Terp Young Scholars 2020—Course Descriptions

School of Architecture, Planning, and Preservation

Architecture—ARCH150: Discovering Architecture (there is an additional $110 course supply fee)
If you dream of designing buildings, bridges, or parks, discover the possibilities in this hands-on course. This hands-on course is designed to assist you in making an intelligent choice about a possible career in architecture. You’ll learn about careers in architecture, landscape architecture, and urban design. Get the chance to meet successful architects, go on guided tours of architectural landmarks, and learn basic design principles that you’ll use to complete your own design project. You’ll work on your active learning design projects in the School of Architecture, Planning and Preservation’s design studio environment and interact with graduate students in architecture while getting a taste of what it’s like to be an architecture student. Experience creative, innovative ways to view the world through architectural design thinking.

College of Arts and Humanities

American Studies—AMST204: Film and American Culture Studies
Narrative films are unique cultural and historical texts that can provide us with important insight into the societies from which and about which they are created. Analyzing specific themes presented in the films or even focusing on the production history will reveal the dynamic nature of culture. In this course, we will be using a variety of American narrative films, both mainstream and independent, as a lens through which to view significant aspects of our own culture. Specifically, we will be examining how race and ethnic identity, gender, sexuality, socio-economic class, and disability are represented through classic and contemporary American films to gain an understanding of this complex and ever-changing society. Upon completion of this course, students will be able to critically analyze films using theories, concepts, and terminology appropriate to the field of study and understand many of the specific ways in which American film speaks to and about our diverse society.
Course Requirement: Students registered in this course will need access to an electronic device with film streaming capabilities to complete homework and other course assignments.

Creative Writing—ARHU298J: Cross Cultural Perspectives in Poetry and Fiction
Immerse yourself in the writing of fiction and poetry that encourages creativity while expanding knowledge. You’ll hone your writing craft in a nurturing, interactive environment while developing skills that help uncover your own distinctive voice. You’ll read great poems and stories from across cultures and engage in related writing exercises. You’ll also refine your skill through close reading, radical revision, and the delivery of constructive criticism on peer work. Morning sessions emphasize assigned readings, writing, analysis, and discussions of craft. Students receive careful, detailed responses to their writing from both instructors and peers. Afternoon sessions are devoted to studio time spent reading and writing. You’ll share your original writing in a supportive workshop setting and discover new approaches to revision.

Philosophy—PHIL209M: Artificial Intelligence: Brains, Minds, and Machines
We are on the verge of constructing artificial systems that will rival or surpass human minds in many ways. The current world champions in chess, go, and Jeopardy are all AI-powered computers. Do these devices think? How, if at all, are they different from human minds in terms of producing intelligent behavior? Are there different kinds of intelligence? Indeed, what is intelligence and what is it to be an intelligent system? Artificial Intelligence also raises new and urgent ethical questions. How can we make sure that AI systems will respect our ethical principles when they make decisions at speeds mere humans can’t achieve or on the basis of reasoning that mere human can’t comprehend? Should we think of AI devices merely as sophisticated machines? Or are they a new form of life? What legal and moral rights, if any, should we grant them? This course will introduce students to philosophical frameworks for thinking about these issues in order to achieve a deeper theoretical and practical understanding of AI.
Anthropology—ANTH221: Forensic Anthropology
Through lectures and hands-on experience, this course will cover: Criminalistics, Digital & Multimedia Sciences, Engineering Sciences, Jurisprudence (lawyers and judges), Odontology (Forensic dentistry), Pathology/Biology, Physical Anthropology, Psychiatry/Behavioral Science, Questioned Documents, Toxicology, and General Forensic Sciences. Also covered would be such general topics as evidence, testimony, standards and real world applications of the forensic sciences such as mass disasters or human rights violation.

Criminology—CCJS105: Introduction to Criminology
This course examines criminal behavior and the methods of its study; causation; typologies of criminal acts and offenders; punishment, correction and incapacitation; prevention of crime.

Economics—ECON181: Putting a Price on the Environment
How does society balance the benefits of environmental protection and preservation against the costs? Though some might say that the environment is priceless, economists recognize that every action involves trade-offs. This course investigates sustainability through comparing costs and benefits. From this perspective, other questions arise: How can we design policies that incentivize sustainable choices? Why might usual market functioning fail to achieve sustainability? Do we need to put a price on the environment in order to protect it? How do we measure an economy’s “success”? This course explores the answers to these and other related questions from an economist's perspective.

Government and Politics—GVPT200: International Political Relations
Discover what it takes to be a world leader in this hands-on exploration of the field of international relations. Using the major theories of international relations, you’ll find out how the international system works in an intensive, interactