AS.360 (INTERDEPARTMENTAL)

AS.360.000. Pre-College E.S.L.. 1 Credit.
Sharpen and refine your speaking, reading, listening, and writing skills, or improve your test scores. A separate application is required. Please contact 410-516-4548 for information or write summer@jhu.edu.

AS.360.100. Neuroscience Applied: Designing and Communicating Theory and Research. 1 Credit.
Science is about theory, research, data and storytelling. This course focuses on Neuroscience and its related topics —Cognitive Science, Psychology, Biology, Computer Science, Philosophy of Mind and Anthropology— as they can be applied outside of the traditional laboratory. Through research projects on a topic of their choice, students will experience hands-on creative problem solving through the scientific process and create and write their own research papers and scientific visualizations. It is strongly recommended to take this course in conjunction with the course "Mind, Brain, and Beauty" or any other course in the brain, psychological and behavioral sciences.

AS.360.105. Intro to Hopkins: Arrive & Thrive. 1 Credit.
Explore the University. Engage with people. Empower yourself. Chart your expedition at Hopkins. In this freshman-only course, students will explore Hopkins' academic resources and opportunities to integrate their academic, career, and personal goals for college and beyond. Students will be exposed to topics including learning strategies, academic planning, and campus culture. Students will develop a personalized plan for success and make some new friends.

AS.360.111. Special Opportunities in Undergraduate Learning Tutorials. 1 Credit.

AS.360.116. Neuroscience Applied - The Brain & Creativity. 1 Credit.
What underlies our perception of visual art and music? Do specific properties of objects, scenes, and musical events evoke consistent emotional responses? Does the perception of beauty lie in the eye of the beholder? What can the creative, artistic process tell us about the mind/brain? Examining such questions from cognitive and computer sciences, neuroscience, psychology, and philosophy, we will explore relevant research, theory and data in the visual and auditory domains as they pertain to art perception and cognition, creativity, and artificial intelligence.

AS.360.118. Health Studies. 1 Credit.
Most Americans were born in one and will die in one. Lots of you likely aspire to spend your careers in one. Hospitals stand at the center of modern health care as symbols of healing; below the surface, they perform all the technological and social functions of a miniature city. This class explores the past, present, and future of hospitals with a focus on Johns Hopkins, a global model for medical education and patient care.
Area: Humanities, Social and Behavioral Sciences

AS.360.125. Scholars.
Permission and separate application required. Please contact 410-516-4548 for information or write summer@jhu.edu. No credit is earned for this course.

AS.360.133. Freshman Seminar: Great Books at Hopkins. 3 Credits.
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 2020 include Homer, Plato, Dante, John Donne, George Herbert, Christina Rosetti, Mary Shelley, Friederick Nietzsche, Isaac Bashevis Singer, Frederick Douglass.
Area: Humanities
Writing Intensive

AS.360.134. Great Books II: A Closer Reading. 3 Credits.
In this semester-long discussion seminar we will use the same close reading techniques employed in the fall 2020 freshman seminar, Great Books, AS.360.133 (this is not a pre-requisite), but we will slow down a bit and enlarge the scope of our discussion, exploring, in turn, each work's historical context; genre or mix of genres; and authorial approaches to character development, thematic unity, and stylistic variation. For the first part of the semester course readings will include Homer's Odyssey, Dante's Inferno, and Milton's Paradise Lost. During the second part of the semester we will explore retrospective echoes in later writers: Mary Shelley's Frankenstein, Frederick Douglass's Narrative of an Ex-Slave, and Virginia Woolf's A Room of One's Own.
Area: Humanities
Writing Intensive

AS.360.137. Mini-Term: Disease as Creativity in the Arts. 1 Credit.
In this course, we will analyze the ways in which physiological and mental diseases have contributed to the creation of renowned works of art and literature through the ages as means of coping with illness.
Area: Humanities

