 1:30-4:20PM
AS.173.111	10	N		**General Physics Laboratory I**	1.00	24	Th 1:30-4:20PM
AS.173.111	11	N		**General Physics Laboratory I**	1.00	24	Th 1:30-4:20PM
AS.173.111	12	N		**General Physics Laboratory I**	1.00	24	Th 1:30-4:20PM
AS.173.111	13	N		**General Physics Laboratory I**	1.00	24	Th 9:00-11:50AM
AS.173.111	14	N		**General Physics Laboratory I**	1.00	24	M 6:00-8:50PM
AS.173.111	15	N		**General Physics Laboratory I**	1.00	24	M 6:00-8:50PM
AS.173.111	16	N		**General Physics Laboratory I**	1.00	24	T 6:00-8:50PM
AS.173.111	17	N		**General Physics Laboratory I**	1.00	24	T 6:00-8:50PM
AS.173.111	18	N		**General Physics Laboratory I**	1.00	24	T 6:00-8:50PM
AS.173.111	19	N		**General Physics Laboratory I**	1.00	24	W 6:00-8:50PM
AS.173.111	20	N		**General Physics Laboratory I**	1.00	24	W 6:00-8:50PM
AS.173.111	21	N		**General Physics Laboratory I**	1.00	24	W 6:00-8:50PM
AS.173.111	22	N		**General Physics Laboratory I**	1.00	24	Th 6:00-8:50PM
AS.173.111	23	N		**General Physics Laboratory I**	1.00	24	Th 6:00-8:50PM
AS.173.112	01	N		**General Physics Laboratory II** *Chien, Chia Ling* Experiments are chosen from both physical and biological sciences and are designed to give students background in experimental techniques as well as to reinforce physical principles. Recommended Course Background: AS.173.111; Corequisite: AS.171.102 or AS.171.104 or AS.171.106	1.00	24	T 1:30-4:20PM
AS.173.112	02	N		**General Physics Laboratory II**	1.00	24	W 1:30-4:20PM
AS.173.112	03	N		**General Physics Laboratory II**	1.00	24	Th 1:30-4:20PM
AS.173.112	04	N		**General Physics Laboratory II**	1.00	24	T 6:00-8:50PM
AS.173.112	05	N		**General Physics Laboratory II**	1.00	24	W 6:00-8:50PM
AS.173.112	06	N		**General Physics Laboratory II**	1.00	24	M 6:00-8:50PM
AS.173.115	01	N		**Classical Mechanics Laboratory** *Chien, Chia Ling* Experiments chosen to complement the lecture course Classical Mechanics I, II AS.171.105 -AS.171.106 and introduce students to experimental techniques and statistical analysis. Corequisite: AS.171.105.	1.00	36	M 6:00-8:50PM
AS.173.115	02	N		**Classical Mechanics Laboratory**	1.00	24	Th 6:00-8:50PM
AS.173.311	01	N		**Mentoring in General Physics Laboratory** *Swartz, Morris*	1.00	25	TBA

Physics & Astronomy

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course provides students who have take General Physics I and II and General Physics Laboratory I and II with the opportunity to mentor new students in General Physics Laboratory I and II. Mentors collaborate General Physics laboratory Teaching Assistants to interact with students to help them to complete laboratory assignments and to master the concepts of General Physics. Mentors must have a strong background in Physics. They are expected to interact with students during one three-hour laboratory section per week and to attend the associated TA training once per week. Permission of the instructor required. S/U only.			

Political Science

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.190.101	01	S		**Introduction to American Politics** *Ginsberg, Benjamin* This course is an introduction to government and politics through the study of the government and politics of the United States. All governments combine coercion and legitimacy. In a stable and legitimate system of government, coercion is hardly noticed by most citizens. Government comes to be seen as a source of benefits. The purpose of this course is to look behind institutions, practices, and benefits to appreciate how, for what and by whom we are governed.	3.00	20	MW 11:00-11:50AM; F 11:00-11:50AM
AS.190.101	02	S		**Introduction to American Politics**	3.00	20	MW 11:00-11:50AM; F 11:00-11:50AM
AS.190.101	03	S		**Introduction to American Politics**	3.00	20	MW 11:00-11:50AM; F 11:00-11:50AM
AS.190.101	04	S		**Introduction to American Politics**	3.00	20	MW 11:00-11:50AM; F 12:00-12:50PM
AS.190.101	05	S		**Introduction to American Politics**	3.00	20	MW 11:00-11:50AM; F 12:00-12:50PM
AS.190.101	06	S		**Introduction to American Politics**	3.00	20	MW 11:00-11:50AM; F 12:00-12:50PM
AS.190.101	07	S		**Introduction to American Politics**	3.00	20	MW 11:00-11:50AM; F 9:00-9:50AM
AS.190.101	08	S		**Introduction to American Politics**	3.00	20	MW 11:00-11:50AM; F 9:00-9:50AM
AS.190.101	09	S		**Introduction to American Politics**	3.00	20	MW 11:00-11:50AM; F 9:00-9:50AM
AS.190.101	10	S		**Introduction to American Politics**	3.00	20	MW 11:00-11:50AM; F 9:00-9:50AM
AS.190.101	11	S		**Introduction to American Politics**	3.00	20	MW 11:00-11:50AM; F 11:00-11:50AM
AS.190.101	12	S		**Introduction to American Politics**	3.00	20	MW 11:00-11:50AM; F 12:00-12:50PM
AS.190.209	01	S		**Contemporary International Politics** *David, Steven R* An introduction to international politics. Emphasis will be on continuity and change in international politics and the causes of war and peace. The first half of the course will focus on events prior to the end of the Cold War, including the Peloponnesian War, the European balance of power, imperialism, the origins and consequences of WWI and WWII, and the Cold War. The second half will focus on international politics since 1990, including globalization, whether democracies produce peace, the impact of weapons of mass destruction, terrorism, and the prospects for peace in the 21st century. Theories of realism and liberalism will also be considered.	3.00	20	MW 1:30-2:20PM; F 1:30-2:20PM
AS.190.209	02	S		**Contemporary International Politics**	3.00	20	MW 1:30-2:20PM; F 1:30-2:20PM
AS.190.209	03	S		**Contemporary International Politics**	3.00	20	MW 1:30-2:20PM; F 3:00-3:50PM
AS.190.209	04	S		**Contemporary International Politics**	3.00	20	MW 1:30-2:20PM; F 3:00-3:50PM
AS.190.209	05	S		**Contemporary International Politics**	3.00	20	MW 1:30-2:20PM; Th 9:00-9:50AM
AS.190.209	06	S		**Contemporary International Politics**	3.00	20	MW 1:30-2:20PM; Th 9:00-9:50AM
AS.190.209	07	S		**Contemporary International Politics**	3.00	20	MW 1:30-2:20PM; Th 10:30-11:20AM
AS.190.209	08	S		**Contemporary International Politics**	3.00	20	MW 1:30-2:20PM; Th 10:30-11:20AM
AS.190.209	09	S		**Contemporary International Politics**	3.00	20	MW 1:30-2:20PM; W 3:00-3:50PM
AS.190.209	10	S		**Contemporary International Politics**	3.00	20	MW 1:30-2:20PM; W 4:00-4:50PM
AS.190.227	01	S		**U.S. Foreign Policy** *Staff*	3.00	20	MW 11:00-11:50AM; F 11:00-11:50AM

Political Science

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course will provide and analysis of US foreign policy with a focus on the interests, institutions, and ideas underpinning its development. While the course will offer a broader survey, the emphasis will be on important developments during the Cold War, such as the articulation of containment strategies and nuclear deterrence, and the analysis of contemporary foreign policy questions, including the problems of terrorism and failed states. In addition to security issues, attention will also be paid to significant developments in international trade policy.			
AS.190.227	02	S		**U.S. Foreign Policy**	3.00	20	MW 11:00-11:50AM; F 12:00-12:50PM
AS.190.280	01	S		**Political Persuasion** *Bennett, Jane* An introduction to Euro-American political thought, with a focus on the role of language, rhetoric, and Eros within politics. Texts by Plato, Machiavelli, Hobbes, Walt Whitman, and Emma Goldman.	3.00	20	MW 12:00-12:50PM; F 12:00-12:50PM
AS.190.280	02	S		**Political Persuasion**	3.00	20	MW 12:00-12:50PM; F 1:30-2:20PM
AS.190.316	01	S		**The American Congress** *Schlozman, Daniel* A survey of legislative politics and policymaking in the US, and their place in the political system. Special attention to issues of representation, and the consequences of institutional design. Students who have taken AS.190.210 may not take this course.	3.00	20	MW 10:00-10:50AM; F 10:00-10:50AM
AS.190.316	02	S		**The American Congress**	3.00	20	MW 10:00-10:50AM; F 11:00-11:50AM
AS.190.327	01	S		**Global and Local Politics of Information** *Marlin-Bennett, Renee* Considers global and comparative politics of information, information technologies, and the Internet. Examines governance of information (ownership of information, rights to information, privacy) and governance of information technologies (domain names, social media websites, etc.). Students who previously took AS.190.327 Politics of Information may not take this course.	3.00	40	TTh 10:30-11:45AM
AS.190.331	01	S		**Comparative Racial Politics** *Hanchard, Michael* Students will learn to utilize qualitative, interpretive methods of comparative politics to examine dynamics of racial and/or ethnic politics in the nation-states of Cuba, Brazil, Britain and France, Germany, and the United States. Readings will emphasize the role of the state, political economy, national culture, racist ideologies and anti-racist politics in the formation, maintenance and transformation of conditions of race-based inequalities. Students will also become familiar with theories and concepts of race and ethnicity, and the histories of social movements in the aforementioned societies founded, in part, on racial and/or ethnic identification as a response to inequality. Formerly titled: Race and Racism in Comparative Perspective.	3.00		TTh 3:00-4:15PM

Political Science

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.190.391	01	S		**Time to Kill: Race, Punishment, Death and Desire** *Brendese, Philip Joseph, III.* This course examines the role of race in determining who deserves to be punished, the timing and occasions of punitive action and how long punishment should endure. Key to our inquiry is how racialized presumptions about human desire might justify punitive logics of power. The class explores inequalities in the distribution of punishment and death in order to illuminate how race shapes questions of whose time is more valuable, who lives and who dies, and ultimately whose lives count as human.	3.00	20	MW 3:00-3:50PM; F 3:00-3:50PM
AS.190.391	02	S		**Time to Kill: Race, Punishment, Death and Desire**	3.00	20	MW 3:00-3:50PM; F 4:00-4:50PM
AS.190.393	01	S		**Theories of Constitutional Interpretation** *Zackin, Emily* In this course, we will read and discuss a variety of arguments about how best to interpret constitutional texts, with particular attention to debates about the U.S. Constitution. The course will also cover debates about the role of ordinary people, legislatures, and judges in determining the content of constitutional law.	3.00	40	TTh 10:30-11:45AM
AS.190.396	01	NS	W	**Capitalism and Ecology** *Connolly, William E* This seminar explores the bumpy relations between contemporary capitalism and the Anthropocene-the two hundred year period when modern political economies have promoted rapid climate change. We examine different readings of capitalism in relation to the self-organizing capacities of climate, ocean currents, glaciers and other force-fields. We also explore the effects on late-modern life and different strategies to respond to them. Key texts: Hayek, Law, Legislation and Liberty, Pearce, With Speed and Violence, Lazzarato, The Rise of The Indebted Man, Hirsch The Social Limits to Growth, Klein, This Changes Everything, Connolly The Fragility of Things. Two 10-12 page essays. Previous course in theory or some near equivalent suggested.	3.00	15	M 1:30-3:50PM
AS.190.405	01	S	W	**Food Politics** *Sheingate, Adam* This course examines the politics of food at the local, national, and global level. Topics include the politics of agricultural subsidies, struggles over genetically modified foods, government efforts at improving food safety, and issues surrounding obesity and nutrition policy. Juniors, seniors, and graduate students only. Cross-listed with Public Health Studies.	3.00	15	MW 3:00-4:15PM
AS.190.408	01	S		**Sovereignty: Historical Perspectives and Contemporary Issues** *Staff*	3.00	25	T 1:30-3:50PM

Political Science

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This seminar provides an in-depth exploration of the concept of sovereignty by examining its historical development, recent controversies, and its use in international relations scholarship. The course will cover both the conceptual articulation of notions of sovereignty and its practice from before the establishment of the modern European state system to the present day.			
AS.190.412	01	S		**Political Violence** *David, Steven R* An examination of the ways in which violence has been used to secure political ends. Topics include terrorism, assassination, genocide, coups, rebellions and war itself. Students examine what makes types of political violence unique and what unites them. (Formerly AS.190.372)	3.00	15	T 3:00-5:20PM
AS.190.425	01	S	W	**The New Deal and American Politics** *Schlozman, Daniel* This seminar explores how the New Deal, the fundamental moment in the post-Civil War United States, has structured politics and government across a variety of domains ever since. Topics include presidential leadership, executive power, political parties, labor, race, and the welfare state.	3.00	15	W 1:30-3:50PM
AS.190.435	01	S	W	**Law and Literature** *Culbert, Jennifer* This course will examine the relationship between law and literature. As many have observed, law and literature have much in common as well as much to teach each other. Topics this course will discuss include practices of interpretation, issues of authority, the rule of law, and the power of narrative. In addition to reading essays by scholars in the field, students will read a selection of judicial opinions, short stories, novels, and plays.	3.00	15	TTh 1:30-2:45PM
AS.190.442	01		W	**Civil Society** *Chung, Erin* This course explores classic and contemporary debates on the concept of civil society and critically examines its analytical value in light of recent developments. Topics include the relationship between civil society, the state, and markets, the role of civil society in development and democratization, social capital, and global civil society. This course is open to graduate students from any discipline. Advanced undergraduate students must obtain permission from the instructor and are expected to keep up with graduate students during class discussions.	3.00	15	W 3:00-5:50PM
AS.190.471	01	S		**The University and Society** *Ginsberg, Benjamin*	3.00	25	W 1:30-3:50PM

Political Science

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				In the 20th century, American universities became the envy of the world, leading in most categories of scholarly productivity and attracting students from every nation. In recent years, though, American higher education has come to face a number of challenges including rapidly rising costs, administrative bloat, corporatization and moocification. We will examine the problems and promises of American higher education, the political struggles within the university and the place of the university in the larger society. Upper classes and Grad Students only.			
AS.190.491	01	S		**Game Theory in the Social Sciences** *Mazzuca, Sebastian L* Strategic thinking is a fundamental component of many political and economic phenomena, from international wars and national elections to wage bargains and monopoly power. Game Theory is a set of ideas and techniques for analyzing strategic interactions and making predictions about its outcomes. This course provides an introduction to Game Theory and its main applications to relevant political and social outcomes. Juniors and Seniors Only.	3.00	25	TTh 3:00-4:15PM
AS.191.113	01	S		**Diet, Politics and Identity: Are We What We Eat?** *Rebrovick, Arthur Joseph* Tracing the history of the idea that "you are what you eat," this course explores the relationships between diets, bodies, selves, and politics. Readings will be both historical and contemporary and cover a variety of fields including philosophy, political theory, anthropology, and the history of science and medicine. Dean's Prize Teaching Fellowship. Freshman Only.	3.00	12	TTh 10:30-11:45AM
AS.191.203	01	S	W	**Energy and Global Politics** *Daggett, Cara Leigh New* The purpose of this course will be to explore with students how energy has affected global politics, both historically and in contemporary and future politics. A key premise of the course will be that energy as an object of politics is a relatively recent phenomenon, as energy only emerged in physics in the nineteenth century, while in politics, a ‘Department of Energy’ or something called ‘energy policy’ only emerged after the 1970s oil crisis. Following energy will therefore involve thinking about energy as not only a scientific unit, but also as a historical and political term, a shifting political apparatus that involves different fuels, supply chains, architectures and institutions over time. In order to ‘follow’ energy in this way, this course will also introduce students to literature that thinks about how things in the material world – whether geography, mapping, natural resources, climate, ships or technology – intersect with global politics.	3.00	18	TTh 4:30-5:45PM
AS.191.335	01	S		**Arab-Israeli Conflict (IR)** *Freedman, Robert*	3.00	40	T 4:00-6:30PM

Political Science

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				The course will focus on the origin and development of the Arab-Israeli conflict from its beginnings when Palestine was controlled by the Ottoman Empire, through World War I, The British Mandate over Palestine, and the first Arab-Israeli war (1947-1949). It will then examine the period of the Arab-Israeli wars of 1956, 1967, 1973, and 1982, the Palestinian Intifadas (1987-1993 and 2000-2005); and the development of the Arab-Israeli peace process from its beginnings with the Egyptian-Israeli treaty of 1979, the Oslo I and Oslo II agreements of 1993 and 1995, Israel's peace treaty with Jordan of 1994, the Road Map of 2003; and the periodic peace talks between Israel and Syria. The conflict will be analyzed against the background of great power intervention in the Middle East, the rise of political Islam and the dynamics of Intra-Arab politics, and will consider the impact of the Arab Spring.			
AS.191.338	01	S		**Diaspora in World Politics** *Abramson, Yehonatan* This course examines the politics of diaspora communities in international perspective. Its main focus is on the impact of diaspora communities on national security and foreign policies of "host-countries" and "homelands." In addition, the course tries to unpack the political meanings and uses of the term diaspora.	3.00	18	TTh 10:30-11:45AM
AS.191.345	01	S		**Russian Foreign Policy (IR)** *Freedman, Robert* This course will explore the evolution of Russian Foreign Policy from Czarist times to the present. The main theme will be the question of continuity and change, as the course will seek to determine to what degree current Russian Foreign Policy is rooted in the Czarist(1613-1917) and Soviet(1917-1991) periods, and to what degree it has operated since 1991 on a new basis. The main emphasis of the course will be on Russia's relations with the United States and Europe, China, the Middle East and the countries of the former Soviet Union--especially Ukraine, the Baltic States, Transcaucasia and Central Asia. The course will conclude with an analysis of the Russian reaction to the Arab Spring and its impact both on Russian domestic politics and on Russian foreign policy.	3.00	35	W 4:00-6:30PM
AS.191.356	01		W	**The Politics and Philosophy of Laughter** *Giamario, Patrick T* What is the political significance of laughter? How does laughter undermine, strengthen, or disrupt political life? We read philosophical, social scientific, and literary texts to explore these questions.	3.00	15	T 3:00-5:30PM
AS.191.372	01	S		**Making Social Change** *Strom, Shayna* Aitchison Students Only.	1.50	12	T 5:30-8:00PM
AS.191.375	01	S		**Thinking Organizationally about Politics** *Teles, Steven Michael* Aitchison Students Only.	3.00		F 9:00-11:30AM
AS.191.376	01	S	W	**Public Policy Writing**	3.00		W 5:30-7:00PM

Political Science

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Longman, Phillip Aitchison Students Only.			
AS.191.379	01	S		**Thinking Strategically** *Mueller, Karl* Aitchison Students Only.	1.50	13	T 5:30-8:30PM
AS.191.382	01	S		**Thinking Economically** *Baker, Dean* Aitchison Students Only.	3.00		F 1:30-4:00PM
AS.191.402	01	QS		**Numbers, Pictures, Politics** *Rom, Mark* Aitchison students only.	3.00	15	Th 6:30-9:00PM
AS.211.394	01	H	W	**Brazilian Culture & Civilization** *De Azeredo Cerqueira, Flavia Christina* This course is intended as an introduction to the culture and civilization of Brazil. It is designed to provide students with basic information about Brazilian history, art, literature, popular culture, theater, cinema, and music. The course will focus on how indigenous Asian, African, and European cultural influences have interacted to create the new and unique civilization that is Brazil today. The course is taught in English, but ONE extra credit will be given to students who wish to do the course work in Portuguese. Those wishing to do the course work in English for 3 credits should register for section 01. Those wishing to earn 4 credits by doing the course work in Portuguese should register for section 02. The sections will be taught simultaneously. Section 01: 3 credits Section 02: 4 credits (instructor's permission required)	3.00	26	WF 3:00-4:15PM
AS.211.394	02	H	W	**Brazilian Culture & Civilization**	4.00	4	WF 3:00-4:15PM
AS.310.305	01	S		**Southeast Asia and US Security** *Ott, Marvin C* This survey course is designed to introduce students to Southeast Asia -- the ten member countries of the Association of Southeast Asian Nations (ASEAN) plus Australia and New Zealand. Southeast Asia is an integral part of the broader region of East Asia and a geographic bridge to the Indian subcontinent (South Asia). Southeast Asia has been one of the great success stories in the saga of modernization and development of post-colonial Afro-Asia over the last six decades. Its resulting economic importance is matched by its strategic significance given the presence of imbedded jihadist networks and the emergence of China as a regional great power and aspirant superpower. Nevertheless, the region has been largely overlooked by senior foreign policy and defense officials in Washington. This course will equip students to fill that void by examining the region from the perspective of national security strategy -- broadly understood in its multiple dimensions. Students will be challenged to formulate some element of a viable U.S. national security strategy for the region.	3.00	20	T 1:30-4:00PM
AS.360.247	01	S	W	**Introduction to Social Policy: Baltimore and Beyond**	3.00	75	TTh 12:00-1:15PM

Political Science

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Edin, Kathryn Thsi course will introduce students to basic concepts in economics, political science and sociology relevant to the study of social problems and the programs designed to remedy them. It will address the many inequalities in access to education and health car, unequal treatment in the criminal justice system, disparities in income and wealth, and differential access to political power. The focus will be on designing effective policies at the national and local level to address these pressing issues. This courseis open to all students, but will be required for the new Social Policy Minor. The course is also recommended for students who are interested in law school, medical school, programs in public health, and gradaute school in related social science fields. Cross list with Sociology, Economics and Political Science. Freshman, Sophomore and Juniors only.			

Program in Latin American Studies

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.010.105	01	H		**Art of the Ancient Americas** *Deleonardis, Lisa* Surveys the art of Olmec, West Mexico, Teotihuacan, Maya, and Aztec.	3.00	25	TTh 10:30-11:45AM
AS.010.389	01	H	W	**The Stone and the Thread** *Deleonardis, Lisa* This course examines the built environment of the Inka and considers architecture in its social, historical, and cultural contexts. Shared forms and ideas implicit in the fiber arts offer comparative points for analysis and discussion.	3.00	25	TTh 1:30-2:45PM
AS.070.132	01	HS		**Invitation to Anthropology** *Han, Clara* The screen that brings you last night's Instagrams and celebrity gossip also flashes glimpses of melting icecaps and burning rubble. These are complex times for human beings, both exhilarating and deeply unsettling. This course introduces anthropology as a way of reflecting on the challenges of contemporary life around the globe, focusing on themes such as faith, war, technology, money and ecology.	3.00	60	TTh 10:30-11:45AM
AS.100.255	01	HS	W	**The Haitian Revolution in World History** *Marvin, Nathan Elliot* This introductory seminar examines the revolution that transformed the slave colony of Saint-Domingue into the first black republic and second independent nation in the Americas, and its repercussions around the world. Non-Majors welcome.	3.00	18	TTh 9:00-10:15AM
AS.190.331	01	S		**Comparative Racial Politics** *Hanchard, Michael* Students will learn to utilize qualitative, interpretive methods of comparative politics to examine dynamics of racial and/or ethnic politics in the nation-states of Cuba, Brazil, Britain and France, Germany, and the United States. Readings will emphasize the role of the state, political economy, national culture, racist ideologies and anti-racist politics in the formation, maintenance and transformation of conditions of race-based inequalities. Students will also become familiar with theories and concepts of race and ethnicity, and the histories of social movements in the aforementioned societies founded, in part, on racial and/or ethnic identification as a response to inequality. Formerly titled: Race and Racism in Comparative Perspective.	3.00		TTh 3:00-4:15PM
AS.210.177	01			**Portuguese Elements** *De Azeredo Cerqueira, Flavia Christina*	4.00	25	MWF 11:00-11:50AM

Program in Latin American Studies

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This one-year course introduces students to the basic skills in reading, writing, and speaking the language. Emphasis is placed on oral communication with extensive training in written and listening skills. Class participation is encouraged from the very beginning. All classes are conducted in Portuguese. Extensive language lab is required. Students must complete both semesters with passing grades to receive credit. May not be taken on a Satisfactory/Unsatisfactory basis. No previous knowledge of Portuguese is required. Students wishing to retain credits for Portuguese Elements I must complete Portuguese Elements II with a passing grade.			
AS.210.277	01	H		**Intermediate/ Advanced Portuguese** *De Azeredo Cerqueira, Flavia Christina* More advanced training in the skills of the language with emphasis on vocabulary building, ease and fluency in the language through the use of a multifaceted approach. Materials used immerse students in the cultures of Brazil, Portugal, and Portuguese-speaking Africa, and reflect the mix of cultures at work in the contemporary Lusophone world. All classes are conducted in Portuguese. Extensive language lab is required. May not be taken on a Satisfactory/Unsatisfactory basis.	3.00	15	MWF 10:00-10:50AM
AS.210.391	01	H	W	**Advanced Portuguese Language & Literature** *De Azeredo Cerqueira, Flavia Christina* This third-year course focuses on reading, writing, and oral expression. Under the supervision of the instructor, students will read one or two complete works by major Brazilian, Portuguese, and/or Afro-Portuguese writers each semester, followed by intense writing and oral discussion on the topics covered. Grammar will be reviewed as necessary. Lab work is required. All classes are conducted in Portuguese.	3.00	10	MWF 9:00-9:50AM
AS.211.394	01	H	W	**Brazilian Culture & Civilization** *De Azeredo Cerqueira, Flavia Christina* This course is intended as an introduction to the culture and civilization of Brazil. It is designed to provide students with basic information about Brazilian history, art, literature, popular culture, theater, cinema, and music. The course will focus on how indigenous Asian, African, and European cultural influences have interacted to create the new and unique civilization that is Brazil today. The course is taught in English, but ONE extra credit will be given to students who wish to do the course work in Portuguese. Those wishing to do the course work in English for 3 credits should register for section 01. Those wishing to earn 4 credits by doing the course work in Portuguese should register for section 02. The sections will be taught simultaneously. Section 01: 3 credits Section 02: 4 credits (instructor's permission required)	3.00	26	WF 3:00-4:15PM
AS.211.394	02	H	W	**Brazilian Culture & Civilization**	4.00	4	WF 3:00-4:15PM
AS.215.458	01	H		**Cuba and its Culture Since the Revolution**	3.00	30	TTh 10:30-11:45AM

Program in Latin American Studies

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Gonzalez, Eduardo We will study the visual and textual arts, cinema, political culture, and blogosphere; reaching back to the first phases in the building of the revolutionary state apparatus and its sovereign mandate. Taught in Spanish.			
AS.230.343	01	S		**Political Sociology of Latin America** *von der Heydt-Coca, Magda Zonia* This course provides an overview of Latin America through its historical, economic, social, and political dimensions. Emphasis will be given to the analysis of social structures: class, race and ethnicity, and the contemporary social movements. The course begins with an overview of the pre-Columbian civilizations and colonial legacies that gave rise to the multiethnic societies and the ethnic conflicts which characterize contemporary Latin America.Cross-listed with Program in Latin American Studies and International Studies (CP)	3.00	20	TTh 3:00-4:15PM
AS.361.410	01	H		**Colombia and Venezuela: Postcolonial History and the European Novel** *Gonzalez, Eduardo* The intertwined histories of Colombia, Venezuela, Panama, and the Caribbean studied in two novels: Joseph Conrad's Nostromo (1904) and Juan Javier Vázquez's The Secret History of Costaguana (2007). Other novelists include Rómulo Gallegos (Doña Bárbara, 1929); Alejo Carpentier (The Lost Steps, 1953), and Gabriel García Márquez (The General in his Labyrinth, 1989).	3.00		TTh 1:30-2:45PM

Program in Museums and Society

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.389.107	01	H		**Freshman Seminar: Technical Research on Archaeological Objects in the Johns Hopkins Archaeological Museum** *Balachandran, Sanchita* Freshmen will learn and apply analytical methods used in the technical study of archaeological objects by examining and researching ancient examples in the Johns Hopkins Archaeological Museum. Freshman Only.	3.00	14	M 1:30-3:50PM
AS.389.110	01	H	W	**Freshman Seminar: All about Things** *Rodini, Elizabeth* What can objects tell us about the world, past and present? Using theoretical, archival, technical, and visual processes and in-depth research at Evergreen Museum & Library, we explore this question. Freshman Only.	3.00	12	T 2:30-5:00PM
AS.389.201	01	HS		**Introduction to the Museum: Past and Present** *Kingsley, Jennifer P* This course surveys museums, from their origins to their most contemporary forms, in the context of broader historical, intellectual, and cultural trends. Anthropology, art, history, and science museums are considered. Cross-listed with Anthropology, History, and History of Art.	3.00	25	TTh 1:30-2:45PM
AS.389.261	01	H		**Curating Homewood** *Arthur, Catherine Rogers* Students explore early American life related to the region and the Carroll family of Homewood. Primary research and object study culminate in student-curated thematic exhibition. Optional intersession practicum experience is also possible. For more on exhibit theme, contact instructor. M&S practicum course.	3.00	12	W 1:30-3:50PM
AS.389.321	01	H		**GhostFood: Curatorial Practicum with the Contemporary** *Staff* Students work with Baltimore's Contemporary and NYC artist Miriam Simun on GhostFood, a project using art to engage important questions concerning the environment, climate change, and the politics of food. Practicum. Instructor Permission. Contact erodini@jhu.edu for enrollment approval.	3.00	12	M 6:00-8:30PM
AS.389.353	01	H	W	**Revolutions of the Book: Material Culture & the Transformation of Knowledge from Antiquity to the Renaissance** *Havens, Earle* Explores the material culture of knowledge through transformations in the technologies and arts of communication, taught entirely from rare books, manuscripts, and artifacts in JHU libraries and museum collections.	3.00	15	T 3:00-5:30PM

Psychological & Brain Sciences

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.050.102	01	NS		**Language and Mind** *Omaki, Akira* Introductory course dealing with theory, methods, and current research topics in the study of language as a component of the mind. What it is to “know” a language: components of linguistic knowledge (phonetics, phonology, morphology, syntax, semantics) and the course of language acquisition. How linguistic knowledge is put to use: language and the brain and linguistic processing in various domains. This course is restricted to freshmen and sophomores. Juniors and seniors must seek instructor approvel to enroll. Cross-listed with Neuroscience and Psychology.	3.00	50	MW 12:00-1:15PM
AS.050.312	01	NS		**Cognitive Neuroimaging Methods in High-Level Vision** *Park, Soojin* This course is an advanced seminar and research practicum course. It will provide the opportunity to learn about fMRI methods used in the field of vision science and for students to have hands-on experience to develop, design and analyze a research study on topics in the cognitive neuroscience field of high-level vision. In the first part of the course students will read recent fMRI journal papers and learn about common fMRI designs and analysis methods; in the second part of the course students will conduct a research study as a group to address a research question developed from readings. Students are expected to write a paper in a journal article format at the end of the course and to present their results in front of the class. Research topics will vary but with special focus on topics in object, scene and space recognition. Cross-listed with Neuroscience and Psychology. instructor's permission required.	3.00	15	T 3:00-5:30PM
AS.080.330	01	N	W	**Brain Injury & Recovery** *Gorman, Linda K* This course investigates numerous types of brain injuries and explores the responses of the nervous system to these injuries. The course's primary focus is the cellular and molecular mechanisms of brain injury and the recovery of function. Discussions of traumatic brain injury, stroke, spinal cord, and tumors, using historical and recent journal articles, will facilitate students' understanding of the current state of the brain injury field. Cross-listed with Psychological and Brain Sciences and Behavioral Biology.	3.00	15	WF 12:00-1:15PM
AS.200.101	01	NS		**Introduction to Psychology** *Drigotas, Stephen M* This course surveys all the major areas of scientific psychology, including the physiological bases of behavior; sensation and perception; learning, memory and cognition; developmental, social, and personality psychology; and psychopathology.	3.00	400	MWF 11:00-11:50AM
AS.200.132	01	S		**Introduction to Developmental Psychology** *Feigenson, Lisa*	3.00	100	MWF 10:00-10:50AM

Psychological & Brain Sciences

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				An introductory survey of human development from the prenatal period through adolescence. The developing child is examined in terms of cognitive, social, emotional, motor, and language development.			
AS.200.141	01	NS		**Foundations of Brain, Behavior and Cognition** *Gorman, Linda K* Formerly listed as Introduction to Physiopsychology. A survey of neuropsychology relating the organization of behavior to the integrative action of the nervous system. Cross-listed with Behavioral Biology and Neuroscience.	3.00	250	TTh 9:00-10:15AM
AS.200.163	01	N	W	**Gamechangers: Conceptual Breakthroughs in Neuroscience** *Mysore, Shreesh Pranesh* Freshman Seminar; This introductory class will highlight some of the key findings in neuroscience over the past century and a half that have revolutionized our understanding of how the brain works. The goal is to convey both the essence of, and the excitement surrounding, neuroscience breakthroughs that caused paradigm-shifts. We will also look at recent neuroscience-related headlines in popular media and unpack them from a scientific perspective. Topics covered will include “Is the brain just one big lump of tissue?”, “Telephones in the brain?”, “The frog with upside-down vision”, “Brains vs. hard-drives”, “Monkey see=monkey do neurons”, Epigenetics, “Changing the brain’s wiring diagram”, “Do ants have GPS?”, The science behind the movie ‘Memento’, “Implanting false memories into brains”, “My brain sees you, but I don’t”, etc. For each big question, we will first examine the thinking that previously existed, and then explore the shift in thinking.	3.00	20	TTh 1:30-2:45PM
AS.200.204	01	S	W	**Human Sexuality** *Kraft, Chris S* Course focuses on sexual development, sexuality across the lifespan, gender identity, sexual attraction and arousal, sexually transmitted disease, and the history of commercial sex workers and pornography. Juniors and seniors only within the following majors/minors: Behavioral Biology, Biology, Neuroscience, Psychological & Brain Sciences, Public Health, and the Study of Women, Gender, & Sexuality. All registration will be done during the normal registration period and you must meet all requirements to register. Formerly taught as AS.200.302.	3.00	25	T 12:00-2:30PM
AS.200.204	02	S	W	**Human Sexuality**	3.00	25	T 9:00-11:30AM
AS.200.207	01	QS	W	**Research Methods in Experimental Psychology** *Egeth, Howard E*	3.00	18	Th 1:30-3:50PM

Psychological & Brain Sciences

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Formerly known as Lab in the Analysis of Psychological Data (LAPD), this course is an overview of research methods used in psychology, experimental designs, interpreting results in psychology, and research ethics. Each student will complete an individual research project on a topic of his/her choosing as part of the course training. The class is taught interactively through lectures and labs.			
AS.200.207	02	QS	W	**Research Methods in Experimental Psychology**	3.00	18	Th 1:30-3:50PM
AS.200.207	03	QS	W	**Research Methods in Experimental Psychology**	3.00	18	Th 1:30-3:50PM
AS.200.207	04	QS	W	**Research Methods in Experimental Psychology**	3.00	18	Th 1:30-3:50PM
AS.200.209	01	S		**Personality** *Staff* This is a survey course focused on theory and research on human personality. Topics include personality traits, motivation, unconscious processes, self-regulation, cognitive and behavioral aspects of personality, biological and evolutionary influences on personality, and dysfunctional manifestations of personality.	3.00	50	T 1:30-3:50PM
AS.200.301	01	HS		**History Of Psychology** *Hofer, Paul Jeffrey* A survey of leading figures, schools, and systems in the history of psychology. The course will emphasize the development of experimental psychology in late 19th century Germany and its establishment in America at Johns Hopkins, Harvard, Chicago, and Columbia. Special topics will include the development of clinical and applied psychology and psychological testing. Juniors and seniors only. Recommended Course Background: two prior Psychology courses.	3.00	35	Th 4:30-6:50PM
AS.200.306	01	S		**Psychology in the Workplace** *Roberts Fox, Heather* Industrial-organizational (I-O) psychology is the scientific study of the workplace. Rigor and methods of psychology are applied to issues of critical relevance to business, including talent management, coaching, assessment, selection, training, organizational development, performance, and work-life balance.	3.00	50	TTh 1:30-2:45PM
AS.200.314	01	QS		**Advanced Statistical Methods** *Staff* Topics in applied probability and statistical inference; analysis of variance; experimental design. Intended for graduate students in psychology. Recommended Course Background: one statistics course.	3.00	15	TTh 9:00-10:15AM
AS.200.316	01	HS	W	**Thought and Perception** *Flombaum, Jonathan*	3.00	8	W 1:30-3:50PM

Psychological & Brain Sciences

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This year's topic: Temporal Experience. Do we perceive time? If so, through what sense(s)? How long is the conscious "now"? Does the temporal order of our perceptions mirror the temporal order of what we perceive? Must the experience of a temporal duration itself be extended in time? What is the relation between the experience of time (for example, the experience of time's passage) and memory? Does our experience of time accurately represent temporal features of reality, or it is actually illusory? How does attending to time's passage affect its perceived rate of passage (and what is it to attend to time's passage)? We will explore these and other questions through an examination of both psychological and philosophical work. [This course meets jointly with Professor Gross's AS.150.476]			
AS.200.321	01	S		**Child and Adolescent Psychopathology** *Papadakis, Alison Moog Aubrecht* This course focuses on mental disorders in children and adolescents. The course begins with an exploration of the general models and theories for why psychopathology occurs in childhood. The second portion of the course provides a systematic review of the symptoms, course, risk factors, theories, and treatments for specific disorders, including mood disorders, anxiety disorders, autism, ADHD, eating disorders, and behavioral disorders.	3.00	40	TTh 10:30-11:45AM
AS.200.325	01	S		**Law Psychology:Clinical Application** *Raifman, Lawrence J* Introduction to legal standards governing criminal forensic psychology assessments, e.g., competence to stand trial, criminal responsibility, mitigation of death penalty, negation of mens rea, and other criminal law forensic applications. Cross-listed with Behavioral Biology.	3.00	100	T 3:00-5:30PM
AS.200.328	01	S	W	**Theory & Methods in Clinical Psychology** *Edwin, David H* A critical examination of the methods of observation, description, reasoning, inference, measurement and intervention that underlie the clinical practice of psychology and psychiatry. Cross listed with Behavioral Biology. Junior and senior Psychology, Behavioral Biology and Cognitive Science majors only OR instructor approval.	3.00	25	M 6:00-8:20PM
AS.200.333	01	S		**Advanced Social Psychology** *Drigotas, Stephen M* The class is designed as a seminar including discussion of primary readings of social psychology articles ranging in topics from interpersonal relationship to behavior in large groups. Rising junior & senior Psychology majors only.	3.00	19	W 1:30-3:50PM
AS.200.380	01	NS		**Neurobiology of Human Cognition** *Bedny, Marina*	3.00	19	TTh 10:30-11:45AM

Psychological & Brain Sciences

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				The complexity of human behavior surpasses even our closest primate relatives. Only humans communicate through language, build complex technology, devise legal system and wage war. What neurobiological capacities set humans apart from other animals? This course will explore the neurobiology of cognition, focusing on cognitive domains that are particularly developed in the human species: language, social cognition, number, executive function and concepts. The course format will consist of lectures and in class workshops.			
AS.200.382	01	S		**Models of Psychotherapy** *Papadakis, Alison Moog Aubrecht* This course reviews the major models of psychotherapy, including psychodynamic, cognitive, behavioral, interpersonal, and family therapy, with a focus on modern and empirically supported treatments. The application of the models through the analysis of clinical case studies is emphasized. Restricted to Junior & Senior Psychology Majors & Minors.	3.00	19	TTh 1:30-2:45PM
AS.200.384	01	N		**Spatial Orientation and Navigation: Behavior and Neural Mechanisms** *Moss, Cynthia* A cross-disciplinary investigation of space representation and navigation in a broad range of animal species. Topics will include sonar orientation, landmark use, the role of dead reckoning, spatial memory, long-distance migration, and map-making.	3.00	19	TTh 3:00-4:15PM
AS.290.420	01	S	W	**Human Sexual Orientation** *Kraft, Chris S* This course will examine the historical and current theories of sexual orientation and sexual variation development by examining the biological, psychological and social contributing factors that influence the development of sexual orientations and variations along with treatment and modification of problematic sexual behaviors. Limited to Juniors and Seniors with PBS, Neuroscience, Public Health, Behavioral Biology, and Biology majors, or Juniors and Seniors with PBS or Women's Studies minors.	3.00	25	T 3:00-5:30PM

Public Health Studies

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.140.105	01	HS		**History of Medicine** *Pomata, Gianna* Course provides an overview of the medical traditions of six ancient cultures; the development of Greek and Islamic traditions in Europe; and the reform and displacement of the Classical traditions during the Scientific Revolution.	3.00	20	MW 10:00-10:50AM; F 10:00-10:50AM
AS.140.105	02	HS		**History of Medicine**	3.00	20	MW 10:00-10:50AM; F 10:00-10:50AM
AS.140.105	03	HS		**History of Medicine**	3.00	20	MW 10:00-10:50AM; F 10:00-10:50AM
AS.150.219	01	HS	W	**Intro to Bioethics** *Bok, Hilary* Introduction to a wide range of moral issues arising in the biomedical fields, e.g. physician-assisted suicide, human cloning, abortion, surrogacy, and human subjects research. Cross-listed with Public Health Studies.	3.00	18	F 12:00-12:50PM; MW 12:00-12:50PM
AS.150.219	02	HS	W	**Intro to Bioethics**	3.00	18	F 12:00-12:50PM; MW 12:00-12:50PM
AS.150.219	03	HS	W	**Intro to Bioethics**	3.00	18	W 1:30-2:20PM; MW 12:00-12:50PM
AS.150.219	04	HS	W	**Intro to Bioethics**	3.00	18	W 1:30-2:20PM; MW 12:00-12:50PM
AS.150.219	05	HS	W	**Intro to Bioethics**	3.00	18	F 12:00-12:50PM; MW 12:00-12:50PM
AS.150.219	06	HS	W	**Intro to Bioethics**	3.00	18	F 1:30-2:20PM; MW 12:00-12:50PM
AS.150.219	07	HS	W	**Intro to Bioethics**	3.00	18	W 2:00-2:50PM; MW 12:00-12:50PM
AS.150.219	08	HS	W	**Intro to Bioethics**	3.00	18	W 2:00-2:50PM; MW 12:00-12:50PM
AS.150.219	09	HS	W	**Intro to Bioethics**	3.00	18	F 2:00-2:50PM; MW 12:00-12:50PM
AS.150.219	10	HS	W	**Intro to Bioethics**	3.00	18	F 2:00-2:50PM; MW 12:00-12:50PM
AS.150.219	11	HS	W	**Intro to Bioethics**	3.00	18	F 12:00-12:50PM; MW 12:00-12:50PM
AS.150.219	12	HS	W	**Intro to Bioethics**	3.00	18	W 2:00-2:50PM; MW 12:00-12:50PM
AS.180.289	01	S		**Economics of Health** *Bishai, David M* Application of economic concepts and analysis to the health services system. Review of empirical studies of demand for health services, behavior of providers, and relationship of health services to population health levels. Discussion of current policy issues relating to financing and and resource allocation.	3.00	100	M 3:30-5:50PM
AS.190.405	01	S	W	**Food Politics** *Sheingate, Adam* This course examines the politics of food at the local, national, and global level. Topics include the politics of agricultural subsidies, struggles over genetically modified foods, government efforts at improving food safety, and issues surrounding obesity and nutrition policy. Juniors, seniors, and graduate students only. Cross-listed with Public Health Studies.	3.00	15	MW 3:00-4:15PM
AS.220.309	01	H	W	**Writing Healthy Baltimore** *Masterson, Karen*	3.00	8	T 10:00AM-12:30PM

Public Health Studies

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Students will explore public health issues in Baltimore and then write about them first in short pieces, and then in longer, polished works. The framework will be the mayor's Healthy Baltimore 2015 initiative – launched in 2011 to address the city's top-10 public health problems, including obesity, smoking, drug and alcohol abuse, STDs, cancer, and environmental health hazards. Students will study the initiative and its historical context; examine data sets; explore where and how the initiative intersects with public health practitioners and advocacy groups at the neighborhood level; and write what they learn in different formats, including essays, breaking news, and substance analysis. Students will then "workshop" each other's papers.			
AS.220.309	02	H	W	**Writing Healthy Baltimore**	3.00	7	T 10:00AM-12:30PM
AS.230.341	01	S		**Sociology of Health and Illness** *Agree, Emily* This course introduces students to medical sociology, which is the application of the sociological perspective to health and health care. Major topics include stress, social epidemiology, and the social organization of health care.	3.00	15	M 3:00-4:50PM; W 3:00-3:50PM
AS.230.341	02	S		**Sociology of Health and Illness**	3.00	15	W 3:00-3:50PM; M 3:00-4:50PM
AS.230.341	03	S		**Sociology of Health and Illness**	3.00	15	M 3:00-4:50PM; W 4:00-4:50PM
AS.230.341	04	S		**Sociology of Health and Illness**	3.00	15	M 3:00-4:50PM; W 4:00-4:50PM
AS.230.341	05	S		**Sociology of Health and Illness**	3.00	15	M 3:00-4:50PM; W 4:00-4:50PM
AS.230.341	06	S		**Sociology of Health and Illness**	3.00	15	M 3:00-4:50PM; W 4:00-4:50PM
AS.270.308	01	N		**Population/Community Ecology** *Szlavecz, Katalin* This course explores the distribution and abundance of organisms and their interactions. Topics include dynamics and regulation of populations, population interactions (competition, predation, mutualism, parasitism, herbivory), biodiversity, organization of equilibrium and non-equilibrium communities, energy flow, and nutrient cycles in ecosystems. Field trip included. Permission of instructor.	3.00	30	TTh 10:30-11:45AM
AS.280.100	01	S		**Public Health in Film and Media** *Staff* This course uses film to explore and question the cultural landscape of public health in today's society. Public health is a richly diverse field that reaches not only into many areas of daily life, but into our cultural imagination as well. The purpose of this class is to examine how public health matters such as epidemic disease, access to health care, health and the law, bioethics, neglected tropical diseases and other topics are portrayed in feature films and documentaries. Each week students will view and discuss a film or documentary that addresses a public health issue.Freshmen Only. S/U Grading Only.	1.00	60	F 1:30-3:50PM
AS.280.225	01	S		**Population, Health and Development** *Becker, Stanley*	3.00	70	TTh 9:00-10:15AM

Public Health Studies

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course will cover the major world population changes in the past century as well as the contemporary situation and projections for this century. Topics include rapid population growth, the historical and continuing decline of death and birth rates, contraceptive methods as well as family planning and child survival programs, population aging, urbanization, population and the environment and the demographic effects of HIV/AIDS.			
AS.280.335	01	N		**The Environment and Your Health** *Trush, Michael A* This course surveys the basic concepts underlying environmental health sciences (toxicology, exposure assessment, risk assessment), current public health issues (hazardous waste, water- and food-borne diseases), and emerging global health threats (global warming, built environment, ozone depletion, sustainability). Public Health Studies, Global Environmental Change and Stability, and Earth and Planetary Science majors have 1st priority for enrollment. Your enrollment may be withdrawn at the discretion of the instructor if you are not a GECS, PHS, or EPS major.	3.00	250	TTh 4:30-5:45PM
AS.280.335	02	N		**The Environment and Your Health** *Bressler, Joseph P.*	3.00	250	TTh 3:00-4:15PM
AS.280.345	01	Q		**Public Health Biostatistics** *Taub, Margaret Anne* Using problem-based learning focusing on public health topics, students learn to describe & summarize data, make inferences regarding population parameters, & test hypotheses. Recommended Course Background: Four years of high school math.	4.00	25	MW 3:00-4:15PM; F 2:00-2:50PM
AS.280.345	02	Q		**Public Health Biostatistics**	4.00	25	MW 3:00-4:15PM; F 2:00-2:50PM
AS.280.345	03	Q		**Public Health Biostatistics**	4.00	25	MW 3:00-4:15PM; F 2:00-2:50PM
AS.280.345	04	Q		**Public Health Biostatistics**	4.00	25	MW 3:00-4:15PM; F 2:00-2:50PM
AS.280.345	05	Q		**Public Health Biostatistics**	4.00	25	MW 3:00-4:15PM; F 3:00-3:50PM
AS.280.345	06	Q		**Public Health Biostatistics**	4.00	25	MW 3:00-4:15PM; F 3:00-3:50PM
AS.280.345	07	Q		**Public Health Biostatistics**	4.00	25	F 3:00-3:50PM; MW 3:00-4:15PM
AS.280.345	08	Q		**Public Health Biostatistics**	4.00	25	F 3:00-3:50PM; MW 3:00-4:15PM
AS.280.346	01	Q		**Advanced Biostatistics Laboratory** *Taub, Margaret Anne* As a complementary course to 280.345, Public Health Biostatistics, this course teaches R programming skills necessary for conducting independent data analyses, beyond those presented in the main course. No programming experience is necessary, but a willingness to learn independently and work with other students is indispensable.	1.00	25	M 2:00-2:50PM
AS.280.350	01	Q		**Fundamentals of Epidemiology** *Phelan-Emrick, Darcy F* A practical introduction to epidemiology focusing on the principles and methods of examining the distribution and determinants of disease morbidity and mortality in human populations. Juniors and seniors only.	4.00	25	MW 1:30-2:45PM; F 1:30-2:45PM

Public Health Studies

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.280.350	02	Q		**Fundamentals of Epidemiology**	4.00	25	MW 1:30-2:45PM; F 1:30-2:45PM
AS.280.350	03	Q		**Fundamentals of Epidemiology**	4.00	25	MW 1:30-2:45PM; F 1:30-2:45PM
AS.280.350	04	Q		**Fundamentals of Epidemiology**	4.00	25	MW 1:30-2:45PM; F 1:30-2:45PM
AS.280.399	01	S		**Community Based Learning - Practicum Community Health Care** *Bone, Lee R* This course is designed to expose students to urban health with focus on Baltimore City through lectures, class discussions, and experiential learning. Students will select a community-based organization (CBO) according to their expressed interests and schedule in order to complete 45 hours of service based learning. Grades are based on participation, completion of service learning project, presentation, and papers. Open to Senior and Junior Public Health Studies majors only. Others by permission of instructor.	3.00	25	W 4:30-6:00PM
AS.280.419	01	Q		**Introduction to Practical Data Analysis in Medicine and Public Health** *Usher, Therri Alexandria* The course is designed to introduce undergraduate public health majors to the methodology of data analysis, such as how to apply previously learned statistical methods in the performance of data analysis in medical and public health research. This course is unique in that it focuses on all parts of the data analysis process, from formulating a research question to synthesizing the results. While the emphasis is placed on developing and implementing various methods of data analysis, the course will also address interpreting and evaluating the strengths and limitations of existing data analyses. Students' understanding will be solidified through small in-class activities that explore the data analysis process and evaluations of data analyses in the scientific literature, culminating in a final data analysis project relevant to their own areas of expertise for the purpose of incorporating knowledge gained from the course into their research. Gordis Teaching Fellowship course open to sophomore, junior, and seniors who have taken AS.280.345: Public Health Biostatistics.	3.00	19	TTh 10:30-11:45AM
AS.280.421	01	QS		**Telling Public Health Stories through Maps** *Davis, Benjamin*	3.00	19	MWF 10:00-10:50AM

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				Maps play an increasingly central role in conceptualizing, investigating, and communicating many types of public health concerns. This semester-long course is intended for undergraduate students in their junior or senior year who are familiar with epidemiology and biostatistics. This course will develop the skills needed to create and manipulate spatial information for public health research and communication. The course also prepares students to critically evaluate spatial data and to identify the common pitfalls of map-making. Through a blend of lectures, student seminars, and lab exercises, students will examine and appreciate the history of map-making, its current uses in public health, and future directions of spatial analysis. This course involves active student participation during discussions, short responses to the readings, and culminates in an independent spatial analysis project involving Geographic Information Systems (GIS) software. Basic knowledge of biostatistics and epidemiology are recommended pre-requisites. Juniors/Seniors Only. Gordis Teaching Fellowship course			
AS.280.422	01	S		**Health Equity and Disparities: Addressing Complex Global Health Challenges** *Schleiff, Meike Jill* In this course, students will be supported and challenged to develop a personal understanding of and perspective on global health equity and disparities, and acquire a toolbox of frameworks and strategies to use in addressing them. Students will have the opportunity to be exposed to numerous examples and case studies to gain experience in assessing and addressing issues of equity in the complex, real-¬life problems such as those they will be facing as public health profess ionals. Students will review major historical and contemporary global and national initiatives to address equity issues in the health sector, including global declarations and reports as well as policies and programs that have been developed to achieve improvements in health equity in specific contexts. Application of this historical and practical knowledge and their own perspectives to new and complex situations will be fostered throughout the course. Basic knowledge of biostatistics and epidemiology and courses on global health or international public health issues recommended pre-requisites. Juniors/Seniors Only. Gordis Teaching Fellowship course	3.00	19	TTh 10:30-11:45AM

Public Health Studies

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.280.495	01	S	W	**Honors in Public Health - Seminar** *Schrack, Jennifer A* Using lectures, oral presentations, and writing assignments, this seminar is designed to assist Public Health Studies majors in writing a senior thesis. Students will formulate their topics, develop research skills, and address issues of professional ethics. Participating in this seminar is required for students pursuing honors in Public Health Studies.Permission Required. Classes willl be held at Bloomberg School of Public Health.	3.00	30	W 10:30-11:50AM
EN.570.108	01	E		**Introduction Environmental Engineering** *Alavi, Hedy V* Overview of environmental engineering including water/air quality issues, water supply/ wastewater treatment, hazardous/solid waste management, pollution prevention, global environmental issues, public health considerations/environmental laws, regulations and ethics. Cross listed with Public Health Studies.	3.00	19	TTh 12:00-1:15PM
EN.570.108	02	E		**Introduction Environmental Engineering**	3.00	19	TTh 1:30-2:45PM

Sociology

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.230.101	01	S		**Introduction Sociology** *Nelson, Timothy* Introduces students to basic sociological concepts and perspectives, and applies them to a variety of topics including family, work, and the dynamics of class, gender, and racial/ethnic inequalities in the United States and globally.	3.00	15	MW 11:00-11:50AM; F 10:00-10:50AM
AS.230.101	02	S		**Introduction Sociology**	3.00	15	MW 11:00-11:50AM; F 10:00-10:50AM
AS.230.101	03	S		**Introduction Sociology**	3.00	15	MW 11:00-11:50AM; F 10:00-10:50AM
AS.230.101	04	S		**Introduction Sociology**	3.00	15	MW 11:00-11:50AM; F 11:00-11:50AM
AS.230.101	05	S		**Introduction Sociology**	3.00	15	MW 11:00-11:50AM; F 11:00-11:50AM
AS.230.101	06	S		**Introduction Sociology**	3.00	15	MW 11:00-11:50AM; F 11:00-11:50AM
AS.230.109	01	S	W	**Freshman Seminar: Hot Topics in Education** *Burdick-Will, Julia* This course examines current school reform initiatives and the controversies surrounding them through a sociological lens. Freshmen Only	3.00	15	TTh 3:00-4:15PM
AS.230.175	01	S	W	**Chinese Revolutions** *Kuo, Huei-Ying* This course introduces the origins, operation and impacts of five major revolutions in modern China between 1850 and 1950. These include the Taiping Rebellion, the republican revolutions, federalist and southern automatic movements, labor strikes as well as peasant rebellions. It draws on the existing historiography that examines China's transition from an empire to a republic, impacts of western and Japanese influences to China, as well as the continuity and change of Chinese social organizations. Cross list with International Studies and East Asian Studies. Fulfills IS History requirement.	3.00	20	TTh 1:30-2:45PM
AS.230.205	01	QS		**Intro Social Statistics** *Pasciuti, Daniel Steven* This course will introduce students to the application of statistical techniques commonly used in sociological analysis. Topics include measures of central tendency and dispersion, probability theory, confidence intervals, chi-square, anova, and regression analysis. Hands-on computer experience with statistical software and analysis of data from various fields of social research. Special Note: Required for IS GSCD track students.	4.00	15	F 10:00-10:50AM; MW 3:00-4:15PM
AS.230.205	02	QS		**Intro Social Statistics**	4.00	15	F 11:00-11:50AM; MW 3:00-4:15PM
AS.230.213	01	S	W	**Social Theory** *Andreas, Joel* This course provides an introduction to classical sociological theories (with an emphasis on Marx, Weber, and Durkheim). Contemporary theoretical perspectives on social inequality, conflict, and social change are also explored. Emphasis is placed on understanding the theoretical constructs as well as on applying them in the analysis of current social issues. Special Note: Required for IS GSCD track students.	3.00	30	TTh 12:00-1:15PM
AS.230.223	01	S		**Housing and Homelessness in the United States**	3.00	20	MW 4:30-5:45PM

Sociology

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				Greif, Meredith This course will examine the role of housing, or the absence thereof, in shaping quality of life. It will explore the consequences of the places in which we live and how we are housed. Consideration will be given to overcrowding, affordability, accessibility, and past and existing housing policies and their influence on society. Special attention will be given to the problem of homelessness.			
AS.230.244	01	S		**Race and Ethnicity in American Society** *Greif, Meredith* Race and ethnicity have played a prominent role in American society and continue to do so, as demonstrated by interracial and interethnic gaps in economic and educational achievement, residence, political power, family structure, crime, and health. Using a sociological framework, we will explore the historical significance of race and its development as a social construction, assess the causes and consequences of intergroup inequalities and explore potential solutions.	3.00	20	MW 1:30-2:45PM
AS.230.265	01	QS		**Research Tools and Technologies for the Social Sciences** *Upadhyay, Smriti* This course will introduce students to a range of digital technologies that are critical for conducting social scientific research in the 21st century, using examples from ongoing social science faculty research projects at Johns Hopkins on global inequality and international development and on the 2010-2012 global wave of social protest. Students will develop competency in the use of computer programs for statistical analysis, database management, the creation of maps and timelines, and the presentation of research reports. Special Note: Required for IS GSCD track students.	3.00	15	MW 1:30-2:45PM
AS.230.310	01	S	W	**Becoming An Adult** *Deluca, Stefanie* While students may already be personally familiar with the subject matter, the course examines the sociological and psychological dimensions of this demographically dense period known as the transition to adulthood. Emphasizes life course theories of human development through readings of empirical work on adolescence, the transition to college, early employment and early family formation. Attention is paid to the ways class; gender; race and nationality influence the pathways, choices and outcomes of young people. A Statistics/ Sociology background is helpful, but not required.	3.00	30	W 3:00-5:30PM
AS.230.313	01	S	W	**Space, Place, Poverty & Race: Sociological Perspectives on Neighborhoods & Public Housing** *Deluca, Stefanie*	3.00	30	T 3:00-5:30PM

Sociology

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Is a neighborhood just a grouping of individuals living in the same place, or do neighborhoods have collective meanings and impacts on children and families? We will capitalize on research methodologies used to define and describe neighborhoods and their effects on economic and educational outcomes. These include case studies, census data, surveys, quasi/experimental data. Focus is on how research measures neighborhood effects and incorporates community level processes into models of social causation (e.g., social capital/control, community efficacy, civic engagement). Also examined: patterns in residential mobility, segregation, and preferences within black and white populations; development of housing policy in the U.S.; programs to determine how neighborhoods affect issues of social importance. Statistics and public policy background is helpful but not required.			
AS.230.316	01	S		**African American Family** *McDonald, Katrina Bell* This course is an examination of sociological theories and studies of African-American families and an overview of the major issues confronting African-American family life. The contemporary conditions of black families are explored, as well as the historical events that have influenced the family patterns we currently observe. Special attention will be given to social policies that have evolved as a result of the prominence of any one perspective at a given point in time.	3.00	15	TTh 1:30-2:45PM
AS.230.323	01	S	W	**Qualitative Research Practicum** *McDonald, Katrina Bell* This course provides "hands on" research experience applying sociological research tools and a sociological perspective to problems of substance. Qualitative observational and/or interviewing methods will be emphasized. Students will design and carry out a research project and write a research report. This course fulfills the "research practicum" requirement for the Sociology major.	3.00	15	TTh 9:00-10:15AM
AS.230.341	01	S		**Sociology of Health and Illness** *Agree, Emily* This course introduces students to medical sociology, which is the application of the sociological perspective to health and health care. Major topics include stress, social epidemiology, and the social organization of health care.	3.00	15	M 3:00-4:50PM; W 3:00-3:50PM
AS.230.341	02	S		**Sociology of Health and Illness**	3.00	15	W 3:00-3:50PM; M 3:00-4:50PM
AS.230.341	03	S		**Sociology of Health and Illness**	3.00	15	M 3:00-4:50PM; W 4:00-4:50PM
AS.230.341	04	S		**Sociology of Health and Illness**	3.00	15	M 3:00-4:50PM; W 4:00-4:50PM
AS.230.341	05	S		**Sociology of Health and Illness**	3.00	15	M 3:00-4:50PM; W 4:00-4:50PM
AS.230.341	06	S		**Sociology of Health and Illness**	3.00	15	M 3:00-4:50PM; W 4:00-4:50PM
AS.230.343	01	S		**Political Sociology of Latin America** *von der Heydt-Coca, Magda Zonia*	3.00	20	TTh 3:00-4:15PM

Sociology

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course provides an overview of Latin America through its historical, economic, social, and political dimensions. Emphasis will be given to the analysis of social structures: class, race and ethnicity, and the contemporary social movements. The course begins with an overview of the pre-Columbian civilizations and colonial legacies that gave rise to the multiethnic societies and the ethnic conflicts which characterize contemporary Latin America.Cross-listed with Program in Latin American Studies and International Studies (CP)			
AS.230.371	01	S		**Sociology of Rock** *Nelson, Timothy* This course examines the history and dynamics of rock music using key concepts and perspectives from sociology. The course is divided into four sections, each of which examines the phenomenon of rock music from a different analytical perspective. The first section on the origins of rock looks at the confluence of developments in post-war America, especially in terms of race, class and generational change, which produced this new musical form. The second section, “Rock as Cultural Production,” looks at all aspects of the rock “field,” not just artists and audiences but record labels, stores, DJ’s and radio stations, the music press and journalists, performance venues. The third section examines rock as a force for social change and protest from the 1960s until present, and the final section examines the performative aspects of rock as a kind of “interaction ritual” with its own microsociological dynamics.	3.00	20	MF 3:00-4:15PM
AS.230.377	01	S		**Colonialism and Anti-Colonialism** *Kuo, Huei-Ying* This seminar examines the theories and historiography of colonialism and anti-colonial movements. It focuses on the establishment of the colonial division of labor, comparative colonialism, identity formation, and nationalism as well as anti-colonial movement.	3.00	20	TTh 10:30-11:45AM
AS.230.381	01	S		**Sociology of the Middle East and North Africa** *Calder, Ryan* This course examines sociological (and some anthropological) perspectives on the contemporary Middle East and North Africa.	3.00	20	W 3:00-5:50PM
AS.230.385	01	S		**Schooling, Racial Inequality and Public Policy in America** *Morgan, Stephen L*	3.00	15	MW 12:00-1:15PM

Sociology

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				After examining alternative explanations for why individuals obtain different amounts and types of educational training, the course focuses on how an individual's family background and race affect his or her trajectory through the educational system. The course covers the specific challenges that have confronted urban schooling in America since the 1960s, including the classic literature on the effects of school and community resources on student achievement as well as the development and later evaluation of school desegregation policies. The course also considers case studies of current policy debates in the US, such as housing segregation and school resegregation, voucher programs for school choice, and the motivation for and consequences of the establishment of state-mandated testing requirements. Throughout the course, emphasis is placed upon the alternative modes of inquiry and writing which opposing scholars, policymakers, and journalists use to address these contentious topics.			
AS.360.247	01	S	W	**Introduction to Social Policy: Baltimore and Beyond** *Edin, Kathryn* Thsi course will introduce students to basic concepts in economics, political science and sociology relevant to the study of social problems and the programs designed to remedy them. It will address the many inequalities in access to education and health car, unequal treatment in the criminal justice system, disparities in income and wealth, and differential access to political power. The focus will be on designing effective policies at the national and local level to address these pressing issues. This courseis open to all students, but will be required for the new Social Policy Minor. The course is also recommended for students who are interested in law school, medical school, programs in public health, and gradaute school in related social science fields. Cross list with Sociology, Economics and Political Science. Freshman, Sophomore and Juniors only.	3.00	75	TTh 12:00-1:15PM
AS.362.111	01	HS	W	**Introduction to African American Studies** *Spence, Lester* This course is an introduction to the origins and emergence of African American Studies as an academic discipline in the American academy. The course is centered on the social realities of people of African descent living in the United States.	3.00	25	M 1:30-3:50PM

Study of Women, Gender, & Sexuality

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.010.236	01	H		**Palaces, Temples and Tombs in Mesopotamia** *Feldman, Marian* Mesopotamia, the “land between the rivers,” is considered the cradle of civilization. Its earliest urban centers appeared by 3500 BCE in the region of modern-day Iraq, Iran, and Syria. Along with urbanism came the emergence of temples and palaces as large-scale elite institutions (replete with written records). Their arts manifest some of the earliest complex representations. This course explores the art and architecture within the social, political and cultural context of Mesopotamia (ancient Sumer, Babylonia and Assyria) from 3500 to 330 BCE.	3.00	25	TTh 10:30-11:45AM
AS.061.397	01	H	W	**French Masculinities** *Mason, Laura* Examines changing ideals of masculinity in French film from 1930 to today, rooting the work of iconic stars and directors in their cultural, political and historical contexts. $40 lab fee.	3.00	15	Th 3:00-5:20PM; M 7:30-10:00PM
AS.100.397	01	HS	W	**U.S. Histories Male and Female** *Ryan, Mary* This seminar will be devoted to exploring gender differences as they have been expressed in a sequence of autobiographies and autobiographical fiction set in a shifting social and historical context.	3.00	20	M 1:30-3:50PM
AS.130.330	01	H		**The Garden of Eden** *Robbins, Ellen Ann* The story of the Garden of Eden remains an archetype in popular culture. Find out about the real biblical story and how it developed into the one we think we know. The only requirements are an open mind and a strong desire to learn.	3.00	10	TTh 3:00-4:15PM
AS.190.331	01	S		**Comparative Racial Politics** *Hanchard, Michael* Students will learn to utilize qualitative, interpretive methods of comparative politics to examine dynamics of racial and/or ethnic politics in the nation-states of Cuba, Brazil, Britain and France, Germany, and the United States. Readings will emphasize the role of the state, political economy, national culture, racist ideologies and anti-racist politics in the formation, maintenance and transformation of conditions of race-based inequalities. Students will also become familiar with theories and concepts of race and ethnicity, and the histories of social movements in the aforementioned societies founded, in part, on racial and/or ethnic identification as a response to inequality. Formerly titled: Race and Racism in Comparative Perspective.	3.00		TTh 3:00-4:15PM
AS.200.204	01	S	W	**Human Sexuality** *Kraft, Chris S*	3.00	25	T 12:00-2:30PM

Study of Women, Gender, & Sexuality

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Course focuses on sexual development, sexuality across the lifespan, gender identity, sexual attraction and arousal, sexually transmitted disease, and the history of commercial sex workers and pornography. Juniors and seniors only within the following majors/minors: Behavioral Biology, Biology, Neuroscience, Psychological & Brain Sciences, Public Health, and the Study of Women, Gender, & Sexuality. All registration will be done during the normal registration period and you must meet all requirements to register. Formerly taught as AS.200.302.			
AS.200.204	02	S	W	**Human Sexuality**	3.00	25	T 9:00-11:30AM
AS.214.376	01	H		**Warrior Women from Ancient Times to Game of Thrones** *Gomez, Janet Elizabeth* This course will trace the origins of the warrior woman from ancient times through today's pop culture and reflect on the multiplicity of its social, cultural, and political ramifications.	3.00	18	MW 12:00-1:15PM
AS.230.316	01	S		**African American Family** *McDonald, Katrina Bell* This course is an examination of sociological theories and studies of African-American families and an overview of the major issues confronting African-American family life. The contemporary conditions of black families are explored, as well as the historical events that have influenced the family patterns we currently observe. Special attention will be given to social policies that have evolved as a result of the prominence of any one perspective at a given point in time.	3.00	15	TTh 1:30-2:45PM
AS.250.351	01	N		**Reproductive Physiology** *Zirkin, Barry R* Focuses on reproductive physiology and biochemical and molecular regulation of the female and male reproductive tracts. Topics include the hypothalamus and pituitary, peptide and steroid hormone action, epididymis and male accessory sex organs, female reproductive tract, menstrual cycle, ovulation and gamete transport, fertilization and fertility enhancement, sexually transmitted diseases, and male and female contraceptive methods. Introductory lectures on each topic followed by research-oriented lectures and readings from current literature.	2.00	100	W 3:00-4:45PM
AS.290.420	01	S	W	**Human Sexual Orientation** *Kraft, Chris S* This course will examine the historical and current theories of sexual orientation and sexual variation development by examining the biological, psychological and social contributing factors that influence the development of sexual orientations and variations along with treatment and modification of problematic sexual behaviors. Limited to Juniors and Seniors with PBS, Neuroscience, Public Health, Behavioral Biology, and Biology majors, or Juniors and Seniors with PBS or Women's Studies minors.	3.00	25	T 3:00-5:30PM

Study of Women, Gender, & Sexuality

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.300.324	01	H		**Cinema of the 1930s: Communist and Capitalist Fantasies** *Eakin Moss, Anne* Comedy and musical comedy film flourished in the USA during the Great Depression as well as in the USSR during the Stalinist Great Terror. This course will compare films of the era in a variety of genres (musical, epic, Western, drama), examining the intersections between politics and aesthetics as well as the lasting implications of the films themselves in light of theoretical works on film as a medium, ethics and gender.	3.00	12	TTh 10:30-11:45AM
AS.300.371	01	H		**The Modernist Novel: James, Woolf, and Joyce** *Ong, Yi-Ping* The purpose of this course is to survey works by three of the greatest, most relentless innovators of the twentieth century – Henry James, Virginia Woolf, and James Joyce -- who explored and exploded narrative techniques for depicting what Woolf called the “luminous halo” of life. Selected works include: "The Beast in the Jungle," The Portrait of a Lady, Jacob’s Room, Mrs. Dalloway, To the Lighthouse, A Portrait of the Artist as a Young Man, and Ulysses.	3.00	20	MW 12:00-1:15PM
AS.310.115	01	H		**Ghost Tales from China and Japan, 14th-19th Centuries** *Joo, Fumiko* We cannot express our own experience of death – only imagine life after death. How did people in the past conceptualize the world of the dead? Ghost tales will teach us what we imagine as the experience of dead and life after death. This course aims to introduce students to a variety of ghost stories in Late Imperial China and Tokugawa Japan and connect their literary imagination of the dead to the cultural, socio-historical, and religious context of each society as well as to the broad East Asian tradition of supernatural narratives. While we also touch upon earlier traditions on narrating the dead, most of the stories in class readings are from the Ming (1368-1644) and Qing (1644-1911) dynasties of China, and the Tokugawa period (1600-1868) of Japan. Key issues include family, gender, sexuality, body, medicine and many more. Although we will also take a look at visual and theatrical representations of the dead, we will primarily focus on literary texts about ghostly phenomena. Film screenings required. All readings are in English.	3.00	25	MW 3:00-4:15PM
AS.363.201	01	HS		**Introduction to the Study of Women, Gender, and Sexuality** *Nealon, Christopher* This course offers an introduction into the fields of Women’s Studies, Gender Studies, and Sexuality Studies. It explores why we need these fields of inquiry, how they have emerged historically, what some of the major and most interesting contributions are and where we might go from here. The course is meant as a preparation for the other WGS core courses.	3.00	40	MW 1:30-2:45PM

Study of Women, Gender, & Sexuality

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.363.255	01	HS	W	**Genes, Gender and Reproduction in 20th Century America** *Schmidt, Marion Andrea* Using the tools of historiography, anthropology and cultural studies, this course will discuss 20th and 21th century debates about gender, genetics and reproduction, family, bioethics and biomedical technology.	3.00	15	TTh 10:30-11:45AM
AS.363.262	01	H	W	**Gendering Empire: Gender & Sexuality in Twentieth Century European Empires** *Rahnama, Sara Mariam* This course uses the lens of gender and sexuality to examine European empires and the function of the colonial state. Topics include gender-policing, masculinity, colonialism, racism and feminism.	3.00	30	MW 1:30-2:45PM
AS.363.264	01	H	W	**Capitalism and Gender** *Westcott, Christopher John* This course explores a range of critical work relating capitalism to gender, sex, and sexuality: from theoretical accounts of witchcraft, marriage, and prostitution at the birth of capitalist social relations, to classic feminist debates around housework and reproduction, to contemporary thought on affect, finance, and the global dimensions of women's labor. As a centerpiece to the course we will read sections from Capital, interrogating the place of gender in Marx's text while developing a grasp of its arguments and influence.	3.00	15	TTh 1:30-2:45PM

Theatre Arts & Studies

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.225.100	01	H		**Introduction to Theatre** *Martin, Joseph H* An introduction to the drama: how and why the theatre came into being; its role in human history; and how changing social structures in different regions and epochs have shaped different kinds of theatre, plays and performance. Also: how theatre "works" for us and on us, and the major plays of world drama.	3.00	20	W 3:00-5:30PM
AS.225.215	01	H		**Performing Muscial Theatre** *Denithorne, Margaret* Effective performance in musical theatre demands a committed analysis of the musical and dramatic values of the song and the libretto from which it springs, in order to develop a fresh, organic interpretation. This course will provide you with the training to both analyze and interpret musical theatre scenes and songs and to make the most of them in performance. Instructor Permission Only.	3.00	12	T 6:00-8:30PM
AS.225.301	01	H		**Acting & Directing Workshop I** *Astin, John* An introduction to the fundamentals of acting through exercises, improvisation, and work on scenes from established plays and Shakespearean sonnets, based on the teachings of Stanislavsky, Greet, Boleslavsky, Michael Chekhov, Clurman, and Meisner. This course also includes a brief survey of major playwrights. Plays will be read, analyzed, and employed in scene work. Auditions: Friday April 3 (11:00am to 1:00pm). Auditions for the Freshmen positions in the class will be held in the fall. By permission only, approval required.	3.00	12	TTh 10:30-11:45AM
AS.225.301	02	H		**Acting & Directing Workshop I**	3.00	12	TTh 12:00-1:15PM
AS.225.307	01	H		**Directing Seminar** *Glossman, James* Fundamentals of mounting, casting and staging the play; various theories of directing; students must commit to a practical lab. It is understood that students have a working familiarity with acting fundamentals.	3.00	14	M 6:00-8:30PM
AS.225.310	01	H		**Stagecraft** *Roche, William C* A hands-on approach to the technical and theoretical elements of production. Meets in the Merrick Barn Scene Shop. Permission Required.	3.00	6	TTh 10:30-11:45AM
AS.225.314	01	H		**Theater:Tech Direction** *Roche, William C* An introduction to Technical Direction including pre-production and production with an overview of materials, tools, rigging and safety, together with design and its implementation.	3.00	14	MW 12:00-1:15PM
AS.225.315	01	H		**Scene Study 2** *Astin, John* Classes and scenes tailored to the needs of the actors. Some rehearsal will take place during school hours. It is expected that substantial out-of-class time be spent on rehearsals and exercises.	3.00	8	F 1:30-4:00PM

Theatre Arts & Studies

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.225.330	01		W	**Playwriting Strategies** *Martin, Joseph H* A seminar and workshop in playwriting with Dr. Joe Martin, playwright and dramaturge. Student writers, developing their plays, will learn how to open up to the creative process, “brainstorm,” refine their work, and shape it toward an act of artistic communication. Writer’s techniques, such as attending to plot or “story,” delineation of character, creating effective “dialog,” even overcoming “writer’s block,” will be addressed. This course is designed to be complementary to – not a replacement for – playwriting classes in the Writing Seminars.	3.00	8	M 3:00-5:30PM
AS.225.345	01	H	W	**History of Modern Theatre & Drama** *Denithorne, Margaret* Designed to impart a deepened appreciation and understanding of today's theatre by surveying the major playwrights, historical movements, and theatre practices of the 20th century. The course also seeks to help students understand theatre's relationship to the societal and political power structure of each era and to introduce students to great dynamic literature in its intended form, which is performance.	3.00	25	T 3:00-5:30PM

Writing Seminars

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.061.205	01	H	W	**Introduction to Dramatic Writing: Film** *Buso-garcia, Roberto* In this course we will explore the basic principles of visual storytelling in narrative film as they apply to the design and execution of a screenplay. During the course of the semester, each student will work on different writing exercises while they search for their specific story and the best way to approach it. We will study different narrative tools and methods of screenwriting by analyzing films to ascertain how they work or fail to do so at script level. Through in-class critiques, group discussions and one-on-one sessions, students will apply these techniques to their own work as they undergo the process of designing, breaking down, outlining and writing a screenplay for a short film. In-class analysis and debate on the strengths and challenges posed by the students' work will help shape the thematic emphasis of the second half of the course.	3.00	15	T 1:30-3:50PM
AS.061.373	01	H	W	**Intermediate Dramatic Writing: Film** *Buso-garcia, Roberto* This course will explore different approaches towards understanding the fabric of story as it pertains to film. Students will be exposed to key challenges in conceiving, structuring and executing a compelling, memorable and vibrant feature-length screenplay. By studying key examples, we will discuss possible solutions to these issues. In every class, students will share their work in progress and will help each other find approaches or solutions to their specific challenges and issues. We will analyze films with screenplays that effectively play with the form to create lasting, thought-provoking and affecting stories. Through in-class critiques, group discussions and one-on- one sessions, students will apply new tools and approaches to their own work as they undergo the process of designing, breaking down, outlining and writing a full step outline, a beat sheet and the first ten pages of a feature length screenplay. As the semester progresses, in-class analysis and debate on the strengths and challenges posed by the students' work will shape the thematic emphasis of each class.	3.00	13	T 10:30AM-12:50PM
AS.213.387	01	H		**Major City, Minor Literature? Berlin in German-Jewish and Yiddish Literature** *Spinner, Samuel Jacob*	3.00	25	Th 1:30-4:00PM

Writing Seminars

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Between the two World Wars, a period of intense artistic and intellectual vitality, Berlin was an international center for theater, visual arts, and literature. Many important Yiddish-language writers were drawn to Berlin and, together with their German- language counterparts, produced a body of literature that explores issues of modernity and identity. By comparing works in Yiddish and German, we will learn about inter-War Berlin's cultural diversity and richness, while also gaining insight into the particular issues of writing about Jewish identity in the 1920s, and the implications of writing in a minor language (Yiddish). We will read works by authors including Joseph Roth and Alfred Döblin in German, and Moyshe Kulbak and Dovid Bergelson in Yiddish. All texts will be in translation. Some questions we will explore include: • What is a minority/minor language or literature? • How did German and Yiddish interact in cultural and social spheres? • Can texts in different languages comprise a single body of literature? • What did it mean to be German and what did it mean to be Jewish? • Are assimilation and hybridity useful concepts? • Is there such a thing as Jewish modernism? • How did literature of the period respond to the rise of the Nazi party and the intensification of antisemitism?			
AS.216.457	01	H		**The Jewish Jesus: Literature, Film, Thought** *Stahl, Neta* "And Jesus was a Jew with ear-locks and prayer shawl" claimed Uri Zvi Greenberg, the ultra-nationalist giant of modern Jewish poetry. A flesh-and-blood Jew, a demon, a spoiled student, an idol, a brother, a (failed) Messiah, a nationalist rebel, a Greek god in a Jewish garb – these images of Jesus accompanied Jewish thought and imagination for almost two thousand years. In what ways do the representations of Jesus contribute to the self understanding of Jews over these two millenia? What were the major changes in the representation of Jesus by Jews throughout this vast period?These and similar questions regarding the Jewish Jesus will engage us at this seminar and will be studied through literary works, visual art, films and thought.	3.00	15	T 1:30-4:00PM

Writing Seminars

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.220.105	06	H	W	**Fiction/Poetry Writing I** *Robinson, Shannon L* A course in realist fiction and traditional verse, with readings in Eudora Welty, Vladimir Nabokov, Henry James, Robert Frost, Paul Fussell, John Gardner, Seamus Heane, and Gwendolyn Brooks. This first course for writers is a study of forms of short fiction and metered verse. Students compose short stories and poems; includes practice of critical attention to literary models and workshop of student writing. This course is a prerequisite for most upper level courses. This course is part one of the year-long Introduction to Fiction and Poetry, and must be taken before AS.220.106.	3.00	15	MWF 10:00-10:50AM
AS.220.105	07	H	W	**Fiction/Poetry Writing I** *Lynch, Molly Therese Kathleen*	3.00	15	MWF 10:00-10:50AM
AS.220.105	08	H	W	**Fiction/Poetry Writing I** *Robinson, Shannon L*	3.00	15	MWF 11:00-11:50AM
AS.220.105	09	H	W	**Fiction/Poetry Writing I** *Eisman, Benjamin L*	3.00	15	MWF 11:00-11:50AM
AS.220.105	10	H	W	**Fiction/Poetry Writing I** *Goldberg, Benjamin Ross*	3.00	15	MWF 11:00-11:50AM
AS.220.105	11	H	W	**Fiction/Poetry Writing I** *Landry, Byron Nicolas*	3.00	15	MWF 11:00-11:50AM
AS.220.105	12	H	W	**Fiction/Poetry Writing I** *Hudgins, Jessica Rae*	3.00	15	MWF 12:00-12:50PM
AS.220.105	13	H	W	**Fiction/Poetry Writing I** *Raskulinecz, Madeline K*	3.00	15	MWF 12:00-12:50PM
AS.220.105	14	H	W	**Fiction/Poetry Writing I** *Dolling, Carmen S*	3.00	15	MWF 12:00-12:50PM
AS.220.105	16	H	W	**Fiction/Poetry Writing I** *Gunn, Amanda Nicole*	3.00	15	MWF 12:00-12:50PM
AS.220.105	17	H	W	**Fiction/Poetry Writing I** *Frantz, Joseph Kenneth*	3.00	15	TTh 9:00-10:15AM
AS.220.105	18	H	W	**Fiction/Poetry Writing I** *Dept. Faculty*	3.00	15	TTh 9:00-10:15AM
AS.220.105	19	H	W	**Fiction/Poetry Writing I** *Mitchell, Robert Alan, Jr.*	3.00	15	TTh 10:30-11:45AM
AS.220.105	20	H	W	**Fiction/Poetry Writing I** *Lynch, Molly Therese Kathleen*	3.00	15	TTh 10:30-11:45AM
AS.220.105	21	H	W	**Fiction/Poetry Writing I** *Ernst, Cody Robert*	3.00	15	TTh 10:30-11:45AM
AS.220.105	22	H	W	**Fiction/Poetry Writing I** *Winchester, Lauren Nicole*	3.00	15	TTh 10:30-11:45AM
AS.220.105	23	H	W	**Fiction/Poetry Writing I** *Booe, Michael A*	3.00	15	TTh 10:30-11:45AM
AS.220.105	24	H	W	**Fiction/Poetry Writing I** *Frantz, Joseph Kenneth*	3.00	15	TTh 12:00-1:15PM
AS.220.105	25	H	W	**Fiction/Poetry Writing I** *Lynch, Molly Therese Kathleen*	3.00	15	TTh 12:00-1:15PM
AS.220.105	26	H	W	**Fiction/Poetry Writing I** *Gunn, Amanda Nicole*	3.00	15	MWF 11:00-11:50AM
AS.220.105	27	H	W	**Fiction/Poetry Writing I** *Xie, Yi*	3.00	15	TTh 10:30-11:45AM
AS.220.105	28	H	W	**Fiction/Poetry Writing I** *Ernst, Cody Robert*	3.00	15	TTh 12:00-1:15PM

Writing Seminars

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.220.105	29	H	W	**Fiction/Poetry Writing I** *Childers, Christopher Jackson*	3.00	15	MWF 10:00-10:50AM
AS.220.105	31	H	W	**Fiction/Poetry Writing I** *Winchester, Lauren Nicole*	3.00	15	TTh 12:00-1:15PM
AS.220.105	32	H	W	**Fiction/Poetry Writing I** *Booe, Michael A*	3.00	15	TTh 12:00-1:15PM
AS.220.105	33	H	W	**Fiction/Poetry Writing I** *Xie, Yi*	3.00	15	TTh 12:00-1:15PM
AS.220.106	03	H	W	**Fiction/Poetry Writing II** *Daynes, Taylor Darlington* The second half of IFP, a course in counter-traditional antirealist fiction and free verse (Emily Dickinson, Virginia Woolf, Elizabeth Bishop, Franz Kafka, Italo Calvino, and William Carlos Williams). This course is a prerequisite for most upper level courses.	3.00	15	TTh 10:30-11:45AM
AS.220.106	04	H	W	**Fiction/Poetry Writing II** *Koekkoek, Taylor Ryan*	3.00	15	TTh 10:30-11:45AM
AS.220.106	06	H	W	**Fiction/Poetry Writing II** *Dept. Faculty*	3.00	15	TTh 12:00-1:15PM
AS.220.106	08	H	W	**Fiction/Poetry Writing II** *Koekkoek, Taylor Ryan*	3.00	15	TTh 12:00-1:15PM
AS.220.108	01	H	W	**Introduction to Fiction & Nonfiction** *Cavanaugh-Simpson, Joanne* A course in realist fiction and nonfiction, with readings by Eudora Welty, Vladimir Nabokov, Henry James; George Orwell, Beryl Markham and Truman Capote. Students compose short stories and essays with attention to literary models. AS.220.105 can be substituted for AS.220.108.	3.00	17	T 6:00-8:30PM
AS.220.200	01	H		**Introduction to Fiction** *Noel, Katharine* Study in the reading and writing of short narrative with focus on basic technique: subject, narrative voice, character, sense of an ending, etc. Students will write weekly sketches, present story analyses in class, and workshop one finished story. Selected parallel readings from such models of the form as Henry James, Anton Chekov, James Joyce, John Cheever, Alice Munro, and others. Permission Required. (Formerly AS.220.191.)	3.00	15	M 1:30-3:50PM
AS.220.200	02	H		**Introduction to Fiction**	3.00	15	W 1:30-3:50PM
AS.220.200	03	H		**Introduction to Fiction** *Leithauser, Brad*	3.00	15	T 3:00-5:20PM
AS.220.201	01	H		**Introduction to Poetry** *Arthur, James P* A study of the fundamentals and strategies of poetry writing. This course combines analysis and discussion of traditional models of poetry with workshop critiques of student poems and student conferences with the instructor. Permission Required. (Formerly AS.220.141.)	3.00	15	M 1:30-3:50PM
AS.220.201	02	H		**Introduction to Poetry** *Malech, Dora Rachel*	3.00	15	W 1:30-3:50PM
AS.220.201	03	H		**Introduction to Poetry** *Williamson, Greg W*	3.00	15	Th 1:30-3:50PM
AS.220.206	01	H	W	**Writing About Science I** *Grimm, David*	3.00	15	F 4:00-6:20PM

Writing Seminars

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course is designed to teach students the skills of daily science news reporting. The focus is on turning complex scientific information into lively prose for the general public. Lectures will cover such topics as how to compose news "ledes," how to get great quotes, how to find stories, and how best to interact with researchers and outside experts. Scientists from Johns Hopkins, University of Maryland, and other local institutions will present their latest research to the class. Students will ask questions, as journalists would, at a news conference. Students will convert these talks into news stories, which will be critiqued in class. As a final project, students will be asked to write a daily news story of their own devising. Please note that a brief writing test is required for this course. To schedule this test, please contact the instructor at dgrimm5@jhu.edu .			
AS.220.210	01	H	W	**Introduction to Non-Fiction: Science as a Social Activity** *Biddle, Wayne* Using the political and economic milieu of science and technology as a context for our writing, we will study how social factors such as government, money, secrecy, and ethics affect the conduct and public presentation of scientific and medical research. Controversies from 20th century history as well as current events will be discussed. Writing assignments to satisfy the W requirement will consist of short papers derived from classroom topics.	3.00	15	T 1:30-3:50PM
AS.220.309	01	H	W	**Writing Healthy Baltimore** *Masterson, Karen* Students will explore public health issues in Baltimore and then write about them first in short pieces, and then in longer, polished works. The framework will be the mayor's Healthy Baltimore 2015 initiative – launched in 2011 to address the city's top-10 public health problems, including obesity, smoking, drug and alcohol abuse, STDs, cancer, and environmental health hazards. Students will study the initiative and its historical context; examine data sets; explore where and how the initiative intersects with public health practitioners and advocacy groups at the neighborhood level; and write what they learn in different formats, including essays, breaking news, and substance analysis. Students will then "workshop" each other's papers.	3.00	8	T 10:00AM-12:30PM
AS.220.309	02	H	W	**Writing Healthy Baltimore**	3.00	7	T 10:00AM-12:30PM
AS.220.318	01	H		**Intermediate Fiction: Voice** *Klam, Matthew* This workshop will focus intensely on student writing, and on reading stories with a strong narrative voice, the kinds of stories in which the reader can hear the narrator speaking, where the voice gets stuck in the reader's mind, where the story feels like an invasion of the narrator's private thoughts, or is a retelling of the tale for some invisible public, or is the quiet, clear prose of a diarist, journaling into the void.	3.00	15	W 3:00-5:20PM
AS.220.377	01	H		**Intermediate Poetry: Poetic Forms**	3.00	15	W 1:30-3:50PM

Writing Seminars

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Williamson, Greg W A consideration of a variety of poetic forms and conventions, analysis and discussion of characteristic approaches, with a balance of workshop of student poems. Admission requires completion of Introduction to Poetry. Permission Required.			
AS.220.399	01	H	W	**Intermediate Poetry: Playwriting for Poets: Suiting the Action** *Yezzi, David D* Many of the finest modern and contemporary poets were also groundbreaking dramatists, including Goethe, Yeats, Eliot, Millay, Cummings, Brecht, and Walcott. Taking these writers' poetic dramas as models, students will explore the elements of playwriting - plot, character, rhythm, etc. - in order to create original dramatic works. Speeches, scenes, and short plays will be read aloud in class and considered in a workshop setting.	3.00	15	T 1:30-3:50PM
AS.220.400	01	H		**Advanced Poetry Workshop** *Irwin, John T* The capstone course in poetry writing. Consideration of various poetic models in discussion, some assigned writing, primarily workshop of student poems. Students will usually complete a “collection” of up to 15 poems. Permission Required. (Formerly AS.220.396.)	3.00	15	W 1:30-3:50PM
AS.220.401	01	H		**Advanced Fiction Workshop** *McDermott, Alice* The capstone course in writing fiction, primarily devoted to workshop of student stories. Some assignments, some discussion of literary models, two or three completed student stories with revisions. Completion of Intermediate Fiction is required for admission. Permission Required. (Formerly 220.355)	3.00	15	T 1:30-3:50PM
AS.220.401	02	H		**Advanced Fiction Workshop** *Davies, Tristan*	3.00	15	W 1:30-3:50PM
AS.220.433	01	H	W	**Mastering Long-form Nonfiction** *Biddle, Wayne* A workshop seminar for students with ambition to publish literary nonfiction of significant length. The goal will be professional-quality manuscripts on subjects of each student's own choice (excluding autobiography). Students will serve as cogent editors of each other's work on a weekly basis.	3.00	15	W 1:30-3:50PM
AS.220.434	01	H		**Readings in Poetry: The Mind in Motion: The Rhetoric of Poetry** *Malech, Dora Rachel* This course examines how argument and formal thought shape poetry. THrough class discussion about readings ranging from Donne to Dickinson to contemporary poets, and through critical and creative exercises, students will explore poems that reveal not only feeling and observation, but also the architecture of the analytical mind at work.	3.00	15	M 1:30-3:50PM
AS.220.435	01	H		**Readings in Poetry: The Romance Tradition** *Arthur, James P*	3.00	15	Th 1:30-3:50PM

Writing Seminars

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				A writer's survey of the medieval romance and of the subsequent poetry that it inspired. Course readings will include Sir Gawain and the Green Knight, The Death of King Arthur, and romances by Chretien de Troyes, as well as poetry by Spenser, Tennyson, and Robert Browning. This is nota workshop course, but students will have the opportunity to respond artistically as well as analytically to the course readings.			
AS.220.436	01	H		**Readings in Fiction: A Writer's Journal** *McGarry, Jean* We will study the role journals play in the work of Virginia Woolf, Franz Kafka, Rainer Maria Rilke, and Anton Chekov. Readings include novels, stories, and diaries.	3.00	15	Th 1:30-3:50PM
AS.300.139	01	H		**Introduction to Intellectual History** *Marrati, Paola* This course offers a conceptual and historical introduction to Intellectual History. What makes the “history of ideas” different from the history of other objects? What, if anything, distinguishes the history of ideas from the history of philosophy? What is it exactly that we call “ideas”? In what sense do they have a history? These are examples of the kind of questions addressed in the course.	3.00	25	TTh 12:00-1:15PM
AS.300.143	01	H		**Introduction to Comparative Literature** *Lisi, Leonardo* This course offers an introduction to the history, theory, and praxis of comparative literature. We will read texts from some of the founding figures of the discipline and look at the most recent debates in the field, including translation studies, literary theory, and world literature, among others. Particular attention will be given to the methodologies and problems of studying literatures in different linguistic traditions and the relation between literature and other areas of thought and culture, such as philosophy, art history, and psychoanalysis. Case studies in comparative approaches to literature will provide concrete examples to our discussions.	3.00	25	Th 1:30-4:00PM
AS.360.133	01	H	W	**Freshman Seminar: Great Books at Hopkins** *Patton, Elizabeth* Students attend lectures by an interdepartmental group of Hopkins faculty and meet for discussion in smaller seminar groups; each of these seminars is led by one of the course faculty. In lectures, panels, multimedia presentations, and curatorial sessions among the University's rare book holdings, we will explore some of the greatest works of the literary and philosophical traditions in Europe and the Americas. Close reading and intensive writing instruction are hallmarks of this course; authors for Fall 2014 include Homer, Plato, Boccaccio, Shakespeare, Madame de Lafayette, Flaubert, Dostoevsky, Chekhov, and Joyce.	3.00	15	TTh 10:30-11:45AM
AS.360.133	02	H	W	**Freshman Seminar: Great Books at Hopkins** *Achinstein, Sharon*	3.00	15	TTh 10:30-11:45AM
AS.360.133	03	H	W	**Freshman Seminar: Great Books at Hopkins** *Bett, Richard*	3.00	15	TTh 10:30-11:45AM

Writing Seminars

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.360.133	04	H	W	**Freshman Seminar:Great Books at Hopkins** *Russo, Elena*	3.00	15	TTh 10:30-11:45AM
AS.360.133	05	H	W	**Freshman Seminar: Great Books at Hopkins** *Stephens, Walter E*	3.00	15	TTh 10:30-11:45AM

Applied Mathematics & Statistics

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
EN.550.100	01	EQ		**Introduction to Applied Mathematics and Statistics** *Staff* A seminar-style series of lectures and assignments to acquaint the student with a range of intellectual and professional activities performed by applied mathematicians and statisticians. Problems arising in applied mathematics and statistics are presented by department faculty and outside speakers. Recommended Course Background: one semester of Calculus.	1.00	45	T 12:00-12:50PM
EN.550.111	01	EQ		**Statistical Analysis I** *Athreya, Dwijavanti P* First semester of a general survey of statistical methodology. Topics include descriptive statistics, introductory probability, conditional probability, random variables, expectation, sampling, the central limit theorem, classical and robust estimation, confidence intervals, and hypothesis testing. Case studies from psychology, epidemiology, economics and other fields serve to illustrate the underlying theory. Some use of Minitab, Excel or R, but no prior computing experience is necessary. Recommended Course Background: four years of high school mathematics. Students who may wish to undertake more than two semesters of probability and statistics should consider EN.550.420-EN.550.430.	4.00	19	W 12:00-1:20PM; MF 12:00-12:50PM
EN.550.111	02	EQ		**Statistical Analysis I**	4.00	19	W 12:00-1:20PM; MW 9:00-9:50AM
EN.550.111	03	EQ		**Statistical Analysis I**	4.00	19	W 12:00-1:20PM; MW 3:00-3:50PM
EN.550.111	04	EQ		**Statistical Analysis I**	4.00	19	W 12:00-1:20PM; MW 4:30-5:20PM
EN.550.111	05	EQ		**Statistical Analysis I**	4.00	19	W 12:00-1:20PM; TTh 9:00-9:50AM
EN.550.111	06	EQ		**Statistical Analysis I**	4.00	19	W 12:00-1:20PM; TTh 3:00-3:50PM
EN.550.111	07	EQ		**Statistical Analysis I**	4.00	19	W 12:00-1:20PM; TTh 4:30-5:20PM
EN.550.112	01	EQ		**Statistical Analysis II** *Torcaso, Fred* Second semester of a general survey of statistical methodology. Topics include two-sample hypothesis tests, analysis of variance, linear regression, correlation, analysis of categorical data, and nonparametrics. Students who may wish to undertake more than two semesters of probability and statistics should strongly consider the EN.550.420-430 sequence.	4.00	25	MWF 1:30-2:20PM; Th 10:30-11:20AM
EN.550.112	02	EQ		**Statistical Analysis II**	4.00	25	MWF 1:30-2:20PM; Th 12:00-12:50PM
EN.550.112	03	EQ		**Statistical Analysis II**	4.00	25	MWF 1:30-2:20PM; Th 1:30-2:20PM
EN.550.112	04	EQ		**Statistical Analysis II**	4.00	25	MWF 1:30-2:20PM; Th 3:00-3:50PM
EN.550.171	01	Q		**Discrete Mathematics** *Castello, Beryl*	4.00	35	MWF 10:00-10:50AM; Th 9:00-9:50AM

Applied Mathematics & Statistics

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Introduction to the mathematics of finite systems. Logic; Boolean algebra; induction and recursion; sets, functions, relations, equivalence, and partially ordered sets; elementary combinatorics; modular arithmetic and the Euclidean algorithm; group theory; permutations and symmetry groups; graph theory. Selected applications. The concept of a proof and development of the ability to recognize and construct proofs are part of the course. Recommended Course Background: Four years of high school mathematics.			
EN.550.171	02	Q		**Discrete Mathematics**	4.00	30	MWF 10:00-10:50AM; Th 12:00-12:50PM
EN.550.171	03	Q		**Discrete Mathematics**	4.00	30	MWF 10:00-10:50AM; Th 10:30-11:20AM
EN.550.171	04	Q		**Discrete Mathematics**	4.00	35	MWF 10:00-10:50AM; Th 4:30-5:20PM
EN.550.291	01	EQ		**Linear Algebra and Differential Equations** *Staff* An introduction to the basic concepts of linear algebra, matrix theory, and differential equations that are used widely in modern engineering and science. Intended for engineering and science majors whose program does not permit taking both AS.110.201 and AS.110.302.	4.00	25	MW 3:00-4:15PM; T 1:30-2:20PM
EN.550.291	02	EQ		**Linear Algebra and Differential Equations**	4.00	25	MW 3:00-4:15PM; T 3:00-3:50PM
EN.550.310	01	EQ		**Probability & Statistics for the Physical Sciences & Engineering** *Staff* An introduction to probability and statistics at the calculus level, intended for engineering and science students planning to take only one course on the topics. Combinatorial probability, independence, conditional probability, random variables, expectation and moments, limit theory, estimation, confidence intervals, hypothesis testing, tests of means and variances, goodness-of-fit. Recommended course background: Co-requisite, Multivariable Calculus.	4.00	30	MWF 11:00-11:50AM; T 9:00-9:50AM
EN.550.310	02	EQ		**Probability & Statistics for the Physical Sciences & Engineering**	4.00	30	MWF 11:00-11:50AM; T 3:00-3:50PM
EN.550.310	03	EQ		**Probability & Statistics for the Physical Sciences & Engineering**	4.00	30	MWF 11:00-11:50AM; T 4:30-5:20PM

Applied Mathematics & Statistics

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
EN.550.311	01	EQ		**Probability and Statistics for the Biological Sciences and Engineering** *Torcaso, Fred* An introduction to probability and statistics at the calculus level, intended for students in the biological sciences planning to take only one course on the topics. This course will be at the same technical level as EN.550.310. Students are encouraged to consider EN.550.420-430 instead. Combinatorial probability, independence, conditional probability, random variables, expectation and moments, limit theory, estimation, confidence intervals, hypothesis testing, tests of means and variances, and goodness-of-fit will be covered. Students cannot receive credit for both EN.550.310 and EN.550.311. Students cannot receive credit for EN.550.311 after having received credit for EN.550.420 or En.550.430. Recommended Course Corequisite: AS.110.202	4.00	35	MWF 10:00-10:50AM; T 9:00-9:50AM
EN.550.311	02	EQ		**Probability and Statistics for the Biological Sciences and Engineering**	4.00	35	MWF 10:00-10:50AM; T 3:00-3:50PM
EN.550.361	01	EQ		**Intro to Optimization** *Fishkind, Donniell* Appropriate for undergraduate and graduate students without the mathematical background required for EN.550.661. An introductory survey of optimization methods, supporting mathematical theory and concepts, and application to problems of planning, design, prediction, estimation, and control in engineering, management, and science. Study of varied optimization techniques including linear programming, network-problem methods, dynamic programming, integer programming, and nonlinear programming. Students should be familiar with computing and linear algebra. Recommended Course Background: one year of calculus	4.00	34	MWF 11:00-11:50AM; Th 1:30-2:20PM
EN.550.361	02	EQ		**Intro to Optimization**	4.00	34	MWF 11:00-11:50AM; Th 3:00-3:50PM
EN.550.361	03	EQ		**Intro to Optimization**	4.00	34	MWF 11:00-11:50AM; Th 9:00-9:50AM
EN.550.361	04	EQ		**Intro to Optimization**	4.00	34	MWF 11:00-11:50AM; Th 4:30-5:20PM
EN.550.385	01	EQ		**Scientific Computing: Linear Algebra** *Eyink, Gregory* A first course on computational linear algebra and applications. Topics include floating-point arithmetic, algorithms and convergence, Gaussian elimination for linear systems, matrix decompositions (LU, Cholesky, QR), iterative methods for systems (Jacobi, Gauss–Seidel), and approximation of eigenvalues (power method, QR-algorithm). Theoretical topics such as vector spaces, inner products, norms, linear operators, matrix norms, eigenvalues, and canonical forms of matrices (Jordan, Schur) are reviewed as needed. Matlab is used to solve all numerical exercises; no previous experience with computer programming is required.	4.00	25	MWF 12:00-12:50PM; T 3:00-3:50PM
EN.550.391	01	EQ		**Dynamical Systems** *Staff*	4.00	24	MWF 11:00-11:50AM; Th 12:00-12:50PM

Applied Mathematics & Statistics

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Mathematical concepts and methods for describing and analyzing linear and nonlinear systems that evolve over time. Topics include boundedness, stability of fixed points and attractors, feedback, optimality, Liapounov functions, bifurcation, chaos, and catastrophes. Examples drawn from population growth, economic behavior, physical and engineering systems. The main mathematical tools are linear algebra and basic differential equations.			
EN.550.400	01	EQ		**Mathematical Modeling and Consulting** *Castello, Beryl* Creating, analyzing and evaluating optimization and mathematical models using case studies. Project-oriented practice and guidance in modeling techniques, with emphasis on communication of methods and results. Applications may include transportation networks, scheduling, industrial processes, and telecommunications. Computation will be emphasized throughout using MATLAB.	4.00	30	MW 3:00-4:15PM; F 3:00-3:50PM
EN.550.413	01	EQ		**Applied Statistics and Data Analysis** *Tang, Minh Hai T* An introduction to basic concepts, techniques, and major computer software packages in applied statistics and data analysis. Topics include numerical descriptive statistics, observations and variables, sampling distributions, statistical inference, linear regression, multiple regression, design of experiments, nonparametric methods, and sample surveys. Real-life data sets are used in lectures and computer assignments. Intensive use of statistical packages such as S+ to analyze data.	4.00	26	MW 3:00-4:15PM; F 3:00-3:50PM
EN.550.413	02	EQ		**Applied Statistics and Data Analysis**	4.00	35	MW 3:00-4:15PM; F 10:00-10:50AM
EN.550.420	01	EQ		**Intro to Probability** *Torcaso, Fred* Probability and its applications, at the calculus level. Emphasis on techniques of application rather than on rigorous mathematical demonstration. Probability, combinatorial probability, random variables, distribution functions, important probability distributions, independence, conditional probability, moments, covariance and correlation, limit theorems. Students initiating graduate work in probability or statistics should enroll in EN.550.620. Auditors are not permitted. Students can use any of the 6th, 7th or 8th editions of the textbook. Recommended Course Background: one year of calculus; Corequisite: multivariable calculus.	4.00	25	MWF 12:00-12:50PM; Th 10:30-11:20AM
EN.550.420	02	EQ		**Intro to Probability**	4.00	25	MWF 12:00-12:50PM; Th 12:00-12:50PM
EN.550.420	03	EQ		**Intro to Probability**	4.00	25	MWF 12:00-12:50PM; Th 1:30-2:20PM
EN.550.420	04	EQ		**Intro to Probability**	4.00	25	MWF 12:00-12:50PM; Th 3:00-3:50PM
EN.550.427	01	Q		**Stochastic Processes and Applications to Finance** *Athreya, Dwijavanti P*	4.00	35	MWF 11:00-11:50AM; Th 12:00-12:50PM

Applied Mathematics & Statistics

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				A development of stochastic processes with substantial emphasis on the processes, concepts, and methods useful in mathematical finance. Relevant concepts from probability theory, particularly conditional probability and conditional expection, will be briefly reviewed. Important concepts in stochastic processes will be introduced in the simpler setting of discrete-time processes, including random walks, Markov chains, and discrete-time martingales, then used to motivate more advanced material. Most of the course will concentrate on continuous-time stochastic processes, particularly martingales, Brownian motion, diffusions, and basic tools of stochastic calculus. Examples will focus on applications in finance, economics, business, and actuarial science. Students may not receive credit for both EN.550.427 and EN.550.426.			
EN.550.427	02	Q		**Stochastic Processes and Applications to Finance**	4.00	25	MWF 11:00-11:50AM; Th 10:30-11:20AM
EN.550.430	01	EQ		**Introduction to Statistics** *Naiman, Daniel Q* Introduction to the basic principles of statistical reasoning and data analysis. Emphasis on techniques of application. Classical parametric estimation, hypothesis testing, and multiple decision problems; linear models, analysis of variance, and regression; nonparametric and robust procedures; decision-theoretic setting, Bayesian methods.	4.00	30	MWF 9:00-9:50AM; T 9:00-9:50AM
EN.550.430	02	EQ		**Introduction to Statistics**	4.00	30	MWF 9:00-9:50AM; T 10:30-11:20AM
EN.550.433	01	EQ		**Monte Carlo Methods** *Spall, James C.* The objective of the course is to survey essential simulation techniques for popular stochastic models. The stochastic models may include classical time-series models, Markov chains and diffusion models. The basic simulation techniques covered will be useful in sample-generation of random variables, vectors and stochastic processes, and as advanced techniques, importance sampling, particle filtering and Bayesian computation may be discussed.	4.00	35	MW 4:30-5:45PM; T 3:00-3:50PM
EN.550.433	02	EQ		**Monte Carlo Methods**	4.00	30	MW 4:30-5:45PM; T 10:30-11:20AM
EN.550.436	01	EQ		**Data Mining** *Budavari, Tamas*	4.00	24	TTh 9:00-10:15AM; Th 10:30-11:20AM

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Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Data mining is a relatively new term used in the academic and business world, often associated with the development and quantitative analysis of very large databases. Its definition covers a wide spectrum of analytic and information technology topics, such as machine learning, artificial intelligence, statistical modeling, and efficient database development. This course will review these broad topics, and cover specific analytic and modeling techniques such as advanced data visualization, decision trees, neural networks, nearest neighbor, clustering, logistic regression, and association rules. Although some of the mathematics underlying these techniques will be discussed, our focus will be on the application of the techniques to real data and the interpretation of results. Because use of the computer is extremely important when “mining” large amounts of data, we will make substantial use of data mining software tools to learn the techniques and analyze datasets. Recommended Course Background: EN.550.413			
EN.550.436	02	EQ		**Data Mining**	4.00	24	TTh 9:00-10:15AM; Th 12:00-12:50PM
EN.550.442	01	EQ		**Investment Science** *Staff* Intended for upper-level undergraduate and graduate students, this course offers a rigorous treatment of the subject of investment as a scientific discipline. Mathematics is employed as the main tool to convey the principles of invest-ment science and their use to make investment calculations for good decision-making. Topics covered in the course include the basic theory of interest and its application to fixed-income securities, cash flow analysis and capital budgeting, mean-variance portfolio theory, and the associated capital asset pricing model, utility function theory and risk analysis, derivative securities and basic option theory, portfolio evaluation. The student is expected to be comfortable with the use of mathematics as a method of deduction and problem solving. Some familiarity with optimization is desirable but not necessary.	4.00	35	MTh 7:00-8:15PM; F 9:00-9:50AM
EN.550.442	02	EQ		**Investment Science**	4.00	30	MTh 7:00-8:15PM; F 12:00-12:50PM
EN.550.444	01	EQ		**Introduction to Financial Derivatives** *Audley, David* This course will develop the mathematical concepts and techniques for modeling cash instruments and their hybrids and derivatives.	4.00	35	MW 3:00-4:15PM; F 3:00-3:50PM
EN.550.444	02	EQ		**Introduction to Financial Derivatives**	4.00	35	MW 3:00-4:15PM; F 1:30-2:20PM
EN.550.446	01	EQ		**Risk Measurement/Management in Financial Markets** *Audley, David* This course applies advanced mathematical techniques to the measurement, analysis, and management of risk. The focus is on financial risk. Sources of risk for financial instruments (e.g., market risk, interest rate risk, credit risk) are analyzed; models for these risk factors are studied and the limitation, shortcomings and compensatory techniques are addressed.	4.00	40	MW 12:00-1:15PM; F 12:00-12:50PM

Applied Mathematics & Statistics

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
EN.550.461	01	EQ		**Optimization in Finance** *Tappenden, Rachael* A survey of many of the more important optimization methods and tools that are found to be useful in financial applications.	4.00	40	MWF 9:00-9:50AM; Th 9:00-9:50AM
EN.550.463	01	EQ		**Network Models in Operations Research** *Castello, Beryl* In-depth mathematical study of network flow models in operations research, with emphasis on combinatorial approaches for solving them. Introduction to techniques for constructing efficient algorithms, and to some related data structures, used in solving shortest-path, maximum-volume, flow, and minimum-cost flow problems. Emphasis on linear models and flows, with brief discussion of non-linear models and network design.	4.00	20	MWF 12:00-12:50PM; T 4:30-5:20PM
EN.600.442	01	EQ		**Modern Cryptography** *Jain, Abhishek* This course focuses on cryptographic algorithms, formal definitions, hardness assumptions, and proofs of security. Topics include number-theoretic problems, pseudo-randomness, block and stream ciphers, public-key cryptography, message authentication codes, and digital signatures. Recommended Course Background: EN.600.226 and a 300-level or above systems course; EN.600.271/EN.600.471 and EN.550.171 or equivalent.	3.00	30	MW 1:30-2:45PM

Biomedical Engineering

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
EN.520.445	01	E		**Audio Signal Processing** *Elhilali, Mounya* This course gives a foundation in current audio and speech technologies, and covers techniques for sound processing by processing and pattern recognition, acoustics, auditory perception, speech production and synthesis, speech estimation. The course will explore applications of speech and audio processing in human computer interfaces such as speech recognition, speaker identification, coding schemes (e.g. MP3), music analysis, noise reduction. Students should have knowledge of Fourier analysis and signal processing.	3.00	40	TTh 10:30-11:45AM
EN.530.426	01	E		**Biofluid Mechanics** *Mittal, Rajat* Course will cover selected topics from physiological fluid dynamics, including respiratory flow patterns, blood flow and pulse propagation, aerodynamics of phonation and speech, rheology of blood flow in the microcirculation, aquatic animal propulsion, and animal flight.	3.00	25	TTh 1:30-3:00PM
EN.580.111	01	EN		**BME Modeling and Design** *Haase, Eileen B* Working in teams with upperclassmen this course (1) introduces biomedical engineering freshmen to an orderly method for analyzing and modeling biological systems and (2) introduces engineering principles to solve design problems that are biological, physiological, and/or medical. Freshmen are expected to use the informational content being taught in calculus, physics and chemistry and to apply this knowledge to the solution of practical problems encountered in biomedical engineering. BME Freshmen only.	2.00	5	Th 12:00-12:50PM; Th 8:00-9:50AM
EN.580.111	02	EN		**BME Modeling and Design**	2.00	5	Th 12:00-12:50PM; Th 8:00-9:50AM
EN.580.111	03	EN		**BME Modeling and Design**	2.00	5	Th 12:00-12:50PM; Th 8:00-9:50AM
EN.580.111	04	EN		**BME Modeling and Design**	2.00	5	Th 12:00-12:50PM; Th 8:00-9:50AM
EN.580.111	05	EN		**BME Modeling and Design**	2.00	5	Th 12:00-12:50PM; Th 8:00-9:50AM
EN.580.111	06	EN		**BME Modeling and Design**	2.00	5	Th 12:00-12:50PM; Th 8:00-9:50AM
EN.580.111	07	EN		**BME Modeling and Design**	2.00	5	Th 12:00-12:50PM; Th 8:00-9:50AM
EN.580.111	08	EN		**BME Modeling and Design**	2.00	5	Th 12:00-12:50PM; Th 1:00-2:50PM
EN.580.111	09	EN		**BME Modeling and Design**	2.00	5	Th 12:00-12:50PM; Th 1:00-2:50PM
EN.580.111	10	EN		**BME Modeling and Design**	2.00	5	Th 12:00-12:50PM; Th 1:00-2:50PM
EN.580.111	11	EN		**BME Modeling and Design**	2.00	5	Th 12:00-12:50PM; Th 1:00-2:50PM
EN.580.111	12	EN		**BME Modeling and Design**	2.00	5	Th 12:00-12:50PM; Th 1:00-2:50PM
EN.580.111	13	EN		**BME Modeling and Design**	2.00	5	Th 1:00-2:50PM; Th 12:00-12:50PM
EN.580.111	14	EN		**BME Modeling and Design**	2.00	5	Th 12:00-12:50PM; Th 1:00-2:50PM
EN.580.111	15	EN		**BME Modeling and Design**	2.00	5	Th 12:00-12:50PM; Th 3:00-4:50PM
EN.580.111	16	EN		**BME Modeling and Design**	2.00	5	Th 12:00-12:50PM; Th 3:00-4:50PM
EN.580.111	17	EN		**BME Modeling and Design**	2.00	5	Th 12:00-12:50PM; Th 3:00-4:50PM
EN.580.111	18	EN		**BME Modeling and Design**	2.00	5	Th 12:00-12:50PM; Th 3:00-4:50PM
EN.580.111	19	EN		**BME Modeling and Design**	2.00	5	Th 12:00-12:50PM; Th 3:00-4:50PM
EN.580.111	20	EN		**BME Modeling and Design**	2.00	5	Th 12:00-12:50PM; Th 3:00-4:50PM

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Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
EN.580.111	21	EN		**BME Modeling and Design**	2.00	5	Th 12:00-12:50PM; Th 3:00-4:50PM
EN.580.111	22	EN		**BME Modeling and Design**	2.00	5	Th 12:00-12:50PM; Th 5:00-6:50PM
EN.580.111	23	EN		**BME Modeling and Design**	2.00	5	Th 12:00-12:50PM; Th 5:00-6:50PM
EN.580.111	24	EN		**BME Modeling and Design**	2.00	5	Th 12:00-12:50PM; Th 5:00-6:50PM
EN.580.111	25	EN		**BME Modeling and Design**	2.00	5	Th 12:00-12:50PM; Th 5:00-6:50PM
EN.580.111	26	EN		**BME Modeling and Design**	2.00	5	Th 12:00-12:50PM; Th 5:00-6:50PM
EN.580.111	27	EN		**BME Modeling and Design**	2.00	5	Th 12:00-12:50PM; Th 5:00-6:50PM
EN.580.111	28	EN		**BME Modeling and Design**	2.00	5	Th 12:00-12:50PM; Th 5:00-6:50PM
EN.580.211	01	EN		**BME Design Group** *Allen, Robert H* Sophomore-level version of EN.580.311-312 or Perm. Req'd	3.00	5	TTh 4:30-5:45PM
EN.580.221	01	N		**Molecules and Cells** *Haase, Eileen B* An introduction to modern molecular and cellular biology in the context of potential biomedical engineering applications. Topics covered: reactions between molecules, including receptor-ligand and antigen-antibody specificity, protein structure, enzyme catalysis, genetic information, protein processing and secretion, cell physiology and cell functions. Advanced quantitative treatment including multi-state kinetics, Monte Carlo simulations of biochemical reactions, and transport phenomena. Recommended Course Background: AS.030.101 and AS.030.104	4.00	35	MWF 11:00-11:50AM; Th 10:30-11:20AM
EN.580.221	02	N		**Molecules and Cells**	4.00	35	MWF 11:00-11:50AM; Th 12:00-12:50PM
EN.580.221	03	N		**Molecules and Cells**	4.00	35	MWF 11:00-11:50AM; Th 1:30-2:20PM
EN.580.221	04	N		**Molecules and Cells**	4.00	35	MWF 11:00-11:50AM; Th 3:00-3:50PM
EN.580.221	05	N		**Molecules and Cells**	4.00	35	MWF 11:00-11:50AM; Th 10:30-11:20AM
EN.580.311	01	EN		**BME Design Group** *Allen, Robert H* A two-semester course sequence where juniors and seniors work with a team leader and a group of BME freshmen and sophomores, to solve open-ended problems in biomedical engineering. Upperclassmen are expected to apply their general knowledge and experience, and their knowledge in their concentration area, to teach lower classmen and to generate the solution to practical problems encountered in biomedical engineering. Perm. Req'd.	3.00	30	TTh 4:30-5:45PM
EN.580.321	01	EN		**Statistical Mechanics and Thermodynamics** *Beer, Michael* Basic principles of statistical physics and thermodynamics with application to biological systems. Topics include fundamental principles of thermodynamics, chemical equilibrium and thermodynamics of reactions in solutions, and elementary statistical mechanics. Recommended Course Background: AS.110.108-AS.110.109, AS.030.101 -AS.030.102, AS.171.101-AS.171.102; Freshman/Sophomore Chemistry and Physics	4.00	35	MWF 11:00-11:50AM; T 11:00-11:50AM

Biomedical Engineering

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
EN.580.321	02	EN		**Statistical Mechanics and Thermodynamics**	4.00	35	MWF 11:00-11:50AM; T 12:00-12:50PM
EN.580.321	03	EN		**Statistical Mechanics and Thermodynamics**	4.00	35	MWF 11:00-11:50AM; T 1:30-2:20PM
EN.580.321	04	EN		**Statistical Mechanics and Thermodynamics**	4.00	35	MWF 11:00-11:50AM; T 3:00-3:50PM
EN.580.410	01			**BME Teaching Practicum** *Haase, Eileen B* Senior biomedical engineering students will assist the core course instructors and PhD students in managing the sections and recitations and or lab component of a course. Permission required.	2.00	40	TBA
EN.580.411	01	E		**BME Design Group** *Allen, Robert H* Perm. Req'd. Senior-level version of EN.580.311-312.	3.00	30	TTh 4:30-5:45PM
EN.580.413	01	E		**Design-Team, Team Leader** *Allen, Robert H* A two-semester sequence where leaders direct a team of undergraduate biomedical engineering students in a series of design problems. Prior design team experience and permission of course director required. Perm. Req'd.	4.00	15	TTh 4:30-5:45PM
EN.580.416	01			**BME Advanced Teaching Practicum** *Beer, Michael* Senior biomedical engineering students will assist the core course instructors in managing the sections, recitations, or lab component of a course. Permission required.	3.00	10	TBA
EN.580.420	01	EN		**Build-a-Genome** *Bader, Joel S* Must understand fundamentals of DNA structure, DNA electrophoresis and analysis, Polymerase Chain Reaction (PCR) and must be either a) Experienced with molecular biology lab work or b) Adept at programming with a biological twist. In this combination lecture/laboratory "Synthetic Biology" course students will learn how to make DNA building blocks used in an int'l. project to build the world's first synthetic eukaryotic genome, Saccharomyces cerevisiae v. 2.0. Please study the wiki www.syntheticyeast.org for more details about the project. Following a biotechnology boot-camp, students will have 24/7 access to computational and wet-lab resources and will be expected to spend 15-20 hours per week on this course. Advanced students will be expected to contribute to the computational and biotech infrastructure. Successful completion of this course provides 3 credit hours toward the supervised research requirement for Molecular and Cellular Biology majors, or 2 credit hours toward the upper level elective requirement for Biology or Molecular and Cellular Biology majors.	4.00	8	MWF 8:30-9:50AM
EN.580.421	01	EN		**Systems Bioengineering I** *Trayanova, Natalia*	4.00	35	MW 3:00-4:15PM; F 11:00-11:50AM

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Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				A quantitative, model-oriented investigation of the cardiovascular system. Topics are organized in three segments. (1) Molecular/cellular physiology, including electrical signaling and muscle contraction. (2) Systems cardiovascular physiology, emphasizing circuit-diagram analysis of hemodynamics. (3) Cardio-vascular horizons and challenges for biomedical engineers, including heart failure and its investigation/treatment by computer simulation, by gene-array analysis, by stem-cell technology, and by mechanical devices (left-ventricular assist and total-heart replacement). Recommended Course Background: EN.580.221 and EN.580.222			
EN.580.421	02	EN		**Systems Bioengineering I**	4.00	35	MW 3:00-4:15PM; F 12:00-12:50PM
EN.580.421	03	EN		**Systems Bioengineering I**	4.00	35	MW 3:00-4:15PM; F 1:30-2:20PM
EN.580.421	04	EN		**Systems Bioengineering I**	4.00	35	MW 3:00-4:15PM; F 3:00-3:50PM
EN.580.423	01	N		**Systems Bioengineering Lab I** *Haase, Eileen B* A two-semester laboratory course in which various physiological preparations are used as examples of problems of applying technology in biological systems. The emphasis in this course is on the design of experimental measurements and on physical models of biological systems. Priority to Junior BME majors. Recommended Corequisite: EN.580.421.	2.00	36	Th 9:00AM-12:50PM; F 9:00-9:50AM
EN.580.423	02	N		**Systems Bioengineering Lab I**	2.00	36	Th 1:30-5:20PM; F 9:00-9:50AM
EN.580.423	03	N		**Systems Bioengineering Lab I**	2.00	36	Th 4:30-5:20PM; F 9:00AM-12:50PM
EN.580.423	04	N		**Systems Bioengineering Lab I**	2.00	36	Th 4:30-5:20PM; F 1:30-5:20PM
EN.580.429	01	EN		**Systems Bioengineering III** *Bader, Joel S* Computational and theoretical systems biology at the cellular and molecular level. Topics include organizational patterns of biological networks; analysis of metabolic networks, gene regulatory networks, and signal transduction networks; inference of pathway structure; and behavior of cellular and molecular circuits. Recommended Course Background: EN.580.221 and EN.580.222 or Permission Required.	4.00	35	TTh 10:30-11:45AM; F 12:00-12:50PM
EN.580.429	02	EN		**Systems Bioengineering III**	4.00	35	TTh 10:30-11:45AM; F 1:30-2:20PM
EN.580.429	03	EN		**Systems Bioengineering III**	4.00	35	TTh 10:30-11:45AM; F 12:00-12:50PM
EN.580.429	04	EN		**Systems Bioengineering III**	4.00	35	TTh 10:30-11:45AM; F 3:00-3:50PM
EN.580.431	01			**Introduction to Computational Medicine I** *Miller, Michael*		24	WF 12:00-1:15PM

Biomedical Engineering

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Computational medicine is an emerging discipline in which computer models of disease are developed, constrained using data measured from individual patients, and then applied to deliver precision health care. Introduction to Computational Medicine I is the first in a sequence of two courses on computational medicine. It covers the core concepts of computational physiological medicine and computational anatomy. The first half of this course will cover computational physiological medicine. Students will learn how to: use biophysical laws and data to formulate computational models of physiological systems in health and disease; analyze the behaviors of these models using analytical and simulation approaches; apply models to understand their use in diagnosing and treating disease. The second half of this course will cover computational anatomy. Students will learn how to: model anatomies using magnetic resonance imaging data; compare anatomies via mappings onto anatomical atlases; discover anatomical biomarkers of disease; analyze changes in the connectivity of anatomies in disease. Class time will emphasize hands-on learning through data analysis, software development, and simulation. All instructional materials will be made available at the beginning of the course. Recommended background: Calculus I-III, linear algebra, and ordinary differential equations. Proficiency in C++, Matlab or Python is required.			
EN.580.431	01			**Introduction to Computational Medicine I**	3.00	24	WF 12:00-1:15PM
EN.580.441	01	E		**Cellular Engineering** *Green, Jordan* This course focuses on principles and applications in cell engineering. Class lectures include an overview of molecular biology fundamentals, protein/ligand binding, receptor/ligand trafficking, cell-cell interactions, cell-matrix interactions, and cell adhesion and migration at both theoretical and experimental levels. Lectures will cover the effects of physical (e.g. shear stress, strain), chemical (e.g. cytokines, growth factors) and electrical stimuli on cell function, emphasizing topics on gene regulation and signal transduction processes. Furthermore, topics in metabolic engineering, enzyme evolution, polymeric biomaterials, and drug and gene delivery will be discussed. This course is intended as Part 1 of a two-semester sequence recommended for students in the Cell and Tissue Engineering focus area. Recommended Course Background: EN.580.221 or AS.020.305 and AS.020.306 or equivalent and AS.030.205 Meets with EN.580.641	3.00	40	TTh 3:00-4:15PM
EN.580.451	01	EN		**Cell and Tissue Engineering Lab** *Haase, Eileen B*	3.00	8	MWF 11:00AM-12:50PM

Biomedical Engineering

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Cell and tissue engineering is a field that relies heavily on experimental techniques. This laboratory course will consist of three six experiments that will provide students with valuable hands-on experience in cell and tissue engineering. Students will learn basic cell culture procedures and specialized techniques related to faculty expertise in cell engineering, microfluidics, gene therapy, microfabrication and cell encapsulation. Experiments include the basics of cell culture techniques, gene transfection and metabolic engineering, basics of cell-substrate interactions I, cell-substrate interactions II, and cell encapsulation and gel contraction. Co-listed with EN.530.451. Senior and Graduate students only; others, instructor permission required. Fall semester only. Lab Fee: $100			
EN.580.451	02	EN		**Cell and Tissue Engineering Lab**	3.00	8	MWF 1:00-2:50PM
EN.580.471	01	EN		**Principles of Design of BME Instrumentation** *Thakor, Nitish V* This core design course will cover lectures and hands-on labs. The material covered will include fundamentals of biomedical sensors and instrumentation, FDA regulations, designing with electronics, biopotentials and ECG amplifier design, recording from heart, muscle, brain, etc., diagnostic and therapeutic devices (including pacemakers and defibrillators), applications in prosthetics and rehabilitation, and safety. The course includes extensive laboratory work involving circuits, electronics, sensor design and interface, and building complete biomedical instrumentation. The students will also carry out design challenge projects, individually or in teams (examples include “smart cane for blind,” “computer interface for quadriplegic”). Students satisfying the design requirement must also register for EN.580.571. Lab Fee: $150. Recommended Course Background: EN.520.345	4.00	8	Th 4:00-5:50PM; F 9:00AM-12:50PM
EN.580.471	02	EN		**Principles of Design of BME Instrumentation**	4.00	8	Th 4:00-5:50PM; F 1:00-4:50PM
EN.580.472	01	E		**Medical Imaging Systems** *Prince, Jerry Ladd* An introduction to the physics, instrumentation, and signal processing methods used in general radiography, X-ray computed tomography, ultrasound imaging, magnetic resonance imaging, and nuclear medicine. The primary focus is on the methods required to reconstruct images within each modality, with emphasis on the resolution, contrast, and signal-to-noise ratio of the resulting images. Cross-listed with Neuroscience and Electrical and Computer Engineering (EN.520.432).	3.00	30	MWF 10:00-10:50AM
EN.580.483	01	E		**Nuclear Medicine Imaging** *Frey, Eric*	3.00	10	TTh 10:30-11:45AM

Biomedical Engineering

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course provides an intermediate-level introduction to the instrumentation, image processing and reconstruction methods used in planar nuclear medicine imaging, single-photon emission computed tomography (SPECT) and positron emission tomography (PET). Topics include radioactive decay, nuclear medicine instrumentation including radiation detectors and associated electronics, analytic and statistical iterative tomographic reconstruction, imaging physics, and image quality in the context of these three modalities. This course will be taught at the School of Medicine Campus. Recommended Course Background: EN.520.432/EN.580.472 and EN.520.434/EN.580.473			
EN.580.492	01	EN		**Build-a-Genome Mentor** *Bader, Joel S* In addition to producing and sequencing DNA segments like regular B-a-G students, mentors will help prepare and distribute reagents, and maintain a Moddle site to track student reagent use and productivity. Mentors will also be expected to mentor specific students who are learning new techniques for the first time, contribute to the computational and biotech infrastructure associated with Build-a-Genome, and pursue at least one independent research project. Successful completion of this course provides 3 credit hours toward the supervised research requirement for Molecular and Cellular Biology majors. Co-listed AS.020.451 Permission Required.	4.00	8	MWF 8:30-9:50AM
EN.580.495	01	EN		**Microfabrication Lab** *Andreou, Andreas* This laboratory course introduces the principles used in the construction of microelectronic devices, sensors, and micromechanical structures. Students will work in the laboratory on the fabrication and testing of a device. Accompanying lecture material covers basic processing steps, design and analysis CAD tools, and national foundry services. Co-listed with EN.530.495 and EN.520.495 Seniors only. Permission Required.	4.00	4	W 1:30-2:20PM; Th 1:00-4:50PM
EN.580.495	02	EN		**Microfabrication Lab**	4.00	4	W 1:30-2:20PM; Th 5:00-8:50PM
EN.580.495	04	EN		**Microfabrication Lab**	4.00	4	W 1:30-2:20PM; F 1:00-4:50PM
EN.580.495	05	EN		**Microfabrication Lab**	4.00	4	W 1:30-2:20PM; Th 8:00-11:50AM

Biomedical Engineering

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
EN.600.461	01	EQ		**Computer Vision** *Vidal, Rene* This course gives an overview of fundamental methods in computer vision from a computational perspective. Methods studied include: camera systems and their modelling, computation of 3-D geometry from binocular stereo, motion, and photometric stereo; and object recognition. Edge detection and color perception are covered as well. Elements of machine vision and biological vision are also included. Students may receive credit for at most one of EN.600.361 or EN.600.461 or EN.600.661. [Applications] Prerequisites (soft): intro programming, linear algebra, and prob/stat.	3.00	20	MW 12:00-1:15PM

Center for Leadership Education

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
EN.660.100	01	S		**Hopkins Leadership Challenge Seminar** *Smedick, William D* The Hopkins Leadership Challenge is a one credit pass/fail seminar and is designed specifically for first year undergraduates at JHU who are interested in developing their leadership skills and applying those skills to Hopkins life. The seminar includes both a classroom component and an experiential component. The classroom content includes leadership topics, discussions with university leaders and serves as an introduction to the history, services and involvement opportunities at Hopkins. The experiential component includes programs such as JHU history, faculty student interaction, visits to other JHU campuses and more! Interested students should register early, as there is limited space available in each section of the seminar. Freshmen only. S/U only.	1.00	19	M 12:00-1:15PM; W 12:00-1:15PM
EN.660.100	02	S		**Hopkins Leadership Challenge Seminar**	1.00	19	M 12:00-1:15PM; W 12:00-1:15PM
EN.660.100	03	S		**Hopkins Leadership Challenge Seminar** *Staff*	1.00	19	F 12:00-1:15PM; W 12:00-1:15PM
EN.660.100	04	S		**Hopkins Leadership Challenge Seminar**	1.00	19	W 12:00-1:15PM; F 12:00-1:15PM
EN.660.104	01			**Exploring Leadership: For Hopkins Students Who Want to Make a Difference** *Smedick, William D* Seminar is designed specifically for second year undergraduates at JHU and is limited to that population. An eight-week seminar and experiential program designed to provide the following learning outcomes for students enrolled: 1. Understand self-others and how to work effectively in communities 2. Understand the importance of integrity, moral purpose, and positive change. 3. Understand how change occurs and why people resist or promote change. 4. Understand the importance of enhancing and applying individual team strengths, developing greater levels of well being for you and in others, and thriving together as individuals and organizations. 5. Form positive connections and relationships with upper class students and alumni in areas of career interests.	1.00	19	Th 12:00-1:15PM; T 12:00-1:15PM
EN.660.105	01	S	W	**Introduction to Business** *Aronhime, Lawrence* This course is designed as an introduction to the terms, concepts, and values of business and management. The course comprises three broad categories: the economic, financial, and corporate context of business activities; the organization and management of business enterprises; and, the marketing and production of goods and services. Topic specific readings, short case studies and financial exercises all focus on the bases for managerial decisions as well as the long and short-term implications of those decisions in a global environment. No audits.	4.00	19	MWF 12:00-12:50PM; T 1:30-2:20PM
EN.660.105	02	S	W	**Introduction to Business**	4.00	19	MWF 12:00-12:50PM; T 1:30-2:20PM

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Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
EN.660.105	03	S	W	**Introduction to Business**	4.00	19	MWF 12:00-12:50PM; T 3:00-3:50PM
EN.660.105	04	S	W	**Introduction to Business**	4.00	19	MWF 12:00-12:50PM; W 3:00-3:50PM
EN.660.105	05	S	W	**Introduction to Business**	4.00	19	MWF 12:00-12:50PM; Th 1:30-2:20PM
EN.660.105	06	S	W	**Introduction to Business**	4.00	19	MWF 12:00-12:50PM; Th 3:00-3:50PM
EN.660.105	07	S	W	**Introduction to Business**	4.00	19	MWF 12:00-12:50PM; M 1:30-2:20PM
EN.660.105	08	S	W	**Introduction to Business**	4.00	19	MWF 12:00-12:50PM; W 3:00-3:50PM
EN.660.203	01			**Financial Accounting** *Aronhime, Lawrence* The course in Financial Accounting is designed for anyone who could be called upon to analyze and/or communicate financial results and/or make effective financial decisions in a for-profit business setting. No prior accounting knowledge or skill is required for successful completion of this course. Because accounting is described as the language of business, this course emphasizes the vocabulary, methods, and processes by which all business transactions are communicated. The accounting cycle, basic business transactions, internal controls, and preparation and understanding of financial statements including balance sheets, statements of income and cash flows are covered. No audits.	3.00	40	MWF 10:00-10:50AM
EN.660.203	02			**Financial Accounting** *Leps, Annette*	3.00	35	MW 12:00-1:15PM
EN.660.203	03			**Financial Accounting** *Aronhime, Lawrence*	3.00	40	TTh 10:30-11:45AM
EN.660.203	04			**Financial Accounting** *Furlong, Sean T*	3.00	19	TTh 4:30-5:45PM
EN.660.203	05			**Financial Accounting** *Staff*	3.00	19	M 3:00-5:45PM
EN.660.250	01			**Principles of Marketing** *Kendrick, Leslie* This course explores the role of marketing in society and within the organization. It examines the process of developing, pricing, promoting and distributing products to consumer and business markets and shows how marketing managers use the elements of the marketing mix to gain a competitive advantage. Through interactive, application-oriented exercises, case videotapes, a guest speaker (local marketer), and a group project, students will have ample opportunity to observe key marketing concepts in action. The group project requires each team to research the marketing plan for an existing product of its choice. Teams will analyze what is currently being done by the organization, choose one of the strategic growth alternatives studied, and recommend why this alternative should be adopted. The recommendations will include how the current marketing plan will need to be modified in order to implement this strategy and will be presented to the instructor in written form and presented to the class. No audits.	3.00	38	MW 12:00-1:15PM
EN.660.250	02			**Principles of Marketing** *Quesenberry, Keith A*	3.00	19	TTh 10:30-11:45AM
EN.660.250	03			**Principles of Marketing** *DeVries, Marci*	3.00	19	TTh 10:30-11:45AM

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Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
EN.660.250	04			**Principles of Marketing**	3.00	35	TTh 12:00-1:15PM
EN.660.250	05			**Principles of Marketing** *Furst, Mary E*	3.00	35	TTh 9:00-10:15AM
EN.660.250	06			**Principles of Marketing** *Graham, Robert M.*	3.00	19	MW 1:30-2:45PM
EN.660.308	01	S		**Business Law I** *Fisher, David* This course is designed to provide students an introduction to legal reasoning and analysis. Content distinguishes forms of business, civil versus criminal law, and agency principles; intellectual property concepts, contract Law, the UCC (Uniform Commercial Code) and consumer protection are explored and discussed in the context of assigned legal cases which are intended to develop a student's ability to analyze and apply law. Note: not open to students who have taken 660.205 Business Law I. No audits.	3.00	19	M 6:15-9:00PM
EN.660.308	02	S		**Business Law I** *Rakes, William Bryan*	3.00	19	W 6:15-9:00PM
EN.660.308	03	S		**Business Law I** *Staff*	3.00	19	W 6:15-9:00PM
EN.660.310	01	H		**Case Studies in Business Ethics** *Sandhaus, Douglas* This course is designed as a workshop using case studies to introduce students to the ethical concepts that are relevant to resolve moral issues in contemporary business and social settings—both global and personal in nature. Students will learn the reasoning and analytical skills needed to apply ethical concepts to their own decision-making, to identify moral issues involved in the management of specific problem areas in business and society, and to understand the social and natural environments which give rise to moral issues. The course focus is on performance articulated by clear reasoning and effective verbal and written communication concerning ethical issues in business and society. Not open to students who have taken EN.660.231 Case Studies in Business Ethics. No audits.	3.00	30	T 6:15-9:00PM
EN.660.311	01	S		**Law and the Internet** *Franceschini, Mark* Sometimes called “Cyber law,” this course uses the case study method to examine some of the most significant and compelling legal aspects, issues, and concerns involved with operating a business enterprise in an Internet environment. Some of the issues likely to be covered include jurisdiction, resolution of online disputes, trademarks, copyright, licenses, privacy, defamation, obscenity, the application of traditional concepts of tort liability to an Internet context, computer crime, information security, taxation, international considerations, and an analysis of other recent litigation and/or statutes. Note: not open to students who have taken EN.660.306 Law and the Internet. No audits.	3.00	30	W 6:15-9:00PM
EN.660.331	01			**Leading in Teams** *Smedick, William D*	3.00	24	TTh 4:00-5:15PM

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Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course will allow students to develop the analytical skills needed to effectively lead and work in teams. Students will learn tools and techniques for problem solving, decision-making, conflict resolution, task management, communications, and goal alignment in team settings. They will also learn how to measure team dynamics and performance, and assess methods for building and sustaining high-performance teams. Students will also explore their own leadership, personality and cognitive styles and learn how these may affect their performance in a team. The course will focus on team-based experiential projects and exercises as well as provide opportunities to individually reflect and write about the concepts explored and skills gained throughout the course. No Audits.			
EN.660.332	01		W	**Leadership Theory** *Smedick, William D* Students will be introduced to the history of Leadership Theory from the "Great Man" theory of born leaders to Transformational Leadership theory of non-positional learned leadership. Transformational Leadership theory postulates that leadership can be learned and enhanced. The course will explore the knowledge base and skills necessary to be an effective leader in a variety of settings. Students will assess their personal leadership qualities and develop a plan to enhance their leadership potential. Recommended Course Background: EN.660.105 or EN.660.220/EN.660.340. No audits.	3.00	30	MW 2:00-3:15PM
EN.660.332	02		W	**Leadership Theory**	3.00	30	TTh 2:00-3:15PM
EN.660.335	01			**Negotiation and Conflict Resolution** *Rice, Eric* The focus of this class is the nature and practice of conflict resolution and negotiation within and between individuals and organizations. The primary format for learning in this class is structured experimental exercises designed to expose students to different aspects of negotiation and to build tangible skills through interpersonal exchange. While some class time is devoted to presentations on theories and approaches, the class method primarily relies on feedback from fellow classmates on their observations of negotiation situations and on personal reflections by students after each structured experience. Topics include conflict style, negotiation, and group conflict. No audits. Recommended Course Background: EN.660.105, an additional course in the Entrepreneurship and Management Program or in the social sciences.	3.00	24	T 3:00-5:45PM
EN.660.340	01			**Principles of Management** *Reiter, Joshua*	3.00	35	M 1:30-4:15PM