AS.360.139. Medicine: An Integrative Approach. 1 Credit.
Integrative medicine considers the human body not as a machine to be repaired when broken, but as a potent mind-body with extraordinary potential for high-level wellness, resilience under duress, and resistance to disease. Changing our disease-care model into a wellness model will be facilitated when we consider the vitality of soul and spirit to be as important as cellular function. We will explore a vision of medicine broader than that of the conventional model as it integrates the biological with the psychological aspects of human experience and focuses on the flourishing of human possibility. David Mercier, M.S., L.Ac., author of A Beautiful Medicine, winner of a Grand and Gold Prize in the 2013 Nautilus Book Awards, will be co-teaching this class with Medical Herbalist Geo Giordano, MSc, RH(AHG)

AS.360.140. Introduction to Orthopedics. 1 Credit.
This two-week course is an immersion experience for high school students in the fascinating medical specialty of orthopaedic surgery. By the end of this course, students will be able to (i) describe important anatomic and physiological aspects of the musculoskeletal system, (ii) explain the pathogenesis and presentation of common musculoskeletal disorders, and (iii) indicate how to evaluate and manage a patient with a musculoskeletal disorder at a level appropriate for the high school student.
AS.360.142. Drug Discovery and Development. 1 Credit.
This interactive course will give students an introduction to the guiding principles of drug discovery and development. Topics will range from pre-clinical pharmacokinetic and pharmacodynamic considerations through clinical trial design, implementation, and analysis. Upon completion of this course, students will be able to define the path of drug discovery, while being able to identify and critically assess important factors to consider at each stage when moving a drug forward through the process.

AS.360.143. Ethics and Public Health Research. 1 Credit.
In this course, students will be introduced to principles of bioethics and ethical theory and their application to public health research and practice both in the U.S. and abroad. We will discuss how ethical considerations have evolved in research, practice, and academia and the systems in place to support ethical research and practice in the U.S. and abroad. The course will use a combination of lecture, discussion and student debates to encourage broad participation.

AS.360.145. JHU EducationUSA Academy. 1 Credit.
Course description: This course provides students who are new to the study of higher education in the United States with an overview of the field and its opportunities. We will explore various topics such as the history and diversity of colleges and universities, the admissions process, introduction to library research, and campus diversity. The course is comprised of guest lecturers, campus tours, readings, and writing workshops.

AS.360.146. Epidemics, Pandemics, & Outbreaks. 1 Credit.
In the midst of a global pandemic that has shifted the ways in which we move, work, and interact with others around the world, it is more important than ever to have a deeper understanding of how outbreaks, epidemics, and pandemics have evolved. You'll review select communicable (COVID-19, Ebola, Zika, and HIV) and non-communicable (diabetes, cancer, cardiovascular disease, injury, and mental health) diseases in public health around the world. Examine the global burden of these diseases and the various forms of prevention efforts undertaken by global and national organizations. This program will use a combination of lecture, discussion, and student presentation format to encourage broad participation.

AS.360.147. Freshmen Seminar: Adam Smith and Karl Marx. 3 Credits.
This course will compare the ideas of Adam Smith, the most famous proponent of free trade and free enterprise, with those of Karl Marx, the greatest critic of capitalism. For freshmen only.
Area: Humanities, Social and Behavioral Sciences
Writing Intensive

Establish a foundation for advanced study of neuroscience in research and medicine. Your curriculum will cover university-level cellular, network, and behavioral neurobiology using evidence-based educational models that encourage enthusiasm and uninhibited critical thought. Additional emphasis will be placed on familiarizing you with the laboratory and research methods useful in a scientific career. There are no prerequisites, but a background in biology is helpful.

AS.360.167. Physics of Sports. 1 Credit.
Starting with an introduction to basic concepts in physics learn why a curve ball curves, why a ping pong ball dunks, how the speed and temperature of bobsled critically define its trajectory and dynamics, etc. The course will try to build general understanding of physics needed to explain various sports in a greater depth and to appreciate the amount of science and engineering that goes into designing sporting equipment.
Area: Engineering, Natural Sciences

AS.360.168. Depression: Philosophical and Neurological Perspectives. 1 Credit.
Depression has established environmental and neurological causes. Efforts to join the two typically ends at lifestyle or social factors, but what can be said beyond that? Sociopolitical power structures, zeitgeist, and culture all exert significant effects on our lives. This course seeks to join modern theories of depression from philosophical, polito-theoretical, and neuropsychiatric perspectives to form a holistic model of how depression exists in modernity.