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Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course introduces the student to the management process. The course takes an integrated approach to management by examining the role of the manager from a traditional and contemporary perspective while applying decision-making and critical-thinking skills to the challenges facing managers in today's globally diverse environment. The course examines the techniques for controlling, planning, organizing resources and leading the workforce. Not open to students who have taken EN.660.220 Principles of Management. No audits.			
EN.660.355	01			**Sports Marketing** *Kendrick, Leslie* This course will allow students to apply marketing principles and concepts to the sports marketing environment while gaining an understanding of how event sponsorships, endorsements, licensing and naming rights are used to achieve business objectives. Through case studies and a group project, students will be exposed to a broad range of sports entities including professional sports teams, governing organizations and sports media.	3.00	38	TTh 12:00-1:15PM
EN.660.357	01		W	**Copywriting and Creative Strategy** *Quesenberry, Keith A* Uncover the process of creative thinking for innovation and conceiving "big ideas" in marketing. Students will be exposed to creative theory and practice as they select a consumer product and determine strategic market positioning, target demographics, media vehicles and creative guidelines. Then students will learn the craft of advertising copywriting for print, broadcast and digital media as they develop finished creative executions for the chosen organization that all build to a complete integrated marketing campaign. No audits.	3.00	19	MW 12:00-1:15PM
EN.660.358	01			**International Marketing** *Kendrick, Leslie* This course covers product, pricing, promotion, distribution, market research, organization and implementation and control policies relating to international marketing. It also explores the economic, cultural, political and legal aspects of international marketing. Through interactive and application-oriented assignments and cases, students will gain hands-on experience in analyzing and developing marketing strategies for organizations that market both consumer and business products/services internationally. A group project will involve the development of an international marketing plan for a specific product. One or more local international marketers will be invited to speak to the class. No audits.	3.00	25	TTh 1:30-2:45PM
EN.660.361	01	EN		**Engineering Business and Management** *Agronin, Michael L*	3.00	19	M 6:15-9:00PM

Center for Leadership Education

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				An introduction to the business and management aspects of the engineering profession, project management, prioritization of resource allocation, intellectual property protection, management of technical projects, and product/production management. Preference will be given to Mechanical Engineering students. No audits. Recommended Course Background: EN.660.105			
EN.660.361	02	EN		**Engineering Business and Management** *Izenberg, Illysa B*	3.00	19	MW 8:30-9:45AM
EN.660.361	03	EN		**Engineering Business and Management**	3.00	19	TTh 9:00-10:15AM
EN.660.361	04	EN		**Engineering Business and Management**	3.00	19	TTh 10:30-11:45AM
EN.660.363	01	EN		**Leadership & Management in Materials Science and Engineering** *Izenberg, Illysa B* In this course, you will learn about leadership, social responsibility, strategy, finance, project management and people management specifically in the materials science and engineering fields. You will practice writing concise persuasive analyses and action plans and verbally defending your ideas. You will learn the ethical guidelines for the materials science profession, to resolve team conflicts and co-lead self-managed work teams, and determine how materials science supports society's stainability goals and the social responsibilities of materials scientists. Our class time will feel like a business meeting, and we will refer to class periods as meetings. When you complete this course, you will be prepared to be a working professional. Your Teaching Team looks forward to seeing you develop into a career engineer, scientist, manager, entrepreneur, professor or other professional over the years.	3.00	19	MW 12:00-1:15PM
EN.660.404	01	S		**Business Law II** *Fisher, David* Building on the material from Business Law I, topics examined include entrepreneurship, business entities and business formation, principles of agency, real property, personal property, bailments, bankruptcy, secured transactions, employment discrimination, business financing, investor protection, antitrust and environmental law. No audits.	3.00	19	T 6:15-9:00PM
EN.660.410	01			**Computer Science Innovation and Entrepreneurship** *Aronhime, Lawrence*	3.00	19	TTh 4:30-6:00PM

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Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course is designed to give students in CS the requisite skills to generate and screen ideas for new venture creation and then prepare a business plan for an innovative technology of their own design. These skills include the ability to incorporate into a formal business case all necessary requirements, including needs identification and validation; business and financial models; and, market strategies and plans. Student teams will present the business plan to an outside panel made up of practitioners, industry representatives, and venture capitalists. In addition, this course functions as the first half of a two course sequence, the second of which will be directed by CS faculty and focus on the actual construction/programming of the business idea.			
EN.660.414	01			**Financial Statement Analysis** *Leps, Annette* This course is designed to increase a student's ability to read and interpret financial statements and related information under both GAAP and IFRS (International Financial Reporting Standards). In addition to a review of the basic financial statements and accounting principles, the course will use industry and ratio analysis in addition to benchmarking and modeling techniques to encourage students to think in a more creative way when analyzing historic information or when forecasting financial statements. Students will assess firm profitability and risk, value assets and use spreadsheet models for financial forecasting and decision making. Not open to students who have taken EN.660.304 Financial Statement Analysis. No audits.	3.00	30	TTh 12:00-1:15PM
EN.660.453	01		W	**Social Media and Marketing** *Quesenberry, Keith A* This course explores strategies for monitoring and engaging consumers in digital media. Students will gain practical knowledge about developing, implementing and measuring social media marketing campaigns. They will learn how to analyze what consumers are saying and connect with them by leveraging word of mouth, viral and buzz marketing through sites like Facebook, Twitter and YouTube. A series of assignments build upon each other toward a final social media marketing plan for a selected consumer product or service. No Audits.	3.00	19	TTh 12:00-1:15PM
EN.660.460	01			**Entrepreneurship** *Rice, Eric*	3.00	25	MW 12:00-1:15PM

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Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course provides students with a solid introduction to the entrepreneurial process of creating new businesses. Students will gain an appreciation for the investors' perspective in assessing opportunities, evaluating strategies, and valuing the new enterprise. The course will cover the principal components of building a successful venture including management, market analysis, intellectual property protection, legal and regulatory issues, operations, entrepreneurial financing, and the role of the capital markets. Course work will include case studies and creation of investor marketing materials. Open to Juniors and Seniors. No Audits. Recommended Course Background: EN.660.203			
EN.661.110	01		W	**Professional Writing and Communication** *Thompson, Jay R* This course teaches students to communicate effectively with a wide variety of specialized and non-specialized audiences. Projects include production of resumes, cover letters, proposals, instructions, reports, and other relevant documents. Class emphasizes writing clearly and persuasively, creating appropriate visuals, developing oral presentation skills, working in collaborative groups, giving and receiving feedback, and simulating the real world environment in which most communication occurs. No audits.	3.00	19	TTh 9:00-10:15AM
EN.661.110	02		W	**Professional Writing and Communication**	3.00	19	TTh 10:30-11:45AM
EN.661.110	03		W	**Professional Writing and Communication** *Bernstein, Jenny*	3.00	19	MW 12:00-1:15PM
EN.661.110	04		W	**Professional Writing and Communication** *Jerr, Nicole*	3.00	19	TTh 12:00-1:15PM
EN.661.110	05		W	**Professional Writing and Communication**	3.00	19	TTh 1:30-2:45PM
EN.661.110	06		W	**Professional Writing and Communication**	3.00	19	TTh 3:00-4:15PM
EN.661.110	07		W	**Professional Writing and Communication** *Wilkins, Caroline A*	3.00	19	MW 10:30-11:45AM
EN.661.110	08		W	**Professional Writing and Communication**	3.00	19	MW 1:30-2:45PM
EN.661.111	01		W	**Professional Writing and Communication for International Students** *Davis, Laura G* This course teaches ESL students to communicate effectively with a wide variety of specialized and non-specialized audiences and will provide ESL-specific help with grammar, pronunciation, and idiomatic expression in these different contexts. Projects include production of resumes, cover letters, proposals, instructions, reports, and other relevant documents. Class emphasizes writing clearly and persuasively, creating appropriate visuals, developing oral presentation skills, working in collaborative groups, giving and receiving feedback, and simulating the real world environment in which most communication occurs. Note: not open to students who have taken EN.661.110 as Technical Communication or Professional Communication for Science, Business, and Industry or EN.661.120 Business Communication. Co-listed with EN.661.611. No audits.	3.00	19	TTh 4:30-5:45PM

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Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
EN.661.250	01		W	**Oral Presentations** *Dungey, Kevin R* This course is designed to help students push through any anxieties about public speaking by immersing them in a practice-intensive environment. They learn how to speak with confidence in a variety of formats and venues - Including extemporaneous speaking, job interviewing, leading a discussion, presenting a technical speech, and other relevant scenarios. Students learn how to develop effective slides that capture the main point with ease and clarity, hone their message, improve their delivery skills, and write thought-provoking, well-organized speeches that hold an audience's attention. No audits. Not open to students that have taken EN.661.150.	3.00	13	M 3:00-5:45PM
EN.661.250	02		W	**Oral Presentations**	3.00	13	M 6:15-9:00PM
EN.661.250	03		W	**Oral Presentations** *Graham, Robert M.*	3.00	13	T 1:30-4:15PM
EN.661.250	04		W	**Oral Presentations**	3.00	13	W 4:30-7:15PM
EN.661.250	05		W	**Oral Presentations** *Reiser, Julie*	3.00	13	W 1:30-4:15PM
EN.661.250	06		W	**Oral Presentations** *Heiserman, Jason*	3.00	13	T 4:30-7:15PM
EN.661.250	07		W	**Oral Presentations** *Kulanko, Andrew*	3.00	13	Th 1:30-4:15PM
EN.661.250	08		W	**Oral Presentations**	3.00	13	Th 5:00-7:45PM
EN.661.251	01		W	**Oral Presentations for International Students** *Davis, Laura G* This course is designed to help students push through any anxieties about public speaking by immersing them in a practice-intensive environment. They learn how to speak with confidence in a variety of formats and venues - Including extemporaneous speaking, job interviewing, leading a discussion, presenting a technical speech, and other relevant scenarios. Students learn how to develop effective slides that capture the main point with ease and clarity, hone their message, improve their delivery skills, and write thought-provoking, well-organized speeches that hold an audience's attention. Special attention will be placed on diction, pronunciation, tone, pace and emphasis of language. Additional attention also will be given to syntax as well as non-verbal communication patterns. No audits. Not open to students that have taken EN.661.151	3.00	13	W 4:30-7:15PM
EN.661.301	01		W	**Writing for the Law** *Sandhaus, Douglas*	3.00	18	Th 6:15-9:00PM

Center for Leadership Education

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course teaches students to communicate effectively in various modes of legal discourse that are fundamental to the practice of law. Students will engage in writing nearly every session and will learn the basics of legal writing, editing (both the student's and others' work), and written/oral advocacy skills. Students can expect to work with litigation-related documents such as pleadings, preliminary and dispositive motions, and appellate briefs as well as non-litigation-related documents such as opinion articles, publications, essays, and various business-related contracts.			
EN.661.315	01		W	**Culture of the Engineering Profession** *Reiser, Julie* This course focuses on building understanding of the culture of engineering while preparing students to communicate effectively with the various audiences with whom engineers interact. Working from a base of contemporary science writing (monographs, non-fiction, popular literature and fiction), students will engage in discussion, argument, case study and project work to investigate: the engineering culture and challenges to that culture, the impacts of engineering solutions on society, the ethical guidelines for the profession, and the ways engineering information is conveyed to the range of audiences for whom the information is critical. Additionally, students will master many of the techniques critical to successful communication within the engineering culture through a series of short papers and presentations associated with analysis of the writings and cases. No audits.	3.00	19	TTh 12:00-1:15PM
EN.661.361	01		W	**Corporate Communications & P.R.** *Sheff, Pamela* This course focuses on the ways that organizations, both for-profit and non-profit, manage their communications to deliver strategic, coherent and compelling messages to their varied stakeholders. Using case studies and team-based, real world projects, we will explore topics including public and media relations, corporate image, branding, advertising, internal and external communications, crisis management, investor relations, ethics and social responsibility. In the process, we will consider issues ranging from organizational culture and leadership styles to defining strategy, managing conflict, defending positions and disagreeing agreeably. No audits. Recommended Course Background: AS.220.105, EN.661.110, AS.060.113 or AS.060.114, AS.060.215, EN.660.250, EN.660.105, and EN.661.250	3.00	19	TTh 12:00-1:15PM
EN.661.370	01			**Visual Rhetoric** *O'Donnell, Charlotte Alyssa*	3.00	15	T 1:30-4:15PM

Center for Leadership Education

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				A course that aims to help students design clearer, more visually engaging graphics for a wide variety of business and technical documents. Students will learn to manage essential principles of graphic design through a variety of graphic programs (Adobe Creative Suite) and MS Office software. Topics will include logos, letterhead, event posters, brochures, data graphics and some basic web design. No audits. Not open to students that have taken EN.661.170.			
EN.661.380	01	Q		**Business Analytics** *Rice, Eric* In this course students learn the procedures and processes that researchers use to determine answers to questions such as how to price a product, how to differentiate one product from another, and how to evaluate customer response to an offering. The materials combine fundamentals of research design with statistics procedures to answer the questions that entrepreneurs and marketing managers must answer as they write business plans, develop their product mix, set prices, create advertising and test products. The course combines case study, simulated situations, lecture, discussion and real-time projects to produce answers using the techniques, tools and procedures typically used in North American enterprises.	3.00	19	TTh 10:30-11:45AM
EN.661.390	01		W	**Catalyst: A Student-Run Magainze** *O'Donnell, Charlotte Alyssa* Catalyst is a student-run magazine that focuses on research, technology, entrepreneurship and design. Students enrolled in this course will learn the fundamental principles of journalism through producing content for the online magazine. The class will cover basic journalistic writing and interviewing techniques. Students will get a primer on media law, newsroom ethics and procedure. As their skills progress, they will learn to pitch, write and edit a variety of stories types – from basic news stories, to profiles, features and reviews. All students will publish at least one piece of writing in the magazine at the end of the semester.	3.00	19	M 1:30-4:15PM

Chemical & Biomolecular Engineering

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
EN.540.101	01	E		**Chemical Engineering Today** *Dahuron, Lise* A series of weekly lectures to introduce students to chemical and biomolecular engineering and its role as a profession in addressing contemporary technological, social, ethical, and economic issues in today's world. The lectures will include examples of how chemical and biomolecular engineers apply the principles of physics and chemistry to develop new products, improve process efficiencies, and alleviate the strain on the ecosystem through the design of novel environmentally conscious processes. In addition, the lectures will highlight exciting new areas now being advanced by chemical and biomolecular engineers, such as biochemical engineering, tissue engineering, nanoparticle fabrication, and processing smart polymers for applications in computer technology and as sensors. Freshmen Only.	1.00	120	M 1:30-2:20PM
EN.540.202	01	E		**Introduction to Chemical & Biological Process Analysis** *Gray, Jeffrey J* Introduction to chemical and biomolecular engineering and the fundamental principles of chemical process analysis. Formulation and solution of material and energy balances on chemical processes. Reductionist approaches to the solution of complex, multi-unit processes will be emphasized. Introduction to the basic concepts of thermodynamics as well as chemical and biochemical reactions.	4.00	19	MWF 3:00-3:50PM; T 3:00-4:50PM
EN.540.202	02	E		**Introduction to Chemical & Biological Process Analysis**	4.00	19	MWF 3:00-3:50PM; T 3:00-4:50PM
EN.540.202	03	E		**Introduction to Chemical & Biological Process Analysis**	4.00	19	MWF 3:00-3:50PM; Th 4:30-6:20PM
EN.540.202	04	E		**Introduction to Chemical & Biological Process Analysis**	4.00	19	MWF 3:00-3:50PM; Th 4:30-6:20PM
EN.540.203	01	E		**Engineering Thermodynamics** *Bevan, Michael* Formulation and solution of material, energy, and entropy balances with an emphasis on open systems. A systematic problem-solving approach is developed for chemical and biomolecular process-related systems. Extensive use is made of classical thermodynamic relationships and constitutive equations for one and two component systems. Applications include the analysis and design of engines, refrigerators, heat pumps, compressors, and turbines.	3.00	35	TTh 9:00-10:15AM
EN.540.204	01	E		**Applied Physical Chemistry** *Gracias, David*	3.00	35	TTh 1:30-2:45PM

Chemical & Biomolecular Engineering

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				The topics in this course include thermodynamic models for multicomponent phase equilibrium including vapor liquid equilibrium, phase diagrams, activity models and colligative properties in both non-electrolyte and electrolyte solutions. . A link between average thermodynamic properties and microstates and molecular interactions is made via a discussion of intermolecular forces and the partition function. Also covered are thermodynamic relationships to describe chemical equilibria, and basic concepts in quantum mechanics and statistical mechanics.			
EN.540.290	01	E		**Chemical Engineering Modeling and Design for Sophomores** *Donohue, Marc D* The courses EN.540.290, 291, 390, and 391 guide the students through the open-ended problems in product and process design. Product design concerns the recognition of customer needs, the creation of suitable specifications, and the creation of new products to fulfill a societal need. Process design concerns the quantitative description of processes which serve to produce chemically-derived materials and the estimation of process profitability. Students work in small teams to complete a major project demonstrating their understanding of and proficiency in the principles of unit operations and design. Students report weekly both orally and in writing on their accomplishments. Some projects are single semester, but others can be multi-semester. Students can start in any semester and can work on projects for as many semesters as they want.	3.00	16	TBA
EN.540.301	01	E		**Kinetic Processes** *Cui, Honggang* Review of numerical methods applied to kinetic phenomena and reactor design in chemical and biological processes. Homogeneous kinetics and interpretation of reaction rate data. Batch, plug flow, and stirred tank reactor analyses, including reactors in parallel and in series. Selectivity and optimization considerations in multiple reaction systems. Non isothermal reactors. Elements of heterogeneous kinetics, including adsorption isotherms and heterogeneous catalysis. Coupled transport and chemical/biological reaction rates.	4.00	19	TBA

Chemical & Biomolecular Engineering

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
EN.540.303	01	E		**Transport Phenomena I** *Frechette, Joelle* Molecular mechanisms of momentum transport (viscous flow), energy transport (heat conduction), and mass transport (diffusion). Isothermal equations of change (continuity, motion, and energy). The development of the Navier Stokes equation. The development of non isothermal and multi component equations of change for heat and mass transfer. Exact solutions to steady state, isothermal unidirectional flow problems, to steady state heat and mass transfer problems. The analogies between heat, mass, and momentum transfer are emphasized throughout the course. Recommended Corequisite: AS.110.302, Introduction to the field of transport phenomena.	3.00	40	TTh 1:30-2:45PM
EN.540.304	01	E		**Transport Phenomena II** *Gagnon, Zachary* Dimensional analysis and dimensionless groups. Laminar boundary layers, introduction to turbulent flow. Definition of the friction factor. Macroscopic mass, momentum and mechanical energy balances (Bernouilli's equation). Metering of fluids. Convective heat and mass transfer. Heat and mass transfer in boundary layers. Correlations for convective heat and mass transfer. Boiling and condensation. Interphase mass transfer.	4.00	100	TTh 12:00-1:15PM; W 9:00-9:50AM
EN.540.305	01	E		**Modeling and Statistical Analysis of Data for Chemical and Biomolecular Engineers** *Schulman, Rebecca* This course seeks to build the student's strength in Chemical Engineering computing and data analysis. To this end, in the first part of the course, we will become familiar with the Matlab/Octave computing environment and solve problems in Chemical Engineering that involve concepts from Process Analysis, Thermodynamics, Transport Phenomena, and Kinetics. In the subsequent part, we will build on the skills learnt earlier and tackle problems in Data Analysis and Hypothesis testing. Recommended Corequisites: EN.540.203 and EN.540.303 and EN.540.304.	3.00	85	TTh 10:30-11:45AM
EN.540.309	01	E		**Product Design Part 1** *Donohue, Marc D*	2.00	12	TBA

Chemical & Biomolecular Engineering

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course guides the student through the steps of product design. Product design concerns the recognition of customer needs, the creation of suitable specifications, and the selection of best products to fulfill the needs. Students work in small teams to complete a major project demonstrating their understanding of and proficiency in the primary objectives of the course. Students report several times both orally and in writing on their accomplishments. This course is the first part of a two-semester sequence that optionally can be taken instead of EN.540.314 Chemical and Biomolecular Engineering Product Design. The material covered is the same as in EN.540.314, but more time is allowed so that laboratory tests can be performed and/or prototypes can be made. Note that students must take 540.310 to complete this sequence and before receiving credits for 540.309. Recommended Course Background: EN.540.301, EN.540.304, EN.540.311 or EN.540.313 or permission of instructor.			
EN.540.310	01	EN		**Product Design Part 2** *Donohue, Marc D* This course is one part of a two semester sequence that optionally can be taken instead of for This course is the second part of a two semester sequence (with EN.540.309) that optionally can be taken instead of EN.540.314 Chemical and Biomolecular Engineering Product Design. Students continue to work with their team on their product design project. Students report several times both orally and in writing on their accomplishments. The material covered is the same as in EN.540.314, but more time is allowed so that laboratory tests can be performed and/or prototypes can be made. Note that both courses, EN.540.309 and EN.540.310 must be taken to satisfy the Undergraduate degree requirement of the Chemical and Biomolecular Engineering program. The two courses can be started in any term. Recommended Course Background: EN.540.301, EN.540.304, EN.540.311 or EN.540.313 or permission of instructor.	2.00	12	TBA
EN.540.311	01	E	W	**Chemical Engineering Lab I** *Dahuron, Lise* This course challenges students with laboratory projects that are not well-defined. Students work in groups to develop an effective approach to experiments. They identify the important operating variables, decide how best to obtain them using measured or calculated values. Based on their results they predict, carryout, analyze and improve experiments. Each student analyzes three of the following projects: distillation, gas absorption, and one of the projects in EN.540.313. In addition to technical objectives, this course stresses oral and written communication. Students will have additional meeting times with the instructors and some writing professors outside of class.	6.00	8	M 1:00-5:50PM

Chemical & Biomolecular Engineering

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
EN.540.311	02	E	W	**Chemical Engineering Lab I** *Goffin, An*	6.00	4	T 1:00-5:50PM
EN.540.311	03	E	W	**Chemical Engineering Lab I** *Dahuron, Lise*	6.00	4	Th 1:00-5:50PM
EN.540.311	04	E	W	**Chemical Engineering Lab I** *Goffin, An*	6.00	4	F 1:00-5:50PM
EN.540.312	01	E	W	**Chemical and Biomolecular Engineering Lab: Part 2** *Dahuron, Lise* Students who, as a part of an exchange program, participated in a laboratory course at the Technical University of Denmark at Copenhagen during the summer are required to register for this course to complete their equivalency requirement for the Chemical and Biomolecular Engineering Laboratory course offered in fall at JHU. The final grade for this course will incorporate the DTU grade. In addition, students perform one experimental project and submit a full professional report along with the current Senior Lab students. Students make a 15-min presentation to the junior class about their projects and of their experience in Denmark. Recommended Course Background: EN.540.301, EN.540.304, EN.540.306, EN.540.490, EN.661.315	3.00	8	Th 1:30-4:30PM
EN.540.313	01	E	W	**Chemical and Biomolecular Engineering Lab** *Dahuron, Lise* This course challenges students with laboratory projects that are not well-defined. Students work in groups to develop an effective approach to experiments. They identify the important operating variables, decide how best to obtain them using measured or calculated values. Based on their results they predict, carryout, analyze and improve experiments. Each student analyzes at least two of the following biomolecular projects: bioreactor, biocatalysis and membrane separation and one of the projects in EN.540.311. In addition to technical objectives, this course stresses oral and written communication. Students will have additional meeting times with the instructors and some writing professors outside of class.	6.00	12	M 1:00-5:50PM
EN.540.313	02	E	W	**Chemical and Biomolecular Engineering Lab** *Gerecht, Sharon*	6.00	16	T 1:00-5:50PM
EN.540.313	03	E	W	**Chemical and Biomolecular Engineering Lab** *Ostermeier, Marc*	6.00	16	Th 1:00-5:50PM
EN.540.313	04	E	W	**Chemical and Biomolecular Engineering Lab** *Goffin, An*	6.00	16	F 1:00-5:50PM
EN.540.390	01	E		**Chemical Engineering Modeling and Design for Juniors** *Donohue, Marc D*	3.00	16	TBA

Chemical & Biomolecular Engineering

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				The courses EN.540.290, 291, 390, and 391 guide the students through the open-ended problems in product and process design. Product design concerns the recognition of customer needs, the creation of suitable specifications, and the creation of new products to fulfill a societal need. Process design concerns the quantitative description of processes which serve to produce chemically-derived materials and the estimation of process profitability. Students work in small teams to complete a major project demonstrating their understanding of and proficiency in the principles of unit operations and design. Students report weekly both orally and in writing on their accomplishments. Some projects are single semester, but others can be multi-semester. Students can start in any semester and can work on projects for as many semesters as they want.			
EN.540.400	01	E		**Project in Design: Pharmacokinetics** *Donohue, Marc D* This design project will be to develop a chemical process model of the human body that can be used to understand the temporal distribution, spatial distribution and bioavailability of pharmaceutical drugs. The course (and software to be developed) will cover the spectrum of factors affecting pharmaceutical bioavailability including drug formulation, mode of dosing and dosing rate, metabolism and metabolic cascades, storage in fatty tissues, and diffusional limitations (such as in crossing the blood-brain barrier or diffusional differences between normal and cancerous cells). The goal is to develop a process model of the human body that will predict pharmaceutical bioavailability as a function of time and organ (or cell) type that will work for a wide variety of pharmaceuticals including small molecules, biologics, and chemotherapy agents.	3.00	12	MW 4:30-5:45PM
EN.540.400	02	E		**Project in Design: Pharmacokinetics**	3.00	12	MW 4:30-5:45PM
EN.540.401	01	E		**Projects in Design: Alternative Energy** *Donohue, Marc D* This course is a group design project (i.e. not a lecture course) to use chemical processing simulation tools (Aspen) to model a real-world process of interest to Chemical and Biomolecular Engineers. The goal of the project will be to develop a process model that is sufficiently complete and robust that it can be used to understand the important factors in the process design and/or operation. This design project is focused on the role alternative energy will play in our country's future. About a third of the course will be devoted to understanding the role of energy and alternative energy in the US and world economies. The remainder of the course will be devoted to a technical and economic analysis of the feasibility of making biofuel from algae.	3.00	12	TBA
EN.540.402	01	E		**Metabolic Systems Biotechnology** *Betenbaugh, Michael J*	3.00	10	F 1:30-4:15PM

Chemical & Biomolecular Engineering

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				The aim of this course is to provide a fundamental understanding of the quantitative principles and methodologies of systems biology and biochemical engineering of metabolism. This includes concepts of cellular growth, cellular stoichiometric models, metabolic networks, metabolite fluxes, and genome-scale metabolic models. Quantitative methods and systems biology approaches for metabolic flux analysis and metabolic control theory will be included as well as an analysis of biochemical systems and bioreactors including a consideration of mass transport processes.			
EN.540.409	01	EQ		**Dynamic Modeling and Control** *Goffin, An* Introduction to modeling, dynamics, and control. Unsteady state analysis of biomolecular and chemical process control systems. State space and Laplace transform techniques, block diagram algebra, and transfer functions. Feedback and feedforward control. Frequency response and stability analysis. Model construction for biomolecular and cellular systems including pharmacokinetic modeling, biomolecular modeling using the central dogma of biology/control of gene expression, large scale biosimulation. Introduction to nonlinear dynamics. Recommended Corequisites: AS.110.302, EN.540.203, EN.540.301, EN.540.303, AS.020.305 and AS.020.306 or equivalent.	4.00	19	MWF 10:00-10:50AM; M 1:00-1:50PM
EN.540.409	02	EQ		**Dynamic Modeling and Control**	4.00	19	MWF 10:00-10:50AM; T 12:00-12:50PM
EN.540.409	03	EQ		**Dynamic Modeling and Control**	4.00	19	MWF 10:00-10:50AM; W 1:00-1:50PM
EN.540.409	04	EQ		**Dynamic Modeling and Control**	4.00	19	MWF 10:00-10:50AM; T 1:00-1:50PM
EN.540.415	01	E		**Interfacial Science with Applications to Nanoscale Systems** *Frechette, Joelle* Nanostructured materials intrinsically possess large surface area (interface area) to volume ratios. It is this large interfacial area that gives rise to many of the amazing properties and technologies associated with nanotechnology. In this class we will examine how the properties of surfaces, interfaces, and nanoscale features differ from their macroscopic behavior. We will compare and contrast fluid-fluid interfaces with solid-fluid and solid-solid interfaces, discussing fundamental interfacial physics and chemistry, as well as touching on state-of-the-art technologies.	3.00	35	TTh 10:30-11:45AM
EN.540.418	01	E		**Projects in the Design of a Chemical Car** *Dahuron, Lise*	2.00	6	W 5:00-6:40PM

Chemical & Biomolecular Engineering

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Ready to put those concepts from class into practice? Members work over the course of the semester to design and build a chemically powered vehicle that will compete with other college teams at the American Institute of Chemical Engineers (AIChE) Regional Conference. In this course, the students work in small groups to design and construct the chassis along with chemically powered propulsion and break mechanisms within the constraints of the competition. In addition, students will give oral presentation, write reports, and do thorough safety analysis of their prototypes. Both semesters must be completed with passing grades to receive credit. Instructor Approval Only.			
EN.540.418	02	E		**Projects in the Design of a Chemical Car**	2.00	6	W 5:00-6:40PM
EN.540.418	03	E		**Projects in the Design of a Chemical Car**	2.00	6	W 5:00-6:40PM
EN.540.422	01	E		**Introduction to Polymeric Materials** *Cui, Honggang* Polymeric materials are ubiquitous in our society from Nature-made proteins and polysaccharides to synthetic plastics and fibers. Their applications range from day-to-day consumables to high performance materials used in critically demanding areas, such as aviation, aerospace and medical devices. The objective of this course is to provide an introductory overview on the field of polymer science and engineering. Students will learn some basic concepts in polymer synthesis, characterization, and processing. With the basic concepts established, industrial applications of polymeric materials will be discussed in two categories: structural polymers and functional polymers. Structural polymers, including plastics, fibers, rubbers, coatings, adhesives, and composites, will be discussed in terms of their structure, processing, and property relationship with a flavor of industrial relevant products and applications. Future trends in developing environmentally friendly polymers from renewable resources (“green polymer chemistry”) will also be covered. Lectures on functional polymers will be focused on their unique properties that are enabled by rational molecular design, controlled synthesis and processing (e.g. supramolecular assembly, and microfabrication). This class of specialty materials can find their use in high performance photovoltaics, batteries, membranes, and composites, and can also serve as “smart” materials for use in coatings, sensors, medical devices, and biomimicry.	3.00	19	M 6:00-8:30PM
EN.540.490	01	E		**Chemical Laboratory Safety** *Kuespert, Daniel*	1.00	75	M 1:30-2:45PM

Chemical & Biomolecular Engineering

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course is meant to provide the student with a basic knowledge of laboratory safety; hazards, regulations, personal protective equipment, good laboratory practice, elementary toxicology, and engineering controls. It has been developed by the Department of Chemical and Biomolecular Engineering to assist with regulatory compliance, minimize hazards, and reduce the severity of any incidents that may occur in the department's laboratories. The course is a prerequisite of EN.540.311/EN.540.313. It is required of all Chemical and Biomolecular Engineering undergraduates. In addition once per year a three-hour refresher seminar must be taken by all students involved in laboratory research.			