AS.360.172. Maximizing Student Entrepreneurship. 1 Credit.
Maximizing Student Entrepreneurship is designed to teach students about the six core tenets of successful entrepreneurship - time management, team building, networking, purpose, operations, and financial management - via exposure to the ideas of successful entrepreneurs and venture capitalists, who will conduct Q&A sessions with the students on these topics.

AS.360.174. Miracles of Modern Medicine. 1 Credit.
The course is an introduction to the milestone discoveries and inventions in the history of modern medicine as well as the frontier of current medical research. The two-week course is composed of 10 teaching modules, each is designed and delivered by the scientists at Johns Hopkins Medical Institutions and Johns Hopkins University. Students will take interactive lectures, participate in group projects, perform hands-on activities, visit cutting-edge laboratories, and interact with scientists and physicians.

AS.360.190. College Writing. 1 Credit.
In College Writing, we will ask well-informed questions and attempt to answer those questions with the support of evidence. In the process, we will treat good writing not only as a product of good thinking, but also as a tool for effective communication. To that end, we will plan, draft, and revise original essays in several genres in order to create finished pieces of writing.
Area: Humanities

AS.360.199. The Memoir: Personal Experience in Health Disparity. 3 Credits.
Memoir is an adept genre for expressing the sociological through the personal; this course will use memoirs to examine health care disparities. The course materials will be interwoven with visits from guest speakers who are either practicing clinicians or research scientists grappling with these same inequities. For example, when we address gender and concepts of masculinity and sexuality, we will have a discussion with a gender-reassignment surgeon. Every text will have a corresponding professional speaker. There will be a particular emphasis on medical memories, contemporary debates, and experiences that critically examine how factors such as race, gender identity, and ability impact our humanity and our health outcomes.
Area: Humanities
Writing Intensive

AS.360.201. The Art and Science of Happiness. 1 Credit.
This dynamic course provides students with life-changing insights and skills that have the potential to affect the quality and substance of their academic, personal, and professional lives. In addition to learning basic concepts from neuroscience, nutritional biochemistry, and positive psychology, students will learn practical skills in social intelligence, resilience, meditation. They will also learn how to think critically about commonly held views of success and happiness. With both lecture and experiential exercises, the course will provide students the opportunity to experience significant changes in mood, cognitive skills, self-awareness, and physical wellbeing.

AS.360.201. The Memoir: Personal Experience in Health Disparity. 3 Credits.
Memoir is an adept genre for expressing the sociological through the personal; this course will use memoirs to examine health care disparities. The course materials will be interwoven with visits from guest speakers who are either practicing clinicians or research scientists grappling with these same inequities. For example, when we address gender and concepts of masculinity and sexuality, we will have a discussion with a gender-reassignment surgeon. Every text will have a corresponding professional speaker. There will be a particular emphasis on medical memories, contemporary debates, and experiences that critically examine how factors such as race, gender identity, and ability impact our humanity and our health outcomes.
Area: Humanities
Writing Intensive
AS.360.223. Mini Term: Medicine, Sports, and Culture. 1 Credit.
This course examines how medicine is practiced in different cultures around the world. In particular, we draw on theories and concepts from medical anthropology to study how these differences reveal alternative perspectives on the body, its health and its capabilities. To sharpen our inquiries into cultural differences surrounding bodily health, we look comparatively at the anthropology of sports and bodily performance. In looking at how concepts including illness, wellness, and injury differ across cultures, we consider, for example, how the bodily experience of pain not only varies according to societal beliefs and behaviors, but also changes as one pursues the limits of athletic performance. In addition to introducing how cultural anthropology engages with medicine and sports performance, this course enriches scientific interest in medicine by teaching students techniques of critical reasoning that powerfully investigate both how medicine is practiced and the cultural phenomenon of bodily health. Prior study in anthropology is not required.