Civil Engineering

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.270.205	01	EN		**Introduction to Geographic Information Systems and Geospatial Analysis** *Chen, Xin* The course provides a broad introduction to the principles and practice of Geographic Information Systems (GIS) and related tools of Geospatial Analysis. Topics will include history of GIS, GIS data structures, data acquisition and merging, database management, spatial analysis, and GIS applications. In addition, students will get hands-on experience working with GIS software.	3.00	25	M 1:30-4:00PM
EN.560.101	01	E		**Freshman Experiences in Civil Engineering** *Staff* An introduction to civil engineering for first-year students. This course welcomes freshmen to the major by exploring civil engineering design and the range of design projects in which professional civil engineers engage. Students will have the opportunity to practice the design process using hands-on team-based projects, with emphasis on creative design, graphical communication, and teamwork.	1.00	20	T 12:00-12:50PM; Th 12:00-12:50PM
EN.560.201	01	E		**Statics & Mechanics of Materials** *Sangree, Rachel H* Basic principles of classical mechanics applied to the equilibrium of particles and rigid bodies at rest, under the influence of various force systems. In addition, the following topics are studied: free body concept, analysis of simple structures, friction, centroids and centers of gravity, and moments of inertia. Includes laboratory experience. Co-listed with EN.530.201. Recommended Course Background: AS.171.101, or EN.530.103/EN.530.104 or instructor permission.	4.00	8	TTh 10:30-11:45AM; M 4:00-5:50PM
EN.560.201	02	E		**Statics & Mechanics of Materials**	4.00	8	TTh 10:30-11:45AM; M 6:00-7:50PM
EN.560.201	03	E		**Statics & Mechanics of Materials**	4.00	8	TTh 10:30-11:45AM; T 2:00-3:50PM
EN.560.201	04	E		**Statics & Mechanics of Materials**	4.00	8	TTh 10:30-11:45AM; T 4:00-5:50PM
EN.560.201	05	E		**Statics & Mechanics of Materials**	4.00	8	TTh 10:30-11:45AM; W 4:00-5:50PM
EN.560.201	06	E		**Statics & Mechanics of Materials**	4.00	8	TTh 10:30-11:45AM; Th 4:00-5:50PM
EN.560.220	01	E		**Civil Engineering Analysis** *Mitrani-Reiser, Judith* Civil engineering problems are formulated and then solved by numerical methods. Matrix inversion, data fitting and interpolation, root-finding, and solutions of ordinary and partial differential equations are presented. Matlab programming will be introduced to facilitate the solutions. Recommended Course Background: AS.110.106, AS.110.107/AS.110.109	3.00	25	MW 1:30-2:45PM
EN.560.305	01	E		**Soil Mechanics** *de Melo, Lucas T* Basic principles of soil mechanics. Classification of soils. Compaction theory. Consolidation seepage and settlement analysis. Stress-strain and shear strength of soils. Introduction to earth pressure theories and slope stability analysis.	4.00	30	F 10:00-11:00AM; W 4:30-6:00PM; F 1:30-2:20PM

Civil Engineering

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
EN.560.305	02	E		**Soil Mechanics**	4.00	30	W 4:30-6:00PM; F 10:00-11:00AM; F 3:00-3:50PM
EN.560.320	01	E		**Structural Design I** *Sangree, Rachel H* Introduction to structural design using common building materials (structural steel, reinforced concrete, and wood). Emphasis will be placed on the application of solid mechanics principles to the design of structural components (beams, columns, and tension members).	3.00	30	MW 12:00-1:15PM
EN.560.445	01	E		**Advanced Structural Analysis** *Guest, James K* Matrix methods for the analysis of statistically indeterminate structures such as beams, plane and space trusses, and plane and space frames. Stiffness and flexibility methods. Linear elastic analysis and introduction to nonlinear analysis.	3.00	35	MW 3:00-4:15PM
EN.560.451	01	E		**Civil Engineering Design I** *Matteo, John* A study of the engineering design process from problem definition to the final design. There are team projects which include written and oral presentations. Senior only or Permission Required	2.00	40	Th 4:30-6:20PM
EN.560.491	01	E		**Civil Engineering Seminar I** *Sangree, Rachel H* Seminar series of speakers on various aspects of civil engineering. Juniors and Seniors in Civil Engineering are expected to enroll in this sequence; juniors and seniors receive one-half credit. Different speakers are invited each semester. Satisfactory/ Unsatisfactory only	0.50	30	T 12:00-12:50PM
EN.560.492	01	E		**Civil Engineering Seminar II** *Sangree, Rachel H* Seminar series of speakers on various aspects of civil engineering. Juniors and Seniors in Civil Engineering are expected to enroll in this sequence; juniors and seniors receive one-half credit. Different speakers are invited each semester. Satisfactory/ Unsatisfactory only	0.50	25	T 12:00-12:50PM
EN.560.493	01	E		**Civil Engineering Seminar III** *Sangree, Rachel H* Seminar series of speakers on various aspects of civil engineering. Juniors and Seniors in Civil Engineering are expected to enroll in this sequence; juniors and seniors receive one-half credit. Different speakers are invited each semester. Satisfactory/ Unsatisfactory only	0.50	20	T 12:00-12:50PM
EN.560.494	01	E		**Civil Engineering Seminar IV** *Sangree, Rachel H* Seminar series of speakers on various aspects of civil engineering. Juniors and Seniors in Civil Engineering are expected to enroll in this sequence; juniors and seniors receive one-half credit. Different speakers are invited each semester. Satisfactory/ Unsatisfactory only	0.50	20	T 12:00-12:50PM
EN.570.351	01	E		**Introduction To Fluid Mechanics** *Staff*	3.00	35	TTh 10:30-11:45AM

Civil Engineering

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Introduction to the use of the principles of continuity, momentum, and energy to fluid motion. Topics include hydrostatics, ideal-fluid flow, laminar flow, turbulent flow. Recommended Course Background: Statics, Dynamics, and AS.110.302			

Computer Science

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.171.205	01	NQ		**Introduction to Practical Data Science: Beautiful Data** *Szalay, Sandor* The class will provide an overview of data science, with an introduction to basic statistical principles, databases, fundamentals of algorithms and data structures, followed by practical problems in data analytics. Recommend Course Background: Familiarity with principles of computing.	3.00	30	WF 1:30-2:45PM
EN.600.104	01	H		**Computer Ethics** *Kosaraju, Sheela* Students will examine a variety of topics regarding policy, legal, and moral issues related to the computer science profession itself and to the proliferation of computers in all aspects of society, especially in the era of the Internet. The course will cover various general issues related to ethical frameworks and apply those frameworks more specifically to the use of computers and the Internet. The topics will include privacy issues, computer crime, intellectual property law -- specifically copyright and patent issues, globalization, and ethical responsibilities for computer science professionals. Work in the course will consist of weekly assignments on one or more of the readings and a final paper on a topic chosen by the student and approved by the instructor. CS Majors Only - Alternate Weeks	1.00	20	W 6:00-8:00PM
EN.600.104	02	H		**Computer Ethics**	1.00	20	T 6:00-8:00PM
EN.600.105	01			**M & Ms: Freshman Experience** *Hager, Gregory* This course is required for all freshmen Computer Science majors. Transfers into the major and minors may enroll by permission only. Students will attend four 3-week blocks of meetings with different computer science professors, focused on a central theme. Active participation is required. Satisfactory/Unsatisfactory only.	1.00	50	T 4:30-5:20PM
EN.600.107	01	E		**Introductory Programming in Java** *Staff* This course introduces the fundamental programming concepts and techniques in Java and is intended for all who plan to use computer programming in their studies and careers. Topics covered include control structures, arrays, functions, recursion, dynamic memory allocation, simple data structures, files, and structured program design. Elements of object-oriented design and programming are also introduced. Students without prior exposure are strongly advised to also take EN.600.108. Students should be familiar with computers	3.00	150	MW 1:30-2:45PM

Computer Science

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
EN.600.108	01	E		**Introduction to Programming Lab** *Staff* The purpose of this course is to give novice programmers extra hands-on practice with guided supervision. Students will work in pairs each week to develop working programs, with checkpoints for each development phase. Sections 1-3 are for 107 students, sections 4-6 are for 112 students. Satisfactory/Unsatisfactory only	1.00	24	W 6:00-9:00PM
EN.600.108	02	E		**Introduction to Programming Lab**	1.00	24	Th 4:30-7:30PM
EN.600.108	03	E		**Introduction to Programming Lab**	1.00	16	F 1:30-4:20PM
EN.600.112	01	E		**Introductory Programming for Scientists and Engineers** *Staff* An introductory "learning by doing" programming course for scientists, engineers, and everybody else who will need basic programming skills in their studies and careers. We cover the fundamentals of structured, modular, and (to some extent) object-oriented programming as well as important design principles and software development techniques such as unit testing and revision control. We will apply our shiny new programming skills by developing computational solutions to a number of real-world problems from a variety of disciplines. Students new to computer programming are encouraged to enroll into EN.600.113 IPSE Lab concurrently with this course. Students may receive credit for no more than one of the following: EN.600.107 or EN.600.111 or EN.600.112. [Note: This course may not be used for the CS major or minor requirements, except as a substitute for EN.600.107]	3.00	75	MW 3:00-4:15PM
EN.600.113	01	E		**IPSE Lab** *Staff* This course is intended for novice programmers, and must be taken in conjunction with EN.600.112. The purpose of this course is to give first-time programmers hands-on practice with guided supervision. Students may receive credit for EN.600.108 or EN.600.113, but not both. Co-requisite: EN.600.112. Satisfactory/Unsatisfactory only.	1.00	20	W 4:30-7:30PM
EN.600.113	02	E		**IPSE Lab**	1.00	20	Th 6:00-9:00PM
EN.600.113	03	E		**IPSE Lab**	1.00	20	F 3:00-6:00PM
EN.600.120	01	E		**Intermediate Programming** *Staff*	4.00	30	MWF 12:00-1:15PM

Computer Science

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course teaches intermediate to advanced programming, using C and C++. (Prior knowledge of these languages is not expected.) We will cover low-level programming techniques, as well as object-oriented class design, and the use of class libraries. Specific topics include pointers, dynamic memory allocation, polymorphism, overloading, inheritance, templates, collections, exceptions, and others as time permits. Students are expected to learn syntax and some language specific features independently. Course work involves significant programming projects in both languages. Recommended Course Background: EN.600.107 or EN.600.226, EN.600.111/EN.600.112 or equivalent.			
EN.600.120	02	E		**Intermediate Programming**	4.00	30	MWF 1:30-2:45PM
EN.600.120	03	E		**Intermediate Programming** *Amir, Yair*	4.00	30	TThF 3:00-4:15PM
EN.600.120	04	E		**Intermediate Programming**	4.00	30	MWF 4:30-5:45PM
EN.600.226	01	EQ		**Data Structures** *Staff* This course covers the design and implementation of data structures including collections, sequences, trees, and graphs. Other topics include sorting, searching, and hashing. Course work involves both written homework and Java programming assignments. Recommended Course Background: EN.600.107 or EN.600.120 or equivalent.	4.00	60	MWF 12:00-1:15PM
EN.600.226	02	EQ		**Data Structures**	4.00	60	MWF 1:30-2:45PM
EN.600.233	01	E		**Computer System Fundamentals** *Froehlich, Peter* CSF addresses the design and performance of the principal operational components of a reduced-instruction-set computing system (RISC) which supports the efficient execution of widely used instruction sets. Arithmetic and logic units, memory hierarchy designs, state-machine controllers, and other related hardware and firmware components are studied, and the qualities of their combined processing capabilities are assessed by means of execution times associated with a range of benchmark programs. Assembly language programming projects, homework problems, and exams are employed to assess a student's fundamental understanding of the tradeoffs resulting from an assortment of variations in digital system design decisions that ultimately characterize the performance of the computing system architecture that is developed. Students may receive credit for only one of EN.600.233, EN.600.333 or EN.600.433.	3.00	45	MWF 10:00-10:50AM
EN.600.233	02	E		**Computer System Fundamentals**	3.00	30	MWF 10:00-10:50AM
EN.600.255	01	E		**Introduction to Video Game Design** *Froehlich, Peter*	3.00	20	MW 4:30-5:45PM

Computer Science

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				A broad survey course in video game design (as opposed to mathematical game theory), covering artistic, technical, as well as sociological aspects of video games. Students will learn about the history of video games, archetypal game styles, computer graphics and programming, user interface and interaction design, graphical design, spatial and object design, character animation, basic game physics, plot and character development, as well as psychological and sociological impact of games. Students will design and implement an experimental video game in interdisciplinary teams of 3-4 students as part of a semester-long project. Section 1 requires technical skills, including at least one programming course (preferably 2 or more). Section 2 requires artistic skills, including at least one multimedia course (preferably 2 or more). Open to sophomores and above.			
EN.600.255	02	E		**Introduction to Video Game Design**	3.00	20	MW 4:30-5:45PM
EN.600.256	01			**Introduction to Video Game Design Lab** *Froehlich, Peter* A lab course in support of 600.255: Introduction to Video Game Design covering a variety of multi-media techniques and applications from image processing, through sound design, to 3D modeling and animation. See 600.255: Introduction to Video Game Design for details about enrolling.	1.00	12	M 6:00-9:00PM
EN.600.256	02			**Introduction to Video Game Design Lab**	1.00	12	T 6:00-9:00PM
EN.600.256	03			**Introduction to Video Game Design Lab**	1.00	12	W 6:00-9:00PM
EN.600.256	04			**Introduction to Video Game Design Lab**	1.00	12	Th 6:00-9:00PM
EN.600.271	01	EQ		**Automata & Computation Theory** *More, Sara K* This course is an introduction to the theory of computing. topics include design of finite state automata, pushdown automata, linear bounded automata, Turing machines and phrase structure grammars; correspondence between automata and grammars; computable functions, decidable and undecidable problems, P and NP problems, NP-completeness, and randomization. Students may not receive credit for EN.600.271 and EN.600.471 for the same degree.	3.00	75	TTh 1:30-2:45PM
EN.600.315	01	E		**Databases** *Yarowsky, David* Introduction to database management systems and database design, focusing on the relational and object-oriented data models, query languages and query optimization, transaction processing, parallel and distributed databases, recovery and security issues, commercial systems and case studies, heterogeneous and multimedia databases, and data mining. [Systems] (www.cs.jhu.edu/~yarowsky/cs415.html) Students may receive credit for EN.600.315 or EN.600.415, but not both.	3.00	30	TTh 3:00-4:15PM
EN.600.321	01	E		**Object Oriented Software Engineering** *Smith, Scott F*	3.00	40	MW 1:30-2:45PM

Computer Science

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course covers object-oriented software construction methodologies and their application. The main component of the course is a large team project on a topic of your choosing. Course topics covered include object-oriented analysis and design, UML, design patterns, refactoring, program testing, code repositories, team programming, and code reviews. [Systems or Applications] (http://pl.cs.jhu.edu/oose/index.shtml) Students may receive credit for EN.600.321 or EN.600.421, but not both.			
EN.600.335	01	E	W	**Artificial Intelligence** *Koehn, Philipp* The course situates the study of Artificial Intelligence (AI) first in the broader context of Philosophy of Mind and Cognitive Psychology and then treats in-depth methods for automated reasoning, automatic problem solvers and planners, knowledge representation mechanisms, game playing, machine learning, and statistical pattern recognition. The class is a recommended for all scientists and engineers with a genuine curiosity about the fundamental obstacles to getting machines to perform tasks such as deduction, learning, and planning and navigation. Strong programming skills and a good grasp of the English language are expected; students will be asked to complete both programming assignments and writing assignments. The course will include a brief introduction to scientific writing and experimental design, including assignments to apply these concepts. [Applications] Prereq: 600.226, 550.171; Recommended: linear algebra, prob/stat. Students can only receive credit for 600.335 or 600.435, not both.	3.00	30	TTh 1:30-2:45PM
EN.600.357	01	EQ		**Computer Graphics** *Kazhdan, Michael* This course introduces computer graphics techniques and applications, including image processing, rendering, modeling and animation. [Applications] Students may receive credit for EN.600.357 or EN.600.457, but not both. No Audits.	3.00	20	MWF 11:00-11:50AM
EN.600.363	01	EQ		**Introduction to Algorithms** *Dinitz, Michael H* This course concentrates on the design of algorithms and the rigorous analysis of their efficiency. topics include the basic definitions of algorithmic complexity (worst case, average case); basic tools such as dynamic programming, sorting, searching, and selection; advanced data structures and their applications (such as union-find); graph algorithms and searching techniques such as minimum spanning trees, depth-first search, shortest paths, design of online algorithms and competitive analysis. [Analysis] Students may receive credit for EN.600.363 or EN.600.463, but not both.	3.00	30	TTh 1:30-2:45PM
EN.600.415	01	E		**Databases**	3.00	40	TTh 3:00-4:15PM

Computer Science

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Yarowsky, David Graduate level version of EN.600.315 [Systems]. Students may receive credit for EN.600.315 or EN.600.415, but not both. Recommended Course Background: EN.600.226			
EN.600.421	01	E		**Object Oriented Software Engineering** *Smith, Scott F* Graduate level version of EN.600.321 [Systems or Applications]. Students may receive credit for EN.600.321 or EN.600.421, but not both. Recommended Course Background: EN.600.226 and EN.600.120	3.00	40	MW 1:30-2:45PM
EN.600.435	01	E	W	**Artificial Intelligence** *Koehn, Philipp* Students may receive credit for EN.600.335 or EN.600.435, not both. Graduate level version of EN.600.335 [Applications]. Prerequisite: EN.600.226, EN.550.171; Recommended: linear algebra, prob/stat.	3.00	30	TTh 1:30-2:45PM
EN.600.439	01	E		**Computational Genomics** *Langmead, Benjamin* Your genome is the blueprint for the molecules in your body. It's also a string of letters (A, C, G and T) about 3 billion letters long. How does this string give rise to you? Your heart, your brain, your health? This, broadly speaking, is what genomics research is about. This course will familiarize you with a breadth of topics from the field of computational genomics. The emphasis is on current research problems, real-world genomics data, and efficient software implementations for analyzing data. Topics will include: string matching, sequence alignment and indexing, assembly, and sequence models. Course will involve significant programming projects. [Applications]	3.00	20	TTh 12:00-1:15PM
EN.600.442	01	EQ		**Modern Cryptography** *Jain, Abhishek* This course focuses on cryptographic algorithms, formal definitions, hardness assumptions, and proofs of security. Topics include number-theoretic problems, pseudo-randomness, block and stream ciphers, public-key cryptography, message authentication codes, and digital signatures. Recommended Course Background: EN.600.226 and a 300-level or above systems course; EN.600.271/EN.600.471 and EN.550.171 or equivalent.	3.00	30	MW 1:30-2:45PM

Computer Science

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
EN.600.443	01	E		**Security & Privacy in Computing** *Rubin, Aviel D* Lecture topics will include computer security, network security, basic cryptography, system design methodology, and privacy. There will be a heavy work load, including written homework, programming assignments, exams and a comprehensive final. The class will also include a semester-long project that will be done in teams and will include a presentation by each group to the class. [Applications] Prerequisite: A basic course in operating systems and networking, or permission of instructor.	3.00	45	TTh 9:00-10:15AM
EN.600.445	01	E		**Computer Integrated Surgery I** *Taylor, Russell H* This course focuses on computer-based techniques, systems, and applications exploiting quantitative information from medical images and sensors to assist clinicians in all phases of treatment from diagnosis to preoperative planning, execution, and follow-up. It emphasizes the relationship between problem definition, computer-based technology, and clinical application and includes a number of guest lectures given by surgeons and other experts on requirements and opportunities in particular clinical areas. Required Course Background: AS.110.201 or permission of instructor. Recommended Course Background: EN.600.120, EN.600.457, EN.600.461, image processing.	4.00	30	TTh 1:30-2:45PM
EN.600.457	01	EQ		**Computer Graphics** *Kazhdan, Michael* Graduate level version of EN.600.357. Students may receive credit for EN.600.357 or EN.600.457, but not both. Recommended Course Background: EN.600.120, EN.600.226, AS.110.201 or instructor permission.	3.00	35	MWF 11:00-11:50AM
EN.600.460	01	E		**Software Vulnerability Analysis** *Checkoway, Stephen F* This course will examine vulnerabilities in C source, stack overflows, writing shell code, etc. Also, vulnerabilities in web applications: SQL Injection, cookies, as well as vulnerabilities in C binary fuzzing, and exploit development without source among other topics. Co-listed with EN.650.460	3.00	40	TTh 1:30-2:45PM

Computer Science

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
EN.600.461	01	EQ		**Computer Vision** *Vidal, Rene* This course gives an overview of fundamental methods in computer vision from a computational perspective. Methods studied include: camera systems and their modelling, computation of 3-D geometry from binocular stereo, motion, and photometric stereo; and object recognition. Edge detection and color perception are covered as well. Elements of machine vision and biological vision are also included. Students may receive credit for at most one of EN.600.361 or EN.600.461 or EN.600.661. [Applications] Prerequisites (soft): intro programming, linear algebra, and prob/stat.	3.00	20	MW 12:00-1:15PM
EN.600.463	01	EQ		**Algorithms I** *Dinitz, Michael H* Graduate version of EN.600.363 [Analysis] Students may receive credit for EN.600.363 or EN.600.463, but not both. Recommended Course Background: EN.600.226 and EN.550.171 or instructor permission required.	3.00	30	TTh 1:30-2:45PM
EN.600.464	01	EQ		**Randomized Algorithms** *Braverman, Vladimir* The course emphasizes algorithmic design aspects, and how randomization can be a helpful tool. The topics covered include: tail inequalities, linear programming relaxation & randomized rounding, de-randomization, existence proofs, universal hashing, markov chains, metropolis and metropolis-hastings methods, mixing by coupling and by eigenvalues, counting problems, semi-definite programming and rounding, lower bound arguments, and applications of expanders. [Analysis] (www.cs.jhu.edu/~cs464) Recommended Course Background: EN.600.363 or EN.600.463.	3.00	20	TTh 9:00-10:15AM
EN.600.471	01	EQ		**Theory of Computation** *Li, Xin* This is a graduate-level course studying the theoretical foundations of computer science. Topics covered will be models of computation from automata to Turing machines, computability, complexity theory, randomized algorithms, inapproximability, interactive proof systems and probabilistically checkable proofs. Students may not take both EN.600.271 and EN.600.471, unless one is for an undergrad degree and the other for grad. [Analysis]Recommended Course Background: EN.550.171 or istructor permission.	3.00	40	TTh 12:00-1:15PM
EN.600.475	01	E		**Introduction to Machine Learning** *Staff*	3.00	75	TBA

Computer Science

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course takes an application driven approach to current topics in machine learning. The course covers supervised learning (classification/structured prediction/regression/ranking), unsupervised learning (dimensionality reduction, bayesian modeling, clustering) and semi-supervised learning. Additional topics may include reinforcement learning and learning theory. The course will also consider challenges resulting from learning applications, such as transfer learning, multi-task learning and large datasets. We will cover popular algorithms (naive Bayes, SVM, perceptron, HMM, winnow, LDA, k-means, maximum entropy) and will focus on how statistical learning algorithms are applied to real world applications. Students in the course will implement several learning algorithms and develop a learning system for a final project. [Applications] Recommended Course Background: multivariate calculus.			
EN.600.479	01	E		**Representation Learning** *Arora, Raman* Often the success of a machine learning project depends on the choice of features used. Machine learning has made great progress in training classification, regression and recognition systems when "good" representations, or features, of input data are available. However, much human effort is spent on designing good features which are usually knowledge-based and engineered by domain experts over years of trial and error. A natural question to ask then is "Can we automate the learning of useful features from raw data?" Representation learning algorithms such as principal component analysis aim at discovering better representations of inputs by learning transformations of data that disentangle factors of variation in data while retaining most of the information. The success of such data-driven approaches to feature learning depends not only on how much data we can process but also on how well the features that we learn correlate with the underlying unknown labels (semantic content in the data). This course will focus on scalable machine learning approaches for learning representations from large amounts of unlabeled, multi-modal, and heterogeneous data. We will cover topics including deep learning, multi-view learning, dimensionality reduction, similarity-based learning, and spectral learning. Students may receive credit for 600.479 or 600.679 but not both. [Analysis or Applications] Required course background: machine learning or basic probability and linear algebra.	3.00	20	TTh 3:00-4:15PM
EN.600.491	01	E		**Computer Science Workshop I** *Staff*			None

Computer Science

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				An applications-oriented, computer science project done under the supervision and with the sponsorship of a faculty member in the Department of Computer Science. Computer Science Workshop provides a student with an opportunity to apply theory and concepts of computer science to a significant project of mutual interest to the student and a Computer Science faculty member. Permission to enroll in CSW is granted by the faculty sponsor after his/her approval of a project proposal from the student. Interested students are advised to consult with Computer Science faculty members before preparing a Computer Science Workshop project proposal.			
EN.600.491	05	E		**Computer Science Workshop I** *Smith, Scott F*			None
EN.600.491	06	E		**Computer Science Workshop I** *Selinski, Joanne F*			None
EN.600.491	13	E		**Computer Science Workshop I** *Yarowsky, David*			None
EN.600.491	28	E		**Computer Science Workshop I** *Froehlich, Peter*			None

Electrical & Computer Engineering

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
EN.520.137	01	EQ		**Introduction To Electrical & Computer Engineering** *Tran, Trac Duy* An introductory course covering the principles of electrical engineering including sinusoidal wave forms, electrical measurements, digital circuits, and applications of electrical and computer engineering. Laboratory exercises, the use of computers, and a design project are included in the course.	3.00	60	MWF 12:00-12:50PM
EN.520.211	01	E		**ECE Engineering Team Project** *Etienne Cummings, Ralph* This course introduces the student to the basics of engineering team projects. The student will become a member of and participate in the different aspects of an ECE team project over several semesters. Permission of the instructor is required for Freshmen and new team members. (Freshmen and Sophomores)	1.00	6	W 4:30-5:45PM
EN.520.211	02	E		**ECE Engineering Team Project**	1.00	6	W 4:30-5:45PM
EN.520.211	03	E		**ECE Engineering Team Project**	1.00	6	W 4:30-5:45PM
EN.520.211	04	E		**ECE Engineering Team Project**	1.00	6	W 4:30-5:45PM
EN.520.213	01	E		**Circuits** *Weinert, Howard L* An introductory course on electric circuits covers analysis techniques in time and frequency domains, transient and steady state response, and operational amplifiers.	4.00	80	TTh 1:30-2:45PM; Th 3:00-3:50PM
EN.520.219	01	EN		**Fields,Matter & Waves** *Foster, Mark A* Vector analysis, electrostatic fields in vacuum and material media, stationary currents in conducting media, magnetostatic fields in vacuum and material media. Maxwell's equations and time-dependent electric and magnetic fields, electromagnetic waves and radiation, transmission lines, wave guides, applications.	3.00	50	MW 3:00-4:15PM
EN.520.270	01	E		**Introduction to Renewable Energy Engineering** *Thon, Susanna* This course provides an introduction to the science and engineering of renewable energy technologies. The class will begin with an overview of today's energy landscape and proceed with an introduction to thermodynamics and basic heat engines. Specific technologies to be discussed include photovoltaics, fuel cells and hydrogen, biomass, wind power and energy storage. The class should be accessible to those from a variety of science and engineering disciplines. Recommended Course Background: Introductory Physics and Calculus.	3.00	49	TTh 9:00-10:15AM
EN.520.345	01	E		**Electrical & Computer Engineering Laboratory** *Foster, Amy C*	3.00	30	Th 1:00-3:50PM; W 1:30-2:20PM

Electrical & Computer Engineering

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course consists of 11 one-week laboratory experiments intended to provide an introduction to analog and digital circuits commonly used in engineering. Topics include phase and frequency response, transistors, operational amplifiers, filters, and other analog circuits.The experiments are done using computer controlled digital oscilloscopes, function generators, and power supplies.			
EN.520.345	02	E		**Electrical & Computer Engineering Laboratory**	3.00	30	F 1:00-3:50PM; W 1:30-2:20PM
EN.520.345	03	E		**Electrical & Computer Engineering Laboratory**	3.00	30	W 1:30-2:20PM; F 9:00-11:50AM
EN.520.349	01	E		**Microprocessor Lab I** *Glaser, Robert E* This course introduces the student to the programming of microprocessors at the machine level. 68HC08, 8051, and eZ8 microcontrollers are programmed in assembly language for embedded control purposes. The architecture, instruction set, and simple input/output operations are covered for each family. Upon completion, students can use these flash-based chips as elements in other project courses. Recommended Course Background: EN.520.142 or equivalent.	3.00	20	Th 8:00-8:50AM; Th 10:30AM-1:20PM
EN.520.349	02	E		**Microprocessor Lab I**	3.00	20	Th 8:00-8:50AM; Th 1:30-4:20PM
EN.520.391	01	E		**CAD Design of Digital VLSI Systems I (Juniors)** *Etienne Cummings, Ralph* An introductory course in which students, manually and through computer simulations, design digital CMOS integrated circuits and systems. The design flow covers transistor, physical, and behavioral level descriptions, using SPICE, Layout, and VerilogHD1 VLSI CAD tools. After design computer verification, students can fabricate and test their semester-long class projects. Juniors Only. Recommended Course Background: EN.520.142, EN.520.216 or equivalent; Corequisite: EN600.333, EN.600.334, EN.520.349 or EN.520.372	3.00	10	MW 3:00-4:15PM
EN.520.407	01	E		**Introduction to the Physics of Electronic Devices** *Khurgin, Jacob* This course is designed to develop and enhance the understanding of the basic physical processes taking place in the electronic and optical devices and to prepare students for taking classes in semiconductor devices and circuits, optics, lasers, and microwaves devices, as well as graduate courses. Both classical and quantum approaches are used. Specific topics include theory of molecular bonding; basics of solid state theory; mechanical, transport, magnetic, and optical properties of the metals; semiconductors; and dielectrics.	3.00	25	MW 1:30-2:45PM
EN.520.414	01	E		**Image Processing & Analysis** *Goutsias, John I*	3.00	50	MW 4:30-5:45PM

Electrical & Computer Engineering

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				The course covers fundamental methods for the processing and analysis of images and describes standard and modern techniques for the understanding of images by humans and computers. Topics include elements of visual perception, sampling and quantization, image transforms, image enhancement, color image processing, image restoration, image segmentation, and multiresolution image representation. Laboratory exercises demonstrate key aspects of the course.			
EN.520.424	01	EQ		**FPGA Synthesis Lab** *Staff* An advanced laboratory course in the application of FPGA technology to information processing, using VHDL synthesis methods for hardware development. The student will use commercial CAD software for VHDL simulation and synthesis, and implement their systems in programmable XILINX 20,000 gate FPGA devices. The lab will consist of a series of digital projects demonstrating VHDL design and synthesis methodology, building up to final projects at least the size of an 8-bit RISC computer. Projects will encompass such things as system clocking, flip-flop registers, state-machine control, and arithmetic. The students will learn VHDL methods as they proceed through the lab projects, and prior experience with VHDL is not a prerequisite.	3.00	13	TBA; TBA
EN.520.424	02	EQ		**FPGA Synthesis Lab**	3.00	13	TBA; TBA
EN.520.427	01	E		**Product Design Lab** *Pouliquen, Philippe O* This project-based course is designed to help students learn how to turn their ideas into commercial products. In the first half of the course, emphasis will be placed on the product development process: student teams will gradually build up a complete "contract book" including a mission statement, competitive analysis, patent review, product specifications, system schematics, economic analysis, development schedule, etc. In the second half of the course, each team will be expected to implement its design and demonstrate a prototype of their product's core functionality. At the end of the semester, a final written report will be submitted in the form of a utility patent. Students are encouraged to take this course in conjunction with Electronic Design Lab (ECE 520.448) in the Spring semester and leverage the groundwork developed here to enable production of a fully functional and marketable prototype by the end of the academic year.	3.00	25	Th 1:30-2:20PM; TBA

Electrical & Computer Engineering

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
EN.520.432	01	E		**Medical Imaging Systems** *Prince, Jerry Ladd* An introduction to the physics, instrumentation, and signal processing methods used in general radiography, X-ray computed tomography, ultrasound imaging, magnetic resonance imaging, and nuclear medicine. The primary focus is on the methods required to reconstruct images within each modality, with emphasis on the resolution, contrast, and signal-to-noise ratio of the resulting images. Co-listed as EN.580.472	3.00	60	MWF 10:00-10:50AM
EN.520.435	01	E		**Digital Signal Processing** *Weinert, Howard L* Methods for processing discrete-time signals. Topics include signal and system representations, z- transforms, sampling, discrete Fourier transforms, fast Fourier transforms, digital filters.	3.00	40	TTh 10:30-11:45AM
EN.520.445	01	E		**Audio Signal Processing** *Elhilali, Mounya* This course gives a foundation in current audio and speech technologies, and covers techniques for sound processing by processing and pattern recognition, acoustics, auditory perception, speech production and synthesis, speech estimation. The course will explore applications of speech and audio processing in human computer interfaces such as speech recognition, speaker identification, coding schemes (e.g. MP3), music analysis, noise reduction. Students should have knowledge of Fourier analysis and signal processing.	3.00	40	TTh 10:30-11:45AM
EN.520.452	01	E		**Advanced ECE Engineering Team Project** *Etienne Cummings, Ralph* This course introduces the student to running an ECE engineering team project. The student will participate in the team project as a leading member and is expected to manage both the team members and the different aspects of the project over several semesters. Permission of the instructor is required for new team members. (Junior and Seniors)	3.00	6	Th 4:30-5:45PM
EN.520.452	02	E		**Advanced ECE Engineering Team Project**	3.00	6	Th 4:30-5:45PM
EN.520.452	03	E		**Advanced ECE Engineering Team Project**	3.00	6	Th 4:30-5:45PM
EN.520.452	04	E		**Advanced ECE Engineering Team Project**	3.00	6	Th 4:30-5:45PM
EN.520.454	01	EN		**Control Systems Design** *Iglesias, Pablo A* Classical and modern control systems design methods. Topics include formulation of design specifications, classical design of compensators, state variable and observer based feedback. Computers are used extensively for design, and laboratory experiments are included. Prerequisite: EN.520.353, AS.110.201	3.00	24	MWF 11:00-11:50AM
EN.520.459	01	EQ		**Quantum Mechanics for Engineering** *Schlesinger, T.E.*	3.00	49	MWF 8:30-9:45AM

Electrical & Computer Engineering

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course will describe some of the basic ideas in and early development of quantum mechanics. This course is intended for students without any previous background in this subject. A description of some of the fundamental ideas in Quantum Mechanics will be offered from a practical point of view and from a perspective that should be useful to engineers who want to understand how these concepts manifest in materials and devices. Topics include the Schrodinger Wave Equation and the concept of a wave function, quantization in atoms and engineered semiconductor heterostructures, the interaction of radiation and atomic systems, and examples of the application of quantum theory in lasers and electronic solid-state devices. Recommended background for this course includes freshmen-year physics (including fundamentals of electricity and magnetism) and sophomore-year mathematics (including partial derivatives, basic differential equations, and fundamentals of linear algebra).			
EN.520.491	01	E		**CAD Design of Digital VLSI Systems I (Seniors/Grads)** *Etienne Cummings, Ralph* Seniors and Graduate Students Only	3.00	20	MW 3:00-4:15PM
EN.520.495	01	EN		**Microfabrication Laboratory** *Andreou, Andreas* This laboratory course is an introduction to the principles of microfabrication for microelectronics, sensors, MEMS, and other synthetic microsystems that have applications in medicine and biology. Course comprises of laboratory work and accompanying lectures that cover silicon oxidation, aluminum evaporation, photoresist deposition, photolithography, plating, etching, packaging, design and analysis CAD tools, and foundry services. Seniors only or Perm. Req'd. Co-listed as EN.580.495 & EN.530.495	4.00	4	W 1:30-2:20PM; Th 1:00-4:50PM
EN.520.495	02	EN		**Microfabrication Laboratory**	4.00	4	W 1:30-2:20PM; Th 5:00-8:50PM
EN.520.495	03	EN		**Microfabrication Laboratory**	4.00	4	W 1:30-2:20PM; F 8:00-11:50AM
EN.520.495	04	EN		**Microfabrication Laboratory**	4.00	4	W 1:30-2:20PM; F 1:00-4:50PM
EN.520.495	05	EN		**Microfabrication Laboratory**	4.00	4	Th 8:00-11:50AM; W 1:30-2:20PM
EN.520.498	01	E		**Senior Design Project** *Prince, Jerry Ladd* Capstone design project, in which a team of students engineers a system and evaluates its performance in meeting design criteria and specifications. Example application areas are micro-electronic information processing, image processing, speech recognition, control, communications, and biomedical instrumentation. The design needs to demonstrate creative thinking and experimental skills, and needs to draw upon knowledge in basic sciences, mathematics, and engineering sciences. Interdisciplinary participation, such as by biomedical engineering, mechanical engineering, and computer science majors, is strongly encouraged. Instructor permission required.	3.00	10	None

Electrical & Computer Engineering

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
EN.520.498	02	E		**Senior Design Project** *Elhilali, Mounya*	3.00	10	None
EN.520.498	04	E		**Senior Design Project** *Andreou, Andreas*	3.00	10	None
EN.520.498	05	E		**Senior Design Project** *Etienne Cummings, Ralph*	3.00	10	None
EN.520.498	06	E		**Senior Design Project** *Tran, Trac Duy*	3.00	10	None
EN.520.498	08	E		**Senior Design Project** *West, James E*	3.00	10	None
EN.520.498	09	E		**Senior Design Project** *Vidal, Rene*	3.00	10	None
EN.580.472	01	E		**Medical Imaging Systems** *Prince, Jerry Ladd* An introduction to the physics, instrumentation, and signal processing methods used in general radiography, X-ray computed tomography, ultrasound imaging, magnetic resonance imaging, and nuclear medicine. The primary focus is on the methods required to reconstruct images within each modality, with emphasis on the resolution, contrast, and signal-to-noise ratio of the resulting images. Cross-listed with Neuroscience and Electrical and Computer Engineering (EN.520.432).	3.00	30	MWF 10:00-10:50AM
EN.580.483	01	E		**Nuclear Medicine Imaging** *Frey, Eric* This course provides an intermediate-level introduction to the instrumentation, image processing and reconstruction methods used in planar nuclear medicine imaging, single-photon emission computed tomography (SPECT) and positron emission tomography (PET). Topics include radioactive decay, nuclear medicine instrumentation including radiation detectors and associated electronics, analytic and statistical iterative tomographic reconstruction, imaging physics, and image quality in the context of these three modalities. This course will be taught at the School of Medicine Campus. Recommended Course Background: EN.520.432/EN.580.472 and EN.520.434/EN.580.473	3.00	10	TTh 10:30-11:45AM