AS.360.247. Introduction to Social Policy and Inequality: Baltimore and Beyond. 3 Credits.
This 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 care, 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 course is 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 graduate school in related social science fields. This course does not count as one of the required courses for the Economics major or minor, but it is required for the Social Policy Minor. Cross list with Sociology, Economics and Political Science. Freshman, Sophomore and Juniors only.
Area: Social and Behavioral Sciences
Writing Intensive

AS.360.249. Basics of Medicinal Plant Pharmacology. 1 Credit.
We will explore some of the commonly used herbal medicines which support our anatomy and physiology. One class will be devoted to pain management & the emerging use of Cannabinoids. JHU is currently performing a clinical trial on Mistletoe which we will be studying as it’s use is widespread for cancer patients in Europe. We will review current scientific discoveries explaining the cellular pathways and mechanisms that these plants affect in healing. Therapeutic doses, appropriate uses, plus known drug-herb interactions will be highlighted. Students will gain some useful insights into staying well, thinking clearly and optimizing their personal performance during their academic years ahead.

AS.360.300. Mini-Term: So you want to be a .... Dentist. 1 Credit.
Participation in all aspects of dentistry designed to immerse students in the experience of being a clinical dentist. The experience will focus on 5 elements for immersion: Chair-side monitoring throughout multiple dental specialties, dental anatomy/radiology review, dental laboratory work, sterilization and OSHA protocols, and business dental management discussion in the changing insurance landscape.

AS.360.308. Policy and Practice in Human Services. 3 Credits.
This course will focus on the policies that frame human service programs and the methods that are used to deliver them. Students will be given the opportunity to review the challenges of implementing programs and reforms in government and to consider the impact human services have on the population served.
Area: Social and Behavioral Sciences

AS.360.311. Methods for Policy Research. 3 Credits.
This course will introduce students to quantitative methods for studying social policy problems. Topics to be covered include descriptive statistics and sampling, correlation and causation, simple and multiple regression, experimental methods, and an introduction to cost-benefit analysis. The emphasis will be on the selection, interpretation and practical application of these methodologies in specific policy settings, rather than with formal proofs. Skills will be reinforced by hands-on exercises using statistical software. Over the course of the semester, students will critically analyze policy reports and empirical research in a range of policy areas and learn how to present this research to a non-specialist audience. Finally, we will discuss the pros and cons of quantitative vs. qualitative methodologies. The course will conclude with group presentations that draw on all these skills. Enrollment restricted to Social Policy minors only.
Area: Quantitative and Mathematical Sciences, Social and Behavioral Sciences

AS.360.339. Planets, Life and the Universe. 3 Credits.
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)
Prerequisite(s): Students may not register for this class if they have already received credit for AS.020.334 OR AS.020.616 OR AS.171.333 OR AS.171.699 OR AS 270.335 OR AS.360.671
Area: Natural Sciences

AS.360.366. Public Policy Writing Workshop. 3 Credits.
This workshop is designed to hone the analytical and communications skills necessary for effective formulation and advocacy of public policy. Topics include how to develop op-ed pieces and other forms of advocacy journalism, memoranda, position papers, and grant proposals. The workshop puts special stress on how to make a clear and persuasive exposition of complex or counter-intuitive policy arguments in the market place of ideas, including the challenges of writing for popular journals and communicating to specific audiences both in and out of government. Students receive intensive individual instruction, including close editing of their work and advice on how to publish or promote it in the public sphere. Enrollment restricted to Social Policy minors only.
Area: Social and Behavioral Sciences
Writing Intensive

AS.360.401. Social Policy Seminar. 3 Credits.
This course is designed for students who have completed either the Baltimore intensive semester 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.
Area: Social and Behavioral Sciences
AS.360.528. Problems in Applied Economics. 2 Credits.
This course focuses on a monetary approach to national income determination and the balance of payments. Money and banking, as well as commodity and financial markets, are dealt with under both central banking, as well as alternative monetary regimes. Particular emphasis is placed on currency board systems. Students learn how to properly conduct substantive economic research, utilizing primary data sources, statistical techniques and lessons from economic history. Findings are presented in the form of either memoranda or working papers of publishable quality. Exceptional work may be suitable for publication through the Johns Hopkins Institute for Applied Economics, Global Health, and the Study of Business Enterprise. Advanced excel programming skills are required and students are expected to be pre-screened for research at the Library of Congress in Washington, D.C.. Bloomberg certification is a requisite.
Prerequisite(s): You must request Independent Academic Work using the Independent Academic Work form found in Student Self-Service: Registration &gt; Online Forms.
Writing Intensive

AS.360.551. Arts and Sciences Research Practicum.

AS.360.603. Graduate Orientation and Academic Ethics.

This course will engage with 20th century critical theory and social inquiry that wrestles with the idea that new mediations have profoundly altered the character of human experience and subjectivity, and it will consider the questions that these theorists pose for our disciplines. How have modern subjectivity, gender, affect, reason, and politics been shaped by the technologies and structures of representation that mediate them? Among figures of interest: Marx, Freud, Eisenstein, Benjamin, Bakhtin, Adorno, Deleuze, Guy Debord, Haraway, Stuart Hall, Teresa de Lauretis, Kitterer, Sobchack, Berlant, Latour, Linda Williams, Ranciere, Orit Halpern.
Area: Humanities, Social and Behavioral Sciences

An interdisciplinary seminar on Latin America’s role in global economic processes, from both historical and contemporary perspectives. Fall 2021 will take up the lenses of ecocriticism, environmental history, and environmental studies.
Area: Humanities, Social and Behavioral Sciences

AS.360.624. Responsible Conduct of Research (Online).
Online - This is a placeholder course. Students cannot register for this course. Do not email the Registrar for permission to enroll.

AS.360.625. Responsible Conduct of Research.
Through a discussion-based curriculum, the Responsible Conduct of Research course introduces students to key research issues: academic ethics, animal subjects, conflict of interest, data management and authorship, and human subjects. Attendance to all meetings is required to receive credit for the course.

AS.360.671. Planets, Life and the Universe.
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 courses in sciences and buy textbooks
Prerequisite(s): Students may not register for this class if they have already received credit for AS.020.616 OR AS.020.334 OR AS.171.333 OR AS.171.699 OR AS.270.335 OR AS.360.339.
Area: Natural Sciences

AS.360.781. Preparation for University Teaching.
Full-time A&S Graduate Students only. This course will prepare graduate students to teach at the university level. Topics covered include large and small class teaching, characteristics of student learning, syllabus construction, grading students, and developing a teaching portfolio. Co-listed with EN.500.781

AS.360.800. Dean’s Teaching Practicum.
AS.360.851. Arts and Sciences Research Practicum.
ME.800.300. DDP Research Practicum/Special Studies.
N/A
ME.800.600. Molecules and Cells.
Principles of Developmental Biology
ME.800.603. Introduction to Medicine I.
ME.800.604. Clinical Epidemiology.
ME.800.608. Patient, Physician and Society - 4th year.
ME.800.609. Genes to Society I (inc. Immunology, Microbiology/Infectious Disease, and Hematology/Oncology).
Required course in the first year medical student curriculum.
ME.800.611. Health Care Disparities Intersession.
ME.800.612. Health Promotion and Disease Prevention Intersession.
ME.800.613. Global Health Intersession.
ME.800.614. Pain Intersession.
ME.800.615. Disaster Medicine Intersession.
ME.800.616. Longitudinal Ambulatory Clerkship - 1st year.
Longitudinal Ambulatory Clerkship - 1st year
ME.800.617. Longitudinal Ambulatory Clerkship - 2nd year.
Required course in the second year medical student curriculum.
ME.800.618. Transition to Residency and Internship and Preparation for Life.
This two-week capstone course is offered twice in April of Year Four. The goal of TRIPLE is to prepare students to work effectively as interns, residents and practicing physicians. Additionally, it will help students to develop the knowledge, attitudes and skills necessary to be successful in their professional lives. In addition to Advanced Cardiac Life Support Certification, activities include exercises in Rapid Response scenarios; central venous catheter and interosseus line insertion; airway management; multitasking, organization and prioritization; advanced communications; reflective writing; teaching skills and facilitated small group discussions.
ME.800.620. Scientific Foundations of Medicine - Epidemiology.
ME.800.621. Clinical Foundations of Medicine.
Clinical Foundations of Medicine
ME.800.623. Scholarly Concentrations.
Required course in the first year medical student curriculum.