Entrepreneurship and Management

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
EN.660.105	01	S	W	**Introduction to Business** *Aronhime, Lawrence* This course is designed as an introduction to the terms, concepts, and values of business and management. The course comprises three broad categories: the economic, financial, and corporate context of business activities; the organization and management of business enterprises; and, the marketing and production of goods and services. Topic specific readings, short case studies and financial exercises all focus on the bases for managerial decisions as well as the long and short-term implications of those decisions in a global environment. No audits.	4.00	19	MWF 12:00-12:50PM; T 1:30-2:20PM
EN.660.105	02	S	W	**Introduction to Business**	4.00	19	MWF 12:00-12:50PM; T 1:30-2:20PM
EN.660.105	03	S	W	**Introduction to Business**	4.00	19	MWF 12:00-12:50PM; T 3:00-3:50PM
EN.660.105	04	S	W	**Introduction to Business**	4.00	19	MWF 12:00-12:50PM; W 3:00-3:50PM
EN.660.105	05	S	W	**Introduction to Business**	4.00	19	MWF 12:00-12:50PM; Th 1:30-2:20PM
EN.660.105	06	S	W	**Introduction to Business**	4.00	19	MWF 12:00-12:50PM; Th 3:00-3:50PM
EN.660.105	07	S	W	**Introduction to Business**	4.00	19	MWF 12:00-12:50PM; M 1:30-2:20PM
EN.660.105	08	S	W	**Introduction to Business**	4.00	19	MWF 12:00-12:50PM; W 3:00-3:50PM
EN.660.203	01			**Financial Accounting** *Aronhime, Lawrence* The course in Financial Accounting is designed for anyone who could be called upon to analyze and/or communicate financial results and/or make effective financial decisions in a for-profit business setting. No prior accounting knowledge or skill is required for successful completion of this course. Because accounting is described as the language of business, this course emphasizes the vocabulary, methods, and processes by which all business transactions are communicated. The accounting cycle, basic business transactions, internal controls, and preparation and understanding of financial statements including balance sheets, statements of income and cash flows are covered. No audits.	3.00	40	MWF 10:00-10:50AM
EN.660.203	02			**Financial Accounting** *Leps, Annette*	3.00	35	MW 12:00-1:15PM
EN.660.203	03			**Financial Accounting** *Aronhime, Lawrence*	3.00	40	TTh 10:30-11:45AM
EN.660.203	04			**Financial Accounting** *Furlong, Sean T*	3.00	19	TTh 4:30-5:45PM
EN.660.203	05			**Financial Accounting** *Staff*	3.00	19	M 3:00-5:45PM
EN.660.250	01			**Principles of Marketing** *Kendrick, Leslie*	3.00	38	MW 12:00-1:15PM

Entrepreneurship and Management

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course explores the role of marketing in society and within the organization. It examines the process of developing, pricing, promoting and distributing products to consumer and business markets and shows how marketing managers use the elements of the marketing mix to gain a competitive advantage. Through interactive, application-oriented exercises, case videotapes, a guest speaker (local marketer), and a group project, students will have ample opportunity to observe key marketing concepts in action. The group project requires each team to research the marketing plan for an existing product of its choice. Teams will analyze what is currently being done by the organization, choose one of the strategic growth alternatives studied, and recommend why this alternative should be adopted. The recommendations will include how the current marketing plan will need to be modified in order to implement this strategy and will be presented to the instructor in written form and presented to the class. No audits.			
EN.660.250	02			**Principles of Marketing** *Quesenberry, Keith A*	3.00	19	TTh 10:30-11:45AM
EN.660.250	03			**Principles of Marketing** *DeVries, Marci*	3.00	19	TTh 10:30-11:45AM
EN.660.250	04			**Principles of Marketing**	3.00	35	TTh 12:00-1:15PM
EN.660.250	05			**Principles of Marketing** *Furst, Mary E*	3.00	35	TTh 9:00-10:15AM
EN.660.250	06			**Principles of Marketing** *Graham, Robert M.*	3.00	19	MW 1:30-2:45PM
EN.660.308	01	S		**Business Law I** *Fisher, David* This course is designed to provide students an introduction to legal reasoning and analysis. Content distinguishes forms of business, civil versus criminal law, and agency principles; intellectual property concepts, contract Law, the UCC (Uniform Commercial Code) and consumer protection are explored and discussed in the context of assigned legal cases which are intended to develop a student's ability to analyze and apply law. Note: not open to students who have taken 660.205 Business Law I. No audits.	3.00	19	M 6:15-9:00PM
EN.660.308	02	S		**Business Law I** *Rakes, William Bryan*	3.00	19	W 6:15-9:00PM
EN.660.308	03	S		**Business Law I** *Staff*	3.00	19	W 6:15-9:00PM
EN.660.310	01	H		**Case Studies in Business Ethics** *Sandhaus, Douglas*	3.00	30	T 6:15-9:00PM

Entrepreneurship and Management

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course is designed as a workshop using case studies to introduce students to the ethical concepts that are relevant to resolve moral issues in contemporary business and social settings—both global and personal in nature. Students will learn the reasoning and analytical skills needed to apply ethical concepts to their own decision-making, to identify moral issues involved in the management of specific problem areas in business and society, and to understand the social and natural environments which give rise to moral issues. The course focus is on performance articulated by clear reasoning and effective verbal and written communication concerning ethical issues in business and society. Not open to students who have taken EN.660.231 Case Studies in Business Ethics. No audits.			
EN.660.311	01	S		**Law and the Internet** *Franceschini, Mark* Sometimes called “Cyber law,” this course uses the case study method to examine some of the most significant and compelling legal aspects, issues, and concerns involved with operating a business enterprise in an Internet environment. Some of the issues likely to be covered include jurisdiction, resolution of online disputes, trademarks, copyright, licenses, privacy, defamation, obscenity, the application of traditional concepts of tort liability to an Internet context, computer crime, information security, taxation, international considerations, and an analysis of other recent litigation and/or statutes. Note: not open to students who have taken EN.660.306 Law and the Internet. No audits.	3.00	30	W 6:15-9:00PM
EN.660.331	01			**Leading in Teams** *Smedick, William D* This course will allow students to develop the analytical skills needed to effectively lead and work in teams. Students will learn tools and techniques for problem solving, decision-making, conflict resolution, task management, communications, and goal alignment in team settings. They will also learn how to measure team dynamics and performance, and assess methods for building and sustaining high-performance teams. Students will also explore their own leadership, personality and cognitive styles and learn how these may affect their performance in a team. The course will focus on team-based experiential projects and exercises as well as provide opportunities to individually reflect and write about the concepts explored and skills gained throughout the course. No Audits.	3.00	24	TTh 4:00-5:15PM
EN.660.332	01		W	**Leadership Theory** *Smedick, William D*	3.00	30	MW 2:00-3:15PM

Entrepreneurship and Management

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Students will be introduced to the history of Leadership Theory from the "Great Man" theory of born leaders to Transformational Leadership theory of non-positional learned leadership. Transformational Leadership theory postulates that leadership can be learned and enhanced. The course will explore the knowledge base and skills necessary to be an effective leader in a variety of settings. Students will assess their personal leadership qualities and develop a plan to enhance their leadership potential. Recommended Course Background: EN.660.105 or EN.660.220/EN.660.340. No audits.			
EN.660.332	02		W	**Leadership Theory**	3.00	30	TTh 2:00-3:15PM
EN.660.335	01			**Negotiation and Conflict Resolution** *Rice, Eric* The focus of this class is the nature and practice of conflict resolution and negotiation within and between individuals and organizations. The primary format for learning in this class is structured experimental exercises designed to expose students to different aspects of negotiation and to build tangible skills through interpersonal exchange. While some class time is devoted to presentations on theories and approaches, the class method primarily relies on feedback from fellow classmates on their observations of negotiation situations and on personal reflections by students after each structured experience. Topics include conflict style, negotiation, and group conflict. No audits. Recommended Course Background: EN.660.105, an additional course in the Entrepreneurship and Management Program or in the social sciences.	3.00	24	T 3:00-5:45PM
EN.660.340	01			**Principles of Management** *Reiter, Joshua* This course introduces the student to the management process. The course takes an integrated approach to management by examining the role of the manager from a traditional and contemporary perspective while applying decision-making and critical-thinking skills to the challenges facing managers in today's globally diverse environment. The course examines the techniques for controlling, planning, organizing resources and leading the workforce. Not open to students who have taken EN.660.220 Principles of Management. No audits.	3.00	35	M 1:30-4:15PM
EN.660.355	01			**Sports Marketing** *Kendrick, Leslie* This course will allow students to apply marketing principles and concepts to the sports marketing environment while gaining an understanding of how event sponsorships, endorsements, licensing and naming rights are used to achieve business objectives. Through case studies and a group project, students will be exposed to a broad range of sports entities including professional sports teams, governing organizations and sports media.	3.00	38	TTh 12:00-1:15PM
EN.660.357	01		W	**Copywriting and Creative Strategy**	3.00	19	MW 12:00-1:15PM

Entrepreneurship and Management

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Quesenberry, Keith A Uncover the process of creative thinking for innovation and conceiving "big ideas" in marketing. Students will be exposed to creative theory and practice as they select a consumer product and determine strategic market positioning, target demographics, media vehicles and creative guidelines. Then students will learn the craft of advertising copywriting for print, broadcast and digital media as they develop finished creative executions for the chosen organization that all build to a complete integrated marketing campaign. No audits.			
EN.660.358	01			**International Marketing** *Kendrick, Leslie* This course covers product, pricing, promotion, distribution, market research, organization and implementation and control policies relating to international marketing. It also explores the economic, cultural, political and legal aspects of international marketing. Through interactive and application-oriented assignments and cases, students will gain hands-on experience in analyzing and developing marketing strategies for organizations that market both consumer and business products/services internationally. A group project will involve the development of an international marketing plan for a specific product. One or more local international marketers will be invited to speak to the class. No audits.	3.00	25	TTh 1:30-2:45PM
EN.660.361	01	EN		**Engineering Business and Management** *Agronin, Michael L* An introduction to the business and management aspects of the engineering profession, project management, prioritization of resource allocation, intellectual property protection, management of technical projects, and product/production management. Preference will be given to Mechanical Engineering students. No audits. Recommended Course Background: EN.660.105	3.00	19	M 6:15-9:00PM
EN.660.361	02	EN		**Engineering Business and Management** *Izenberg, Illysa B*	3.00	19	MW 8:30-9:45AM
EN.660.361	03	EN		**Engineering Business and Management**	3.00	19	TTh 9:00-10:15AM
EN.660.361	04	EN		**Engineering Business and Management**	3.00	19	TTh 10:30-11:45AM
EN.660.404	01	S		**Business Law II** *Fisher, David* Building on the material from Business Law I, topics examined include entrepreneurship, business entities and business formation, principles of agency, real property, personal property, bailments, bankruptcy, secured transactions, employment discrimination, business financing, investor protection, antitrust and environmental law. No audits.	3.00	19	T 6:15-9:00PM
EN.660.410	01			**Computer Science Innovation and Entrepreneurship** *Aronhime, Lawrence*	3.00	19	TTh 4:30-6:00PM

Entrepreneurship and Management

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course is designed to give students in CS the requisite skills to generate and screen ideas for new venture creation and then prepare a business plan for an innovative technology of their own design. These skills include the ability to incorporate into a formal business case all necessary requirements, including needs identification and validation; business and financial models; and, market strategies and plans. Student teams will present the business plan to an outside panel made up of practitioners, industry representatives, and venture capitalists. In addition, this course functions as the first half of a two course sequence, the second of which will be directed by CS faculty and focus on the actual construction/programming of the business idea.			
EN.660.414	01			**Financial Statement Analysis** *Leps, Annette* This course is designed to increase a student's ability to read and interpret financial statements and related information under both GAAP and IFRS (International Financial Reporting Standards). In addition to a review of the basic financial statements and accounting principles, the course will use industry and ratio analysis in addition to benchmarking and modeling techniques to encourage students to think in a more creative way when analyzing historic information or when forecasting financial statements. Students will assess firm profitability and risk, value assets and use spreadsheet models for financial forecasting and decision making. Not open to students who have taken EN.660.304 Financial Statement Analysis. No audits.	3.00	30	TTh 12:00-1:15PM
EN.660.453	01		W	**Social Media and Marketing** *Quesenberry, Keith A* This course explores strategies for monitoring and engaging consumers in digital media. Students will gain practical knowledge about developing, implementing and measuring social media marketing campaigns. They will learn how to analyze what consumers are saying and connect with them by leveraging word of mouth, viral and buzz marketing through sites like Facebook, Twitter and YouTube. A series of assignments build upon each other toward a final social media marketing plan for a selected consumer product or service. No Audits.	3.00	19	TTh 12:00-1:15PM
EN.660.460	01			**Entrepreneurship** *Rice, Eric*	3.00	25	MW 12:00-1:15PM

Entrepreneurship and Management

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course provides students with a solid introduction to the entrepreneurial process of creating new businesses. Students will gain an appreciation for the investors' perspective in assessing opportunities, evaluating strategies, and valuing the new enterprise. The course will cover the principal components of building a successful venture including management, market analysis, intellectual property protection, legal and regulatory issues, operations, entrepreneurial financing, and the role of the capital markets. Course work will include case studies and creation of investor marketing materials. Open to Juniors and Seniors. No Audits. Recommended Course Background: EN.660.203			

General Engineering

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
EN.500.101	01	E		**What Is Engineering?** *Staff* This is a course of lectures, laboratories, and special projects. Its objective is to introduce students not only to different fields of engineering but also to the analytic tools and techniques that the profession uses. Assignments include hands-on and virtual experiments, oral presentations of product design, and design/construction/testing of structures. Freshmen only or Permission Required.	3.00	35	TTh 4:30-6:00PM
EN.500.101	02	E		**What Is Engineering?**	3.00	30	TBA 2:00-2:50PM; TBA 2:00-3:50PM
EN.500.101	03	E		**What Is Engineering?**	3.00	36	TBA 4:00-4:50PM; TBA 4:00-5:50PM
EN.500.103	01	E		**Hopkins Engineering Sampler Seminar** *Scheinerman, Edward* This course provides students with an overview of the undergraduate programs in the Whiting School of Engineering. Faculty from various departments will introduce students to their discipline including aspects of their personal research. Freshmen only.	1.00	100	M 4:00-5:30PM
EN.500.111	01	E		**HEART: Hybrid Materials for Solid-State Energy Harvesting** *Ireland, Robert Matthew*	1.00	19	M 4:30-6:30PM
EN.500.111	02	E		**HEART: Stuff of Dreams/ How Advances in Materials Science Shape the World** *Roy, Anindya*	1.00	19	T 4:30-6:30PM
EN.500.111	03	E		**HEART: Finding the Cure/ Methods in Drug Discovery** *Wiedman, Gregory Robert*	1.00	19	W 6:00-8:00PM
EN.500.111	04	E		**HEART: Visualizing Biomolecules** *Del Piccolo, Nuala Wheeler*	1.00	19	Th 4:30-6:30PM
EN.500.111	05	E		**HEART: State of the Art Speech Recognition** *Variani, Ehsan*	1.00	19	M 6:00-8:00PM
EN.500.111	06	E		**HEART: Three-D Printing and Topology Optimization** *Gaynor, Andrew Thomas*	1.00	19	T 5:30-7:30PM
EN.500.111	07	E		**HEART: Genetic Basis of Disease** *Wrasman, Kristie Marie*	1.00	19	W 4:30-6:30PM
EN.500.111	08	E		**HEART: Looking into the Heart - An Introduction to Cardiac Imaging** *Pourmorteza, Amir*	1.00	19	Th 5:30-7:30PM
EN.500.111	09	E		**HEART: Melding Mind & Machine - Exploring Neurotechnologies that Can Read Our Minds and Alter Our Brains** *Yaffe, Robert Benjamin*	1.00	19	Th 5:00-7:00PM
EN.500.125	01	E		**Spatial Reasoning and Visualization for Engineers** *Stephens, Amy Marie* This course will enhance students ability to imagine and mentally manipulate objects in three-dimensional space---a talent that is important in engineering. Through guided practice and fun hands-on activities, students will hone their spatial skills. This course is only for engineering freshmen. Registration is by invitation only, based on the results of the summer spatial reasoning diagnostic assessment. S/U only.	1.00	19	T 3:30-4:20PM

General Engineering

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
EN.500.125	02	E		**Spatial Reasoning and Visualization for Engineers**	1.00	19	Th 3:30-4:20PM
EN.500.200	01	EQ		**Computing for Engineers and Scientists** *Staff* This course introduces a variety of techniques for solving problems in engineering and science on a computer using MATLAB. Topics include structure and operation of a computer, the programming language MATLAB, computational mathematics, and elementary numerical analysis. Co-listed with EN.550.200.	4.00	20	TTh 10:30-11:50AM; F 9:00-9:50AM
EN.500.200	02	EQ		**Computing for Engineers and Scientists** *Hedrick, Kathryn Ruth*	4.00	25	TTh 10:30-11:50AM; F 9:00-9:50AM
EN.500.401	01			**Research Laboratory Safety** *Kuespert, Daniel* An introduction to laboratory safety including chemical, biological, radiation, and physical hazards. Includes information on hazard assessment techniques, laboratory emergencies, and general lab standards for Whiting School of Engineering. The class will feature hands-on exercises with real-life experiments. Intended for students who have not yet begun working in a research laboratory.	1.00	50	M 1:30-2:45PM
EN.500.401	02			**Research Laboratory Safety**	1.00	50	TBA
EN.500.401	03			**Research Laboratory Safety**	1.00	50	M 12:00-1:15PM
EN.500.401	04			**Research Laboratory Safety**	1.00	50	Th 12:00-1:15PM
EN.500.401	05			**Research Laboratory Safety**	1.00	85	T 3:00-4:15PM
EN.670.495	01	EN		**Animation in Nanotechnology & Medicine** *Searson, Peter C*	3.00	10	TBA

Geography & Environmental Engineering

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.270.205	01	EN		**Introduction to Geographic Information Systems and Geospatial Analysis** *Chen, Xin* The course provides a broad introduction to the principles and practice of Geographic Information Systems (GIS) and related tools of Geospatial Analysis. Topics will include history of GIS, GIS data structures, data acquisition and merging, database management, spatial analysis, and GIS applications. In addition, students will get hands-on experience working with GIS software.	3.00	25	M 1:30-4:00PM
AS.280.335	01	N		**The Environment and Your Health** *Trush, Michael A* This course surveys the basic concepts underlying environmental health sciences (toxicology, exposure assessment, risk assessment), current public health issues (hazardous waste, water- and food-borne diseases), and emerging global health threats (global warming, built environment, ozone depletion, sustainability). Public Health Studies, Global Environmental Change and Stability, and Earth and Planetary Science majors have 1st priority for enrollment. Your enrollment may be withdrawn at the discretion of the instructor if you are not a GECS, PHS, or EPS major.	3.00	250	TTh 4:30-5:45PM
AS.280.335	02	N		**The Environment and Your Health** *Bressler, Joseph P.*	3.00	250	TTh 3:00-4:15PM
AS.360.147	01	HS	W	**Freshmen Seminar: Adam Smith and Karl Marx** *Jelavich, Peter* This freshmen seminar examines the ideas of Smith, the greatest proponent of the free market, and Marx, his most radical critic. Freshmen only.	3.00	20	W 1:30-3:50PM
EN.570.108	01	E		**Introduction Environmental Engineering** *Alavi, Hedy V* Overview of environmental engineering including water/air quality issues, water supply/ wastewater treatment, hazardous/solid waste management, pollution prevention, global environmental issues, public health considerations/environmental laws, regulations and ethics. Cross listed with Public Health Studies.	3.00	19	TTh 12:00-1:15PM
EN.570.108	02	E		**Introduction Environmental Engineering**	3.00	19	TTh 1:30-2:45PM
EN.570.147	01	HS	W	**Adam Smith & Karl Marx** *Schoenberger, Erica* Smith and Marx are iconic figures in the history of political economic thought, often cited, rarely read. They are positioned as polar opposites in highly consequential debates about how society should be ordered. In this class, we will read and discuss their work, closely and carefully. We concentrate on the two iconic texts – The Wealth of Nations and Capital, Vol. 1 – but also explore some of their less well-known writings. Freshmen Only.	3.00	25	W 4:00-7:00PM
EN.570.205	01	N		**Ecology** *Brush, Grace S*	3.00	40	MWF 11:00-11:50AM

Geography & Environmental Engineering

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Introduction to processes governing the organization of individual organisms into populations, communities, and ecosystems. Interactions between individual organisms, groups of organisms, and the environment, including adaptation, natural selection, competition.			
EN.570.222	01			**Environment and Society** *Schoenberger, Erica* Humans make their living in the environment. How we do that changes nature and changes us. This class explores human impacts on the environment, how we have thought about our relationship to nature over the millennia, and contemporary environmental discourses.	3.00	50	TTh 1:30-2:45PM
EN.570.301	01	EN		**Environmental Engineering Fundamentals I** *Chen, Kai Loon* Fundamentals and applications of physical and chemical processes in the natural environment and engineered systems. This class will cover material balances, chemical equilibrium, chemical kinetics, vapor pressure, dissolution, sorption, acid-base reactions, transport phenomena, reactor design, water quality, and environmental implications of nanotechnology.	3.00	50	MWF 1:30-2:20PM
EN.570.305	01	EQ		**Environmental Engineering Systems Design** *Ellis, Joseph Hugh* Techniques from systems analysis applied to environmental engineering design and management problems: reservoir management, power plant siting, nuclear waste management, air pollution control, and transportation planning. Design projects are required.	4.00	30	TTh 12:00-1:15PM
EN.570.334	01	QS		**Engineering Microeconomics** *Hobbs, Benjamin F* This course uses a calculus-based approach to introduce principles of engineering economics and microeconomics (demand and production theory) and their uses in engineering decision making. Recommended Course Background: AS .110.202	3.00	30	TTh 9:00-10:15AM
EN.570.351	01	E		**Introduction To Fluid Mechanics** *Staff* Introduction to the use of the principles of continuity, momentum, and energy to fluid motion. Topics include hydrostatics, ideal-fluid flow, laminar flow, turbulent flow. Recommended Course Background: Statics, Dynamics, and AS.110.302	3.00	35	TTh 10:30-11:45AM
EN.570.353	01	S		**Hydrology** *Harman, Ciaran* The occurrence, distribution, movement, and properties of the waters of the Earth. Topics include precipitation, infiltration, evaporation, transpiration, groundwater, and streamflow. Analyzes include the frequency of floods and droughts, time-series analyzes, flood routing, and hydrologic synthesis and simulation. Recommended Course Background: AS.110.302, EN.570.351	3.00	35	TTh 1:30-2:45PM

Geography & Environmental Engineering

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
EN.570.403	01	N	W	**Ecology** *Brush, Grace S* This is a graduate level of EN.570.205; Addtional Writing Requirements.	3.00	20	MWF 11:00-11:50AM
EN.570.411	01	EN		**Engineering Microbiology** *Bouwer, Edward J* Fundamental aspects of microbiology and biochemistry as related to environmental pollution and water quality control processes, biogeochemical cycles, microbiological ecology, energetics and kinetics of microbial growth, and biological fate of pollutants.	4.00	40	TTh 9:00-10:15AM; Th 2:00-4:50PM; Th 6:00-8:50PM
EN.570.419	01	E		**Environmental Engineering Design I** *Bouwer, Edward J* Through general lectures and case study examples, this course will expose students to some of the non-technical professional issues that they will face as professional engineers and in their second-semester senior design project.	2.00	40	T 4:30-6:30PM
EN.570.428	01	QS	W	**Problems in Applied Economics** *Hanke, Steve H* This course brings the principles of economic theory to bear upon particular problems in the fields of economics, finance and public policy. Micro, macro and international problems, from both the private and public sectors, are addressed. A heavy emphasis is placed on research and writing. Students learn how to properly conduct substantive economic research, utilizing statistical techniques and lessons from economic history. Findings are presented in the form of either memoranda or working papers. Exceptional work may be suitable for publication through the Johns Hopkins Institute for Applied Economics, Global Health, and the Study of Business Enterprise.	3.00	19	TBA
EN.570.442	01	EN		**Environmental Organic Chemistry** *Roberts, A Lynn* Advanced undergraduate/graduate course focusing on examination of processes that affect the behavior and fate of anthropogenic organic contaminants in aquatic environments. Students learn to predict chemical properties influencing transfers between hydrophobic organic chemicals, air, water, sediments, and biota, based on a fundamental understanding of intermolecular interactions and thermodynamic principles. Recommended Course Background: AS.030.104 or permission required.	3.00	20	TTh 10:30-11:45AM
EN.570.443	01	EN		**Aquatic Chemistry** *Stone, Alan T* Equilibrium speciation of natural waters, biofluids, and engineered systems. Electrolyte solutions, acids and bases, complex formation, precipitation and dissolution, oxidation and reduction. Recommended Course Background: One year of both Chemistry and Calculus.	3.00	60	MWF 12:00-12:50PM
EN.570.445	01	E		**Physical and Chemical Processes** *Ball, William P*	3.00	30	MWF 9:00-9:50AM

Geography & Environmental Engineering

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				The application of basic physical and chemical concepts to the analysis of environmental engineering problems. Principles of chemical equilibrium and reaction, reaction engineering, interphase mass transfer, and adsorption are presented in the context of process design for unit operations in common use for water and wastewater treatment. Topics addressed include mass balances, hydraulic characteristics of reactors, reaction kinetics and reactor design, gas transfer processes (including both fundamentals of mass transfer and design analysis), and adsorption processes (including both fundamentals of adsorption and design analysis).			
EN.570.470	01	QS	W	**Applied Econ & Finance** *Hanke, Steve H* This course focuses on company valuations, using the proprietary Hanke-Guttridge Discounted Free Cash Flow Model. Students use the model and data from financial statements filed with the Securities and Exchange Commission to calculate the value of publicaly-traded companies. Using Monte Carlo simulations, students also generate forecast scenarios, project likely share-price ranges and assess potential gains/losses. Stress is placed on using these simulations to diagnose the subjective market expectations contained in current objective market prices, and the robustness of these expectations. During the weekly seminar, students' company valuations are reviewed and critiqued.	3.00	11	F 1:30-4:30PM
EN.570.487	01	QS	W	**Financial Market Research** *Hanke, Steve H* This course investigates the workings of financial, foreign exchange, and commodity futures markets. Research is focused on price behavior, speculation, and hedging in these markets. Extensive research and writing is required. Exceptional work may be suitable for publication through the Johns Hopkins Institute for Applied Economics, Global Health, and the Study of Business Enterprise.	3.00	10	TBA
EN.570.490	01	E		**Solid Waste Engineering and Management** *Alavi, Hedy V* This course covers advanced engineering and scientific concepts and principles applied to the management of municipal solid waste (MSW) to protect human health and the environment and the conservation of limited resources through resource recovery and recycling of waste material.	3.00	40	Th 3:00-5:40PM
EN.570.492	01			**Department Seminar - Undergraduates** *Chen, Kai Loon* Undergraduates only with permission of instructor.	1.00	10	T 3:00-4:50PM
EN.570.493	01	QS		**Economic Foundations for Environmental Engineering and Policy Design** *Coleman, Thomas S.*	3.00	20	M 3:00-6:00PM

Geography & Environmental Engineering

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course includes an exposition of intermediate level price theory, combined with a survey of applications to the analysis of public sector decisions. Theoretical topics include demand, supply, the function and behavior of the market, and introductory welfare economics. Recommended Course Background: AS.180.101-AS.180.102, AS.110.202 or equivalent.			
EN.570.495	01	EQ		**Optimization Foundations for Environmental Engineering and Policy Design** *Williams, Justin* A collection of systems analytic techniques which are frequently used in the study of public decision making is presented. Emphasis is on mathematical programming techniques. Primarily linear programming, integer and mixed-integer programming, and multiobjective programming. Recommended Course Background: AS.110.106 -AS.110.107/AS.110.109	3.00	40	TTh 10:30-11:45AM

Information Security Institute

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
EN.600.442	01	EQ		**Modern Cryptography** *Jain, Abhishek* This course focuses on cryptographic algorithms, formal definitions, hardness assumptions, and proofs of security. Topics include number-theoretic problems, pseudo-randomness, block and stream ciphers, public-key cryptography, message authentication codes, and digital signatures. Recommended Course Background: EN.600.226 and a 300-level or above systems course; EN.600.271/EN.600.471 and EN.550.171 or equivalent.	3.00	30	MW 1:30-2:45PM
EN.600.443	01	E		**Security & Privacy in Computing** *Rubin, Aviel D* Lecture topics will include computer security, network security, basic cryptography, system design methodology, and privacy. There will be a heavy work load, including written homework, programming assignments, exams and a comprehensive final. The class will also include a semester-long project that will be done in teams and will include a presentation by each group to the class. [Applications] Prerequisite: A basic course in operating systems and networking, or permission of instructor.	3.00	45	TTh 9:00-10:15AM
EN.600.460	01	E		**Software Vulnerability Analysis** *Checkoway, Stephen F* This course will examine vulnerabilities in C source, stack overflows, writing shell code, etc. Also, vulnerabilities in web applications: SQL Injection, cookies, as well as vulnerabilities in C binary fuzzing, and exploit development without source among other topics. Co-listed with EN.650.460	3.00	40	TTh 1:30-2:45PM
EN.600.463	01	EQ		**Algorithms I** *Dinitz, Michael H* Graduate version of EN.600.363 [Analysis] Students may receive credit for EN.600.363 or EN.600.463, but not both. Recommended Course Background: EN.600.226 and EN.550.171 or instructor permission required.	3.00	30	TTh 1:30-2:45PM
EN.600.471	01	EQ		**Theory of Computation** *Li, Xin* This is a graduate-level course studying the theoretical foundations of computer science. Topics covered will be models of computation from automata to Turing machines, computability, complexity theory, randomized algorithms, inapproximability, interactive proof systems and probabilistically checkable proofs. Students may not take both EN.600.271 and EN.600.471, unless one is for an undergrad degree and the other for grad. [Analysis]Recommended Course Background: EN.550.171 or istructor permission.	3.00	40	TTh 12:00-1:15PM
EN.650.401	01			**Introduction to Information Security** *Li, Xiangyang*		30	TTh 10:30-11:45AM

Information Security Institute

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course exposes students to the cross-disciplinary and broad information security field. It surveys a range of fundamental topics of information security principles, architecture, policy and standard, risk management, cryptography, physical, operation, system and network security mechanisms, and law and ethics, among others. This course includes lectures, case studies, and homework. Students will also complete independent study class projects. Recommended Course Background: Basic knowledge of computer system and information technology.			
EN.650.401	01			**Introduction to Information Security**	3.00	30	TTh 10:30-11:45AM
EN.650.414	01	S		**Rights in Digital Age** *Jacobs, Michael* This course will examine various legal and policy issues presented by the tremendous growth in computer technology, especially the Internet. The rights that various parties have with respect to creating, modifying, using, distributing, storing, and copying digital data will be explored. The concurrent responsibilities, and potential liabilities, of those parties will also be addressed. The course will focus on intellectual property issues, especially copyright law, and other legal and economic considerations related to the use and management of digital data. Copyright law and its role within the framework of intellectual property law will be presented in a historical context with an emphasis on its applicability to emerging-technology issues. Specifically, the treatment of various works, such as music, film, and photography that were traditionally, analog in nature will be analyzed with respect to their treatment in the digital domain; works that are by their nature digital, such as computer software, will also be analyzed. The current state of U.S. copyright law will be presented, as will relevant international treaties and foreign laws. The goal of the course is to provide those involved or interested in digital rights management with a general awareness of the rights and obligations associated with maintaining and distributing digital data. (This course will be taught in Washington, DC and video-cast into Hodson Hall Room 213.)	3.00	25	M 3:30-6:00PM
EN.650.433	01	E		**Embedded Computer Systems** *Kalb, George E* This course provides an understanding of differences in network-based computers, program mobility, current intrusion protection technologies and exploitation methods along with material relating to computer hacking and vulnerability assessment. Department Majors Only. Course taught On-line.		25	None
EN.650.433	01	E		**Embedded Computer Systems**	3.00	25	None
EN.650.457	01	E		**Computer Forensics** *Leschke, Timothy R*		30	W 4:30-7:00PM

Information Security Institute

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course introduces students to the field of computer forensics and it will focus o n the various contemporary policy issues and applied technologies. Topics to be covered include: legal and regulatory issues, investigation techniques, data analysis approaches, and incident response procedures for Windows and UNIX systems. Homework in this course will relate to laboratory assignments and research exercises. Students should also expect that a group project will be integrated into this course.			
EN.650.457	01	E		**Computer Forensics**	3.00	30	W 4:30-7:00PM
EN.650.458	01	E		**Introduction to Cryptography** *Li, Xiangyang* Cryptography has a rich history as one of the foundations of information security. This course serves as the introduction to the working primitives, development and various techniques in this field. It emphasizes reasoning about the constraint and construction of cryptographic protocols that use shared secret key or public key. Students will also be exposed to some current open problems. Permission of instructor only.		30	TTh 12:00-1:15PM
EN.650.458	01	E		**Introduction to Cryptography**	3.00	30	TTh 12:00-1:15PM
EN.650.461	01	EN		**Cloud Computing Security** *Coffman, Joel Matthew* Cloud computing promises significant cost savings via economies of scale that typically are not achievable by a single organization. This course examines cloud computing in detail and introduces the security concerns associated with cloud computing. Key topics include service models for cloud computing, virtualization, storage, management, and data processing. Fundamental security principles are introduced and applied to cloud computing environments. The format of this course includes lectures and hands-on assignments. Students will complete a project and present it as part of the course. Recommended Course Background: EN.600.318, EN.600.418, or equivalent.	3.00	25	TTh 3:00-4:15PM

Institute for NanoBio Technology

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
EN.670.495	01	EN		**Animation in Nanotechnology & Medicine** *Searson, Peter C*	3.00	10	TBA

Materials Science & Engineering

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
AS.171.321	01	EN		**Introduction to Space, Science, and Technology** *McCandliss, Stephan R* Topics include space astronomy, remote observing of the earth, space physics, planetary exploration, human space flight, space environment, orbits, propulsion, spacecraft design, attitude control and communication. Crosslisted by Departments of Earth and Planetary Sciences, Materials Science and Engineering and Mechanical Engineering. Recommended Course Background: AS.171.101-AS.171.102 or similar; AS.110.108 -AS.110.109.	3.00	36	TTh 12:00-1:15PM
EN.510.101	01	N		**Introduction to Materials Chemistry** *Mcguiggan, Patricia* Basic principles of chemistry and how they apply to the behavior of materials in the solid state. The relationship between electronic structure, chemical bonding, and crystal structure is developed. Attention is given to characterization of atomic and molecular arrangements in crystalline and amorphous solids: metals, ceramics, semiconductors, and polymers (including proteins). Examples are drawn from industrial practice (including the environmental impact of chemical processes), from energy generation and storage (such as batteries and fuel cells), and from emerging technologies (such as biomaterials). Students may receive credit for AS.030.103 or EN.510.101, but not both.	3.00	75	MWF 9:00-9:50AM
EN.510.109	01	EN		**Materials Science & Engineering for the 21st Century** *Wilson, Orla* Through this course, students are introduced to the basic tenants of the field of materials science and engineering and important aspects of career development. Discussions will cover the range of career options in the field, the opportunities to engage with cutting edge research and technology at JHU, the skills that practitioners require and the ethical conundrums that engineering professionals navigate. Only available to Materials Science & Engineering freshmen and engineering undecided freshmen.	1.00	30	F 12:00-12:50PM
EN.510.311	01	EN		**Structure of Materials** *Erlebacher, Jonah D* First of the Introduction to Materials Science series, this course seeks to develop an understanding of the structure of materials starting at the atomic scale and building up to macroscopic structures. Topics include bonding, crystal structures, crystalline defects, symmetry and crystallography, microstructure, liquids and amorphous solids, diffraction, molecular solids and polymers, liquid crystals, amphiphilic materials, and colloids.	3.00	30	MWF 10:00-10:50AM
EN.510.312	01	EN		**Thermodynamics/Materials** *Ulmschneider, Martin*	3.00	30	MWF 11:00-11:50AM