ME.800.624. Translational Science Intersession - Metabolism.

ME.800.625. Translational Science Intersession - Infectious Disease.

ME.800.626. Translational Science Intersession - Immunology.

ME.800.627. Translational Science Intersession - Cancer.

ME.800.628. End of Life/Palliative Care Intersession.

ME.800.629. Substance Abuse Care Intersession.

ME.800.630. Genes to Society III (inc. Cardiovascular, Pulmonary, and Renal).
Required course in the first year medical student curriculum.

ME.800.631. Genes to Society IV (inc. GI, Reproductive, Endocrine, and Musculoskeletal).
Required course in the second year medical student curriculum.

ME.800.632. Patient Safety Intersession.

ME.800.633. Scholarly Concentrations - 2nd year.
Required course in the second year medical student curriculum.

ME.800.634. Transition to the Wards.
Required course in the second year medical student curriculum.

ME.800.635. Genes to Society I (inc. Immunology, Microbiology/Infectious Disease and Hematology/Oncology).


ME.800.637. Foundations of Public Health: Epidemiology, Ethics & the Health Care System.
Required course in the first year medical student curriculum.

ME.800.638. Scientific Foundation of Medicine: Macromolecules.
N/A

ME.800.639. Genes to Society I (inc. Immunology, Microbiology/Infectious Disease, Hematology/Oncology, and Dermatology).
Required course in the first year medical student curriculum.

ME.800.640. Topics in Interdisciplinary Medicine - Disparities and Inequities in Health and Health Care.
Required course in the first year medical student curriculum.

ME.800.641. Topics in Interdisciplinary Medicine – Health Promotion and Disease Prevention.
Required course in the first year medical student curriculum.

ME.800.642. Topics in Interdisciplinary Medicine – Global Health.
Required course in the first year medical student curriculum.

ME.800.643. Topics in Interdisciplinary Medicine – Pain.
Required course in the first year medical student curriculum.

ME.800.644. Topics in Interdisciplinary Medicine – Disaster Medicine.
Required course in the first year medical student curriculum.

ME.800.645. Topics in Interdisciplinary Medicine – Substance Abuse Care.
Required course in the second year medical student curriculum.

ME.800.646. Topics in Interdisciplinary Medicine – Patient Safety.
Required course in the second year medical student curriculum.

ME.800.647. Topics in Interdisciplinary Medicine – End of Life/Palliative Care.
Required course in the second year medical student curriculum.

ME.800.648. Topics in Interdisciplinary Medicine – Metabolism.
Topics in Interdisciplinary Medicine – Metabolism

ME.800.649. Topics in Interdisciplinary Medicine – Immunology.
Topics in Interdisciplinary Medicine – Immunology

ME.800.650. Topics in Interdisciplinary Medicine – Infectious Disease.
Topics in Interdisciplinary Medicine – Infectious Disease

ME.800.651. Topics in Interdisciplinary Medicine – Cancer.
Topics in Interdisciplinary Medicine – Cancer

ME.800.652. Topics in Interdisciplinary Medicine - Introduction to Regenerative Medicine.
Topics in Interdisciplinary Medicine - Introduction to Regenerative Medicine

ME.800.653. Integrative Medicine.
Required course in the first year medical student curriculum.

ME.800.654. Scientific Foundations of Medicine Histology and Pathobiology.
N/A

ME.800.655. Topics in Interdisciplinary Medicine - High Value Healthcare.
This three-day course is offered in February of Year One after the Microbiology and Infectious Disease section. The goals of the course are to empower students to understand high value care and advocate for its practice. Lectures serve as the background on why providers order unnecessary labs, imaging, and medications and the changes that are occurring. Interactive small group sessions then allow students to participate in hands-on approaches to improving their role as stewards of healthcare for the healthcare system and most importantly their patients.

ME.800.656. Genes to Society III - Cardiovascular.
This GTS Cardiovascular course will build upon seminal observations on the structure and function of the cardiovascular system. See course syllabus for full description and objectives.

ME.800.657. Primary Care Leadership Track 1.

ME.800.658. Primary Care Leadership Track 2.

ME.800.659. Primary Care Leadership Track 3.

ME.800.660. Primary Care Leadership Track 4.

ME.800.661. Topics in Interdisciplinary Medicine - Genomic Medicine.
Fulfills TIME requirement in the third and fourth year medical student curriculum.

ME.800.662. Pre- clerkship Education Exercises.

ME.800.699. Interdepartmental Elective.
For Medical Students only. Specialized Topics in Interdepartmental.
Refer to Medical Student Electives Book located at https://www.hopkinsmedicine.org/som/students/academics/electives.html.

ME.800.702. Intro to the Human Body (Organ Histology).
N/A

ME.800.703. CMM Core Discussion.
In section One: Students present a journal article and lead the class discussion. In section Two: 3R online modules with class discussions. In section Three: Compliments Intro to Clinical Research course content.

ME.800.705. Method and Logic in Biology.
Students meet in small groups with faculty members to read and discuss current research articles. The goal is to learn to critically evaluate experiments, results and to design controlled experiments.
### ME.800.707. Computational Biology and Bioinformatics.
This short course is a survey of quantitative methods in modern biology and the computational concepts that are developing to analyze large data sets. Topics range from a review of statistics to problems in sequence analysis to the modeling of complex systems. The goal of the course is to familiarize students with the concepts of computational biology rather than to achieve a deep understanding of any one topic.

### ME.800.708. BCMB Core Discussion.
Core discussion is a small-group discussion which corresponds to the BCMB core module lectures.

### ME.800.709. Cellular and Molecular Basis of Disease.
The emphasis of this course is the cellular and molecular aspects of the pathogenesis and treatment of human diseases.

### ME.800.710. Beginning Spanish for Medical Personnel.

### ME.800.711. Advanced Beginning Spanish for Medical Personnel.

### ME.800.712. Intermediate Spanish for Medical Personnel.

### ME.800.713. BCMB Responsible Conduct of Research.
This discussion course focuses on responsible conduct of research in science. Topics include Issues of Diversity, Mentoring, Misconduct/Fraud, Authorship, Conflict of Interest, Scientific Record Keeping, Animal and Human Experimentation.

### ME.800.714. Advanced Spanish Topics for Medical Personnel.

### ME.800.715. Effective Scientific Communication.
Students will have the opportunity to improve their science communication skills and get exposed to the diversity of careers available in science communication.

### ME.800.716. Genomic Instability in Human Disease.

### ME.800.717. CMM Grant Writing: Nuts and Bolts.
Will give a general overview of the grant writing process to include the significant components of a hypothesis driven scientific grant application and its peer review process. Proposals for this course will be based on each student’s current thesis work and will be developed as the thesis proposal.

### ME.800.718. Topics in Cellular and Molecular Medicine.
This course introduces students to CMM faculty and their areas of expertise.


### ME.800.722. BCMB Tutorial.
One-to-one reading tutorial with a faculty member who is an expert in the chosen field of study. The faculty member will select the papers to be discussed. The minimal duration of the tutorial has to be equivalent to eleven 1.5-hour sessions or a total of 16 hours. The course will be offered every quarter, including during the summer months.

### ME.800.723. Computational Genomics Methods.
Hands-on elective course discussing computational methods (including R, Unix and Python) for manipulating and exploring high throughput datasets.