Materials Science & Engineering

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				Second of the Introduction to Materials Science series, this course examines the principles of thermodynamics as they apply to materials. Topics include fundamental principles of thermodynamics, equilibrium in homogeneous and heterogeneous systems, thermodynamics of multicomponent systems, phase diagrams, thermodynamics of defects, and elementary statistical thermodynamics.			
EN.510.316	01	EN		**Biomaterials I** *Mao, Hai-Quan* Sixth of the Introduction to Materials Science series, this course offers an overview of principles and properties of biomedical materials. Topics include properties of materials used in medicine, synthesis and properties of polymeric materials, polymeric biomaterials, natural and recombinant biomaterials, biodegradable materials, hydrogels, stimuli-sensitive materials, and characterizations of biomaterials.	3.00	92	MWF 9:00-9:50AM
EN.510.335	01	EN		**MSE Design Team I** *Wilson, Orla* This course is the first half of a two-semester course sequence for freshmen, sophomores, and juniors majoring or double majoring in materials science and engineering (MSE). This course provides a broad exposure to various aspects of planning and conducting independent research in a team setting (3 to 6 students on each team). In this course, MSE freshmen, sophomores, and juniors, working with a team leader and seniors on the team, apply their general knowledge in MSE to develop the solution to open-ended problems. *The team will meet 150 minutes per week at a time to be designated by the instructor. Recommended Course Background: EN.510.101, EN.510.109, or equivalent courses.	3.00	10	TBA
EN.510.403	01	N		**Materials Characterization** *Mcguiggan, Patricia* This course will describe a variety of techniques used to characterize the structure and composition of engineering materials, including metals, ceramics, polymers, composites and semiconductors. The emphasis will be on microstructural characterization techniques, including optical and electron microscopy, X-ray diffraction, and acoustic microscopy. Surface analytical techniques, including Auger electron spectroscopy, secondary ion mass spectroscopy, X-ray photoelectron spectroscopy, and Rutherford backscattering spectroscopy. Real-world examples of materials characterization will be presented throughout the course, including characterization of thin films, surfaces, interfaces, and single crystals.	3.00	30	TTh 9:00-10:15AM

Materials Science & Engineering

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
EN.510.409	01	EN		**Melting, Smelting, Refining and Casting** *Hufnagel, Todd Clayton* This is a laboratory class on metal formation, an area that underlies almost all other technologies. We will examine extraction of metals from ore, refining of metals. The kinetics of melting and solidification will be explored in the context of casting and forming.	3.00	10	T 1:30-3:50PM
EN.510.426	01	EN		**Biomolecular Materials I - Soluble Proteins and Amphiphiles** *Hristova, Kalina A* This course will examine the fundamental structure, interactions, and function relationship for biological macromolecules. The course will emphasize experimental methods and experimental design, and the physics behind human disease. Topics will include micellization, protein folding and misfolding, and macromolecular interactions. Recommended Course Background: EN.580.221 Co-listed with EN.510.621	3.00	25	MF 1:30-2:45PM
EN.510.428	01	EN	W	**Material Science Laboratory I** *Wilson, Orla* This course focuses on characterizing the microstructure and mechanical properties of structural materials that are commonly used in modern technology. A group of A1 alloys, Ti alloys, carbon and alloy steels, and composite materials that are found, for example, in actual bicycles will be selected for examination. Their microstructures will be studied using optical metallography, scanning electron microscopy, X-ray diffraction, and transmission electron microscopy. The mechanical properties of these same materials will be characterized using tension, compression, impact, and hardness tests. The critical ability to vary microstructure and therefore properties through mechanical and heat treatments will also be demonstrated and investigated in the above materials.	3.00	17	Th 12:00-1:15PM; Th 1:30-3:50PM
EN.510.433	01	E	W	**Senior Design Research** *Wilson, Orla* This course is the first half of a two-semester sequence required for seniors majoring or double majoring in materials science and engineering. It is intended to provide a broad exposure to many aspects of planning and conducting independent research. During this semester, students join ongoing graduate research projects for a typical 10-12 hours per week of hands-on research. Classroom activities include discussions, followed by writing of research pre-proposals (white papers), proposals, status reports and lecture critiques of the weekly departmental research seminar. Co-listed with EN.510.438 and EN.510.440	3.00	15	W 3:00-4:15PM; W 1:30-2:20PM
EN.510.438	01	EN	W	**Biomaterials Senior Design I** *Wilson, Orla*	3.00	8	W 3:00-4:15PM; W 1:30-2:20PM

Materials Science & Engineering

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course is the first half of a two-semester sequence required for seniors majoring in materials science and engineering with the Biomaterials Concentration. It is intended to provide a broad exposure to many aspects of planning and conducting independent research with a focus on biomaterials. During this semester, students join ongoing graduate research projects for a typical 10-12 hours per week of hands-on experiences in design and research. Classroom activities include discussions, followed by writing of research pre-proposals (white papers), proposals, status reports and lecture critiques of departmental research seminars. Co-listed with EN.510.440 and EN.510.433			
EN.510.440	01	EN	W	**Nanomaterials Senior Design I** *Wilson, Orla* This course is the first half of a two-semester sequence required for seniors majoring in materials science and engineering with the Nanotechnology Concentration. It is intended to provide a broad exposure to many aspects of planning and conducting independent research with a focus on nanotechnology and nanomaterials. During this semester, students join ongoing graduate research projects for a typical 10-12 hours per week of hands-on experiences in design and research. Classroom activities include discussions, followed by writing of research pre-proposals (white papers), proposals, status reports and lecture critiques of departmental research seminars. Co-listed with EN.510.433 and EN.510.438	3.00	8	W 3:00-4:15PM; W 1:30-2:20PM
EN.510.442	01	EN		**Nanomaterials Lab** *Wilson, Orla* The objective of the laboratory course will be to give students hands on experience in nanotechnology based device fabrication through synthesis, patterning, and characterization of nanoscale materials. The students will use the knowledge gained from the specific synthesis, characterization and patterning labs to design and fabricate a working nanoscale/nanostructured device. The course will be augmented with comparisons to microscale materials and technologies. These comparisons will be key in understanding the unique phenomena that enable novel applications at the nanoscale. DMSE Seniors or permission of the instructor.	3.00	10	F 10:00-10:50AM; M 1:30-4:00PM

Materials Science & Engineering

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
EN.510.443	01	EN		**Chemistry and Physics of Polymers** *Katz, Howard E* The course will describe and evaluate the synthetic routes, including condensation and addition polymerization, to macromolecules with varied constituents and properties. Factors that affect the efficiencies of the syntheses will be discussed. Properties of polymers that lead to technological applications will be covered, and the physical basis for these properties will be derived. Connections to mechanical, electronic, photonic, and biological applications will be made. Also listed as EN.510.643. Recommended Course Background: Organic Chemistry I and one semester of thermodynamics.	3.00	15	TTh 12:00-1:15PM
EN.510.445	01	EN	W	**MSE Design Team II** *Wilson, Orla* This course is the first half of a two-semester course sequence for senior students majoring or double majoring in MSE. This course provides a broad experience to various aspects of planning and conducting independent research in a team setting (3 to 6 students on each team). In this course, MSE seniors, working with a team leader and a group of freshmen, sophomores, and seniors, apply their knowledge in their track area to generate the solution to open-ended problems encountered in MSE. Recommended Course Background: EN.510.101, EN.510.311, EN.510.312, EN.510.428, EN 510.429.	3.00	6	W 1:30-2:20PM; W 3:00-4:15PM
EN.510.447	01	EN	W	**MSE Design Team Leader** *Wilson, Orla* This course is the first half of a two-semester course sequence for students majoring or double majoring in MSE. This course provides a leadership experience to various aspects of planning and conducting independent research in a team setting. In this course, MSE seniors assemble and lead a student team consisting of 3 to 6 students, apply their knowledge in their track area, and develop leadership skills to generate the solution to open-ended problems encountered in MSE. Recommended Course Background: EN.510.101, EN.510.311, EN.510.312, EN.510.428, EN 510.429.	4.00	3	W 1:30-2:20PM; W 3:00-4:15PM; TBA

Materials Science & Engineering

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
EN.510.459	01	EN		**Physics & Properties of Low-Dimensional Nanomaterials** *Poehler, Theodore O* This course is intended for advanced undergraduates and graduate students and will cover the fundamentals and properties of low dimensional nanomaterials. Subject matter will include a detailed and comprehensive discussion of the physics and physical properties of solids confined in either one, two or three directions. Features examined for these low dimensional materials will include electronic structure, electrical transport, vibrational and thermal transport in low dimensional systems such as graphene, carbon nanotubes, quantum wires, semiconductor and metal nanoparticles. Co-listed with EN.510.659.	3.00	20	TTh 12:00-1:15PM

Mechanical Engineering

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
EN.530.101	01	E		**Freshman Experiences in Mech. Eng.** *Marra, Steven P* An overview of the field of mechanical engineering along with topics that will be important throughout the mechanical engineering program. This one-year course includes applications of mechanics, elementary numerical analysis, programming in Matlab, use of computer in data acquisition, analysis, design, and visualization, technical drawing, the design process and creativity, report preparation, teamwork, and engineering ethics. Corequisites: EN.530.103 and EN.530.105.	2.00	80	MW 1:30-2:20PM
EN.530.103	01	EN		**Introduction to Mechanics I** *Thomas, John A* This is the first half of a one-year course offering in-depth study of elements of mechanics, including linear statics and dynamics, rotational statics and dynamics, thermodynamics, fluids, continuum mechanics, transport, oscillations, and waves. This is an alternate to AS.171.101, designed specifically for Mechanical Engineering and Engineering Mechanics students taking EN.530.101 concurrently. Restricted to Mechanical Engineering, Engineering Mechanics, Civil Engineering, Undecided Engineering Majors, or permission of instructor.	2.00	65	WF 3:00-3:50PM
EN.530.105	01	E		**Mechanical Engineering Freshman Lab I** *Marra, Steven P* Hands on laboratory complementing EN.530.101 and EN.530.103, including experiments, mechanical dissections, and design experiences distributed throughout the year. Experiments are designed to give students background in experimental techniques as well as to reinforce physical principles. Mechanical dissections connect physical principles to practical engineering applications. Design projects allow students to synthesize working systems by combining mechanics knowledge and practical engineering skills. Corequisites: EN.530.101 and EN.530.103.	1.00	18	Th 9:00-11:50AM
EN.530.105	02	E		**Mechanical Engineering Freshman Lab I**	1.00	18	Th 12:00-2:50PM
EN.530.105	03	E		**Mechanical Engineering Freshman Lab I**	1.00	18	Th 3:00-5:50PM
EN.530.105	04	E		**Mechanical Engineering Freshman Laboratory I**	1.00	18	Th 6:00-8:50PM
EN.530.105	05	E		**Mechanical Engineering Freshman Lab I**	1.00	18	F 12:00-2:50PM
EN.530.201	01	E		**Statics & Mechanics of Materials** *Sangree, Rachel H* Equilibrium of rigid bodies, free-body diagrams, design of trusses. One-dimensional stress and strain, Hooke's law. Properties of areas. Stress, strain, and deflection of components subjected to uniaxial tension, simple torsion, and bending. Co-listed with EN.560.201. Recommended Course Background: AS.171.101 or EN.530.103 and EN.530.104 or Permission Only.	4.00	16	TTh 10:30-11:45AM; M 4:00-5:50PM
EN.530.201	02	E		**Statics & Mechanics of Materials**	4.00	16	TTh 10:30-11:45AM; M 6:00-7:50PM
EN.530.201	03	E		**Statics & Mechanics of Materials**	4.00	16	TTh 10:30-11:45AM; T 2:00-3:50PM
EN.530.201	04	E		**Statics & Mechanics of Materials**	4.00	16	TTh 10:30-11:45AM; T 4:00-5:50PM

Mechanical Engineering

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
EN.530.201	05	E		**Statics & Mechanics of Materials**	4.00	16	TTh 10:30-11:45AM; W 4:00-5:50PM
EN.530.201	06	E		**Statics & Mechanics of Materials**	4.00	16	TTh 10:30-11:45AM; Th 4:00-5:50PM
EN.530.231	01	E		**Mechanical Engineering Thermodynamics** *Katz, Joseph* Properties of pure substances, phase equilibrium, equations of state. First law, control volumes, conservation of energy. Second law, entropy, efficiency, reversibility. Carnot and Rankine cycles. Internal combustion engines, gas turbines. Ideal gas mixtures, air-vapor mixtures. Introduction to combustion.	3.00	82	MWF 1:30-2:20PM
EN.530.232	01	EN		**Mechanical Engineering Thermodynamics Laboratory** *Marra, Steven P* This course is the complementary laboratory course and a required corequisite for EN.530.231. Corequisite: EN.530.231 There will be four lab sessions, days and times TBA.	1.00	82	T 6:00-6:50PM; TBA
EN.530.327	01	E		**Introduction to Fluid Mechanics** *Gayme, Dennice F* Fluid statics. Control volumes and surfaces, kinematics of fluids, conservation of mass. Linear momentum in integral form. Bernoulli's equation and applications. Dimensional analysis. The Navier-Stokes equations. Laminar and turbulent viscous flows. External flows, lift and drag. Mechanial Engineering and Engineering Mechanics majors only.	3.00	82	TTh 10:30-11:45AM
EN.530.329	01	E		**Introduction to Fluid Mechanics Laboratory** *Marra, Steven P* This course is the complementary laboratory course and a required co-requisite for EN.530.327. Corequisite: EN.530.327 There will be four lab sessions, days and times TBA.	1.00	82	W 6:00-6:50PM; TBA
EN.530.352	01	E		**Materials Selection** *Hemker, Kevin J* An introduction to the properties and applications of a wide variety of materials: metals, polymers, ceramics, and composites. Considerations include availability and cost, formability, rigidity, strength, and toughness. This course is designed to facilitate sensible materials choices so as to avoid catastrophic failures leading to the loss of life and property.	4.00	82	MWF 11:00-11:50AM
EN.530.354	01	E		**Manufacturing Engineering** *Ronzhes, Yury* An introduction to the various manufacturing processes used to produce metal and nonmetal components. Topics include casting, forming and shaping, and the various processes for material removal including computer-controlled machining. Simple joining processes and surface preparation are discussed. Economic and production aspects are considered throughout. Special Notes: Labs and field trips will be scheduled with class separately. Mechanical Engineering and Engineering Mechanics Sophomores and Juniors only.	3.00	35	MWF 10:00-10:50AM

Mechanical Engineering

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
EN.530.371	01	EQ		**Quantitative Applications in Mechanical Engineering** *Kraemer, David Robert Burke* Solution of practical mechanical engineering problems with differential equations and linear algebra using numerical tools. Applications include topics like ballistics with viscous drag, fluid flow, solid mechanics, and kinematics. Numerical exercises with Matlab and other tools are used to reinforce concepts. Laboratory sessions will be scheduled in place of lectures a few times during the semester.	3.00	30	MWF 10:00-10:50AM
EN.530.403	01	E		**Engineering Design Project** *Scott, Nathan William* This senior year “capstone design” course is intended to give some practice and experience in the art of engineering design. Students working in teams of two to four will select a small-scale, industry-suggested design problem in the area of small production equipment, light machinery products, or manufacturing systems and methods. A solution to the problem is devised and constructed by the student group within limited time and cost boundaries. Preliminary oral reports of the proposed solution are presented at the end of the first semester. A final device, product, system, or method is presented orally and in writing at the end of the second semester. Facilities of the Engineering Design Laboratory (including machine shop time) and a specified amount of money are allocated to each student design team for purchases of parts, supplies, and machine shop time where needed. Recommended Course Background: ME Majors: EN.530.215, EN.530.327; EM & BME Majors: EN.530.215 or EN.530.405, and EN.530.327.	4.00	4	M 4:30-6:00PM; TBA
EN.530.403	02	E		**Engineering Design Project**	4.00	4	M 4:30-6:00PM; TBA
EN.530.403	03	E		**Engineering Design Project**	4.00	4	M 4:30-6:00PM; TBA
EN.530.403	04	E		**Engineering Design Project**	4.00	4	M 4:30-6:00PM; TBA
EN.530.403	05	E		**Engineering Design Project**	4.00	4	M 4:30-6:00PM; TBA
EN.530.403	06	E		**Engineering Design Project**	4.00	4	M 4:30-6:00PM; TBA
EN.530.403	07	E		**Engineering Design Project**	4.00	4	M 4:30-6:00PM; TBA
EN.530.403	08	E		**Engineering Design Project**	4.00	4	M 4:30-6:00PM; TBA
EN.530.403	09	E		**Engineering Design Project**	4.00	4	M 4:30-6:00PM; TBA
EN.530.403	10	E		**Engineering Design Project**	4.00	4	M 4:30-6:00PM; TBA
EN.530.403	11	E		**Engineering Design Project**	4.00	4	M 4:30-6:00PM; TBA
EN.530.403	12	E		**Engineering Design Project**	4.00	4	M 4:30-6:00PM; TBA
EN.530.403	13	E		**Engineering Design Project**	4.00	4	M 4:30-6:00PM; TBA
EN.530.403	14	E		**Engineering Design Project**	4.00	4	M 4:30-6:00PM; TBA
EN.530.403	15	E		**Engineering Design Project**	4.00	4	M 4:30-6:00PM; TBA
EN.530.403	16	E		**Engineering Design Project**	4.00	4	M 4:30-6:00PM; TBA
EN.530.403	17	E		**Engineering Design Project**	4.00	4	TBA; M 4:30-6:00PM
EN.530.403	18	E		**Engineering Design Project**	4.00	4	TBA; M 4:30-6:00PM
EN.530.414	01	E		**Computer-Aided Design** *Stoianovici, Dan*	3.00	36	Th 12:00-2:50PM

Mechanical Engineering

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				The course outlines a modern design platform for 3D modeling, analysis, simulation, and manufacturing of mechanical systems using the "Pro/E" package by PTC. The package includes the following components: • Pro/ENGINEER: is the kernel of the design process, spanning the entire product development, from creative concept through detailed product definition to serviceability. • Pro/MECHANICA: is the main analysis and simulation component for kinematic, dynamic, structural, thermal and durability performance. • Pro/NC: is a numeric-control manufacturing package. This component provides NC programming capabilities and tool libraries. It creates programs for a large variety of CNC machine tools.			
EN.530.414	02	E		**Computer-Aided Design**	3.00	36	Th 3:00-5:50PM
EN.530.414	03	E		**Computer-Aided Design**	3.00	36	F 9:00-11:50AM
EN.530.418	01	E		**Aerospace Structures & Materials** *Dragone, Thomas* An introduction to the design of aircraft and spacecraft structures and components. This course will build on skills learned in EN.530.215 and EN.530.352. Recommended Course Background: EN.530.352 or instructor permission.	3.00	30	TTh 9:00-10:15AM
EN.530.420	01	E		**Robot Sensors/Actuators** *Kraemer, David Robert Burke* Introduction to modeling and use of actuators and sensors in mechatronic design. Topics include electric motors, solenoids, micro-actuators, position sensors, and proximity sensors.	4.00	9	TTh 12:00-1:15PM; W 3:00-5:50PM
EN.530.420	02	E		**Robot Sensors/Actuators**	4.00	9	TTh 12:00-1:15PM; W 6:00-8:50PM
EN.530.420	03	E		**Robot Sensors/Actuators**	4.00	9	TTh 12:00-1:15PM; Th 6:00-8:50PM
EN.530.420	04	E		**Robot Sensors/Actuators**	4.00	9	TTh 12:00-1:15PM; F 3:00-5:50PM
EN.530.420	05	E		**Robot Sensors/Actuators**	4.00	9	TTh 1:30-2:45PM; W 3:00-5:50PM
EN.530.420	06	E		**Robot Sensors/Actuators**	4.00	9	TTh 1:30-2:45PM; W 6:00-8:50PM
EN.530.420	07	E		**Robot Sensors/Actuators**	4.00	9	TTh 1:30-2:45PM; Th 6:00-8:50PM
EN.530.420	08	E		**Robot Sensors/Actuators**	4.00	9	TTh 1:30-2:45PM; F 3:00-5:50PM
EN.530.425	01	E		**Mechanics of Flight** *Phillips, Kerri Beth* Elements of flight dynamics: aerodynamics forces, gliding, cruising, turning, ascending, descending, stability, etc. Review of the pertinent fluid mechanic principles. Application to two-dimensional airfoils and theory of lift. Three-dimensional airfoils. Boundary layers. Effects of compressibility. Subsonic and supersonic flight.	3.00	35	TTh 4:30-5:45PM

Mechanical Engineering

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
EN.530.426	01	E		**Biofluid Mechanics** *Mittal, Rajat* Course will cover selected topics from physiological fluid dynamics, including respiratory flow patterns, blood flow and pulse propagation, aerodynamics of phonation and speech, rheology of blood flow in the microcirculation, aquatic animal propulsion, and animal flight.	3.00	25	TTh 1:30-3:00PM
EN.530.430	01	E		**Applied Finite Element Analysis** *Daphalapurkar, Nitin P* This course will introduce finite element methods for analysis of solids, structures and heat transfer problems. Following topics will be considered. Procedure to defining a mechanics problem: governing equations, constitutive equations, boundary and initial value problems. Theory and implementation of the finite element methods for static analysis using linear elasticity. Finite element analysis (FEA) using ABAQUS software. Verification and validation, understanding uncertainty. Introduction to other FEA topics: structural elements, dynamic analysis, heat transfer and thermodynamics using ABAQUS. The course will include assignments and a term project. The term project is mandatory for graduate students and will involve applying FEA to an engineering problem or a research problem, interpretation of results and documenting a term paper.	3.00	10	TTh 10:30-11:45AM
EN.530.445	01	E		**Introduction to Biomechanics** *Belkoff, Stephen M* An introduction to the mechanics of biological materials and systems. Both soft tissue such as muscle and hard tissue such as bone will be studied as will the way they interact in physiological functions. Special emphasis will be given to orthopedic biomechanics. Recommended Course Background: EN.530.215/EN.530.216 and Lab or equivalent. If you have not taken this course or an equivalent, please contact the instructor before registering to ensure you have the appropriate background knowledge to succeed in this course.	3.00	25	MWF 9:00-9:50AM
EN.530.485	01	E		**Physics and Feedback in Living Systems** *Cowan, Noah J* The complex mechanisms of living systems cannot be reduced to a set of base pairs: genes are only one part of mystery of life. Rather, organisms must develop, move, interact, and function in their natural environment, and thus are constrained by the laws of physics. For example, during locomotion an animal must accelerate according to Newton's laws by applying forces between itself and the environment. Beyond physical principles alone, biological systems extensively use feedback to enhance stability and facilitate adaptation in the presence of a changing world. This course examines the critical roles that physical principles and feedback mechanisms play in life, with special emphasis on animal locomotion and its control. Juniors and Seniors only.	3.00	24	MW 3:00-4:15PM

Mechanical Engineering

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
EN.530.495	01	EN		**Microfabrication Lab** *Andreou, Andreas* This laboratory course is an introduction to the principles of microfabrication for microelectronics, sensors, MEMS, and other synthetic microsystems that have applications in medicine and biology. Course comprised of laboratory work and accompanying lectures that cover silicon oxidation, aluminum evaporation, photoresist deposition, photolithography, plating, etching, packaging, design and analysis CAD tools, and foundry services. Seniors only or Permission Required.	4.00	4	Th 1:00-4:50PM; W 1:30-2:20PM
EN.530.495	02	EN		**Microfabrication Lab** *Wang, Jeff T*	4.00	4	Th 5:00-8:50PM; W 1:30-2:20PM
EN.530.495	03	EN		**Microfabrication Lab**	4.00	4	F 8:00-11:50AM; W 1:30-2:20PM
EN.530.495	04	EN		**Microfabrication Lab** *Andreou, Andreas*	4.00	4	F 1:00-4:50PM; W 1:30-2:20PM
EN.530.495	05	EN		**Microfabrication Laboratory**	4.00	4	Th 8:00-11:50AM; W 1:30-2:20PM
EN.560.201	01	E		**Statics & Mechanics of Materials** *Sangree, Rachel H* Basic principles of classical mechanics applied to the equilibrium of particles and rigid bodies at rest, under the influence of various force systems. In addition, the following topics are studied: free body concept, analysis of simple structures, friction, centroids and centers of gravity, and moments of inertia. Includes laboratory experience. Co-listed with EN.530.201. Recommended Course Background: AS.171.101, or EN.530.103/EN.530.104 or instructor permission.	4.00	8	TTh 10:30-11:45AM; M 4:00-5:50PM
EN.560.201	02	E		**Statics & Mechanics of Materials**	4.00	8	TTh 10:30-11:45AM; M 6:00-7:50PM
EN.560.201	03	E		**Statics & Mechanics of Materials**	4.00	8	TTh 10:30-11:45AM; T 2:00-3:50PM
EN.560.201	04	E		**Statics & Mechanics of Materials**	4.00	8	TTh 10:30-11:45AM; T 4:00-5:50PM
EN.560.201	05	E		**Statics & Mechanics of Materials**	4.00	8	TTh 10:30-11:45AM; W 4:00-5:50PM
EN.560.201	06	E		**Statics & Mechanics of Materials**	4.00	8	TTh 10:30-11:45AM; Th 4:00-5:50PM
EN.580.451	01	EN		**Cell and Tissue Engineering Lab** *Haase, Eileen B* Cell and tissue engineering is a field that relies heavily on experimental techniques. This laboratory course will consist of three six experiments that will provide students with valuable hands-on experience in cell and tissue engineering. Students will learn basic cell culture procedures and specialized techniques related to faculty expertise in cell engineering, microfluidics, gene therapy, microfabrication and cell encapsulation. Experiments include the basics of cell culture techniques, gene transfection and metabolic engineering, basics of cell-substrate interactions I, cell-substrate interactions II, and cell encapsulation and gel contraction. Co-listed with EN.530.451. Senior and Graduate students only; others, instructor permission required. Fall semester only. Lab Fee: $100	3.00	8	MWF 11:00AM-12:50PM
EN.580.451	02	EN		**Cell and Tissue Engineering Lab**	3.00	8	MWF 1:00-2:50PM
EN.660.361	01	EN		**Engineering Business and Management** *Agronin, Michael L*	3.00	19	M 6:15-9:00PM

Mechanical Engineering

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				An introduction to the business and management aspects of the engineering profession, project management, prioritization of resource allocation, intellectual property protection, management of technical projects, and product/production management. Preference will be given to Mechanical Engineering students. No audits. Recommended Course Background: EN.660.105			
EN.660.361	02	EN		**Engineering Business and Management** *Izenberg, Illysa B*	3.00	19	MW 8:30-9:45AM
EN.660.361	03	EN		**Engineering Business and Management**	3.00	19	TTh 9:00-10:15AM
EN.660.361	04	EN		**Engineering Business and Management**	3.00	19	TTh 10:30-11:45AM

Professional Communication

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
EN.661.110	01		W	**Professional Writing and Communication** *Thompson, Jay R* This course teaches students to communicate effectively with a wide variety of specialized and non-specialized audiences. Projects include production of resumes, cover letters, proposals, instructions, reports, and other relevant documents. Class emphasizes writing clearly and persuasively, creating appropriate visuals, developing oral presentation skills, working in collaborative groups, giving and receiving feedback, and simulating the real world environment in which most communication occurs. No audits.	3.00	19	TTh 9:00-10:15AM
EN.661.110	02		W	**Professional Writing and Communication**	3.00	19	TTh 10:30-11:45AM
EN.661.110	03		W	**Professional Writing and Communication** *Bernstein, Jenny*	3.00	19	MW 12:00-1:15PM
EN.661.110	04		W	**Professional Writing and Communication** *Jerr, Nicole*	3.00	19	TTh 12:00-1:15PM
EN.661.110	05		W	**Professional Writing and Communication**	3.00	19	TTh 1:30-2:45PM
EN.661.110	06		W	**Professional Writing and Communication**	3.00	19	TTh 3:00-4:15PM
EN.661.110	07		W	**Professional Writing and Communication** *Wilkins, Caroline A*	3.00	19	MW 10:30-11:45AM
EN.661.110	08		W	**Professional Writing and Communication**	3.00	19	MW 1:30-2:45PM
EN.661.111	01		W	**Professional Writing and Communication for International Students** *Davis, Laura G* This course teaches ESL students to communicate effectively with a wide variety of specialized and non-specialized audiences and will provide ESL-specific help with grammar, pronunciation, and idiomatic expression in these different contexts. Projects include production of resumes, cover letters, proposals, instructions, reports, and other relevant documents. Class emphasizes writing clearly and persuasively, creating appropriate visuals, developing oral presentation skills, working in collaborative groups, giving and receiving feedback, and simulating the real world environment in which most communication occurs. Note: not open to students who have taken EN.661.110 as Technical Communication or Professional Communication for Science, Business, and Industry or EN.661.120 Business Communication. Co-listed with EN.661.611. No audits.	3.00	19	TTh 4:30-5:45PM

Professional Communication

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
EN.661.250	01		W	**Oral Presentations** *Dungey, Kevin R* This course is designed to help students push through any anxieties about public speaking by immersing them in a practice-intensive environment. They learn how to speak with confidence in a variety of formats and venues - Including extemporaneous speaking, job interviewing, leading a discussion, presenting a technical speech, and other relevant scenarios. Students learn how to develop effective slides that capture the main point with ease and clarity, hone their message, improve their delivery skills, and write thought-provoking, well-organized speeches that hold an audience's attention. No audits. Not open to students that have taken EN.661.150.	3.00	13	M 3:00-5:45PM
EN.661.250	02		W	**Oral Presentations**	3.00	13	M 6:15-9:00PM
EN.661.250	03		W	**Oral Presentations** *Graham, Robert M.*	3.00	13	T 1:30-4:15PM
EN.661.250	04		W	**Oral Presentations**	3.00	13	W 4:30-7:15PM
EN.661.250	05		W	**Oral Presentations** *Reiser, Julie*	3.00	13	W 1:30-4:15PM
EN.661.250	06		W	**Oral Presentations** *Heiserman, Jason*	3.00	13	T 4:30-7:15PM
EN.661.250	07		W	**Oral Presentations** *Kulanko, Andrew*	3.00	13	Th 1:30-4:15PM
EN.661.250	08		W	**Oral Presentations**	3.00	13	Th 5:00-7:45PM
EN.661.251	01		W	**Oral Presentations for International Students** *Davis, Laura G* This course is designed to help students push through any anxieties about public speaking by immersing them in a practice-intensive environment. They learn how to speak with confidence in a variety of formats and venues - Including extemporaneous speaking, job interviewing, leading a discussion, presenting a technical speech, and other relevant scenarios. Students learn how to develop effective slides that capture the main point with ease and clarity, hone their message, improve their delivery skills, and write thought-provoking, well-organized speeches that hold an audience's attention. Special attention will be placed on diction, pronunciation, tone, pace and emphasis of language. Additional attention also will be given to syntax as well as non-verbal communication patterns. No audits. Not open to students that have taken EN.661.151	3.00	13	W 4:30-7:15PM
EN.661.315	01		W	**Culture of the Engineering Profession** *Reiser, Julie*	3.00	19	TTh 12:00-1:15PM

Professional Communication

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				This course focuses on building understanding of the culture of engineering while preparing students to communicate effectively with the various audiences with whom engineers interact. Working from a base of contemporary science writing (monographs, non-fiction, popular literature and fiction), students will engage in discussion, argument, case study and project work to investigate: the engineering culture and challenges to that culture, the impacts of engineering solutions on society, the ethical guidelines for the profession, and the ways engineering information is conveyed to the range of audiences for whom the information is critical. Additionally, students will master many of the techniques critical to successful communication within the engineering culture through a series of short papers and presentations associated with analysis of the writings and cases. No audits.			
EN.661.361	01		W	**Corporate Communications & P.R.** *Sheff, Pamela* This course focuses on the ways that organizations, both for-profit and non-profit, manage their communications to deliver strategic, coherent and compelling messages to their varied stakeholders. Using case studies and team-based, real world projects, we will explore topics including public and media relations, corporate image, branding, advertising, internal and external communications, crisis management, investor relations, ethics and social responsibility. In the process, we will consider issues ranging from organizational culture and leadership styles to defining strategy, managing conflict, defending positions and disagreeing agreeably. No audits. Recommended Course Background: AS.220.105, EN.661.110, AS.060.113 or AS.060.114, AS.060.215, EN.660.250, EN.660.105, and EN.661.250	3.00	19	TTh 12:00-1:15PM
EN.661.370	01			**Visual Rhetoric** *O'Donnell, Charlotte Alyssa* A course that aims to help students design clearer, more visually engaging graphics for a wide variety of business and technical documents. Students will learn to manage essential principles of graphic design through a variety of graphic programs (Adobe Creative Suite) and MS Office software. Topics will include logos, letterhead, event posters, brochures, data graphics and some basic web design. No audits. Not open to students that have taken EN.661.170.	3.00	15	T 1:30-4:15PM
EN.661.380	01	Q		**Business Analytics** *Rice, Eric*	3.00	19	TTh 10:30-11:45AM

Professional Communication

Crse	Sect	Area	WI	Title	Credits	Limit	Day/Time
				In this course students learn the procedures and processes that researchers use to determine answers to questions such as how to price a product, how to differentiate one product from another, and how to evaluate customer response to an offering. The materials combine fundamentals of research design with statistics procedures to answer the questions that entrepreneurs and marketing managers must answer as they write business plans, develop their product mix, set prices, create advertising and test products. The course combines case study, simulated situations, lecture, discussion and real-time projects to produce answers using the techniques, tools and procedures typically used in North American enterprises.			
EN.661.390	01		W	**Catalyst: A Student-Run Magainze** *O'Donnell, Charlotte Alyssa* Catalyst is a student-run magazine that focuses on research, technology, entrepreneurship and design. Students enrolled in this course will learn the fundamental principles of journalism through producing content for the online magazine. The class will cover basic journalistic writing and interviewing techniques. Students will get a primer on media law, newsroom ethics and procedure. As their skills progress, they will learn to pitch, write and edit a variety of stories types – from basic news stories, to profiles, features and reviews. All students will publish at least one piece of writing in the magazine at the end of the semester.	3.00	19	M 1:30-4:15PM