### ME.800.724. Introduction to Clinical Research.
Understand the steps involved in conceiving, conducting and translating clinical research. Prepare and review a clinical research project in groups.

### ME.800.725. Medical Scientist Training Program in Research Ethics.

This course is designed to provide an opportunity for students to learn principles and practices of electron microscopy so they can use then for their thesis projects. The course has two components: lectures and hands-on experimental sessions. Lectures will cover history, principles, and techniques. In the hands-on sessions, students will learn how to process samples for electron microscopy, including, fixation, plastic embedding, high-pressure freezing, freeze-substitution, imaging and image analysis.


### ME.800.781. Scientific Foundations of Medicine: Macromolecules.

### ME.800.782. Scientific Foundations of Medicine: Cell Physiology.

### ME.800.783. Scientific Foundations of Medicine: Histopathology.
Course is offered in two sections. Students must enroll and attend both sections. The course is designed to provide the foundations to understand organ histology and histopathology. The course begins with basic concepts of tissue organization and ends with globally relevant histopathologic changes seen in disease. The course is primarily designed around the virtual microscopy (VM system within small group), occasional lectures, and e-lectures.

### ME.800.784. Scientific Foundations of Medicine: Metabolism.

### ME.800.785. Scientific Foundations of Medicine: Genetics.

### ME.800.786. Scientific Foundations of Medicine: Pharmacology.

### ME.800.787. Scientific Foundations of Medicine (inc. Macromolecules, Cell Physiology, Metabolism and Genetics).

### ME.800.788. Scientific Foundations of Medicine: Neoplasia.

### ME.800.789. 3B’s: Bench to Bedside and Back.
Students in years 3 and 4 will gain further expose and education about the clinical opportunities and translational implications associated with their thesis research.

### ME.800.800. Introduction to Pathobiology.

### ME.800.801. Research in Cellular and Molecular Medicine.
First year students perform 3 lab rotations. Upper-class students in conjunction with thesis advisor perform focused research on his/her thesis project.

### ME.800.802. Research in Biochemistry, Cellular and Molecular Biology. Laboratory Research.

### ME.800.803. Biomedical Science Practicum (BME).

### ME.800.804. AstraZeneca Scholars Thesis Research.
Graduate students engaged in the MedImmune Scholars Program will spend 50% of their time during their thesis work at MedImmune which is located in Gaithersburg, MD. This program enrolls students from multiple departments / graduate programs and there will be interdivisional registrations (WSE, SPH, KSAS) for this SOM course. Registration for this course is restricted to students who have been selected for the program.
ME.800.805. BCMB Quantitative Biology Lab.
Weekly session provide hands-on work to reinforce and further develop computational concepts and problems students learn didactically in the BCMB core courses during the same period. Experimental design, and concepts of rigor and reproducibility will also be emphasized.

ME.800.806. BCMB Computational Biology Bootcamp.
This intensive one week course is meant to immerse student in computation, and to provide them with the foundational tools to be able to apply modern computational techniques and appropriate statistics to their data.

ME.800.807. Research in Biomedical Science.
Research course for students in the Crossdisciplinary Program for Biomedical Sciences (XDBio)

ME.800.808. Physiology and Sensory Transduction.

Short elective course with a mix of lectures, readings, discussion, and short assignments on the biology of coronaviruses, potential treatments, therapeutic mechanisms, and contributions by the Johns Hopkins community to deal with the COVID-19 pandemic. Topics include host-pathogen interactions at the molecular, cellular, and immune/organismal levels, vaccines, and public health strategies.

ME.800.900. Experiential Learning Practicum Course.
The PDCO Experiential Learning Practicum offers PhD students and postdoctoral fellows the opportunity to gain experience in research-related careers in various sectors via externship opportunities (short-term opportunities with < 10 hours/week time commitment). Through these opportunities, participants will build both technical and non-technical skills that have the potential to aid them in research-related settings. Students will be expected to contribute to the project as outlined in the externship description and meet the stated expectations of the externship host site. Students will be evaluated based on an evaluation submitted by the externship supervisor at the conclusion of the externship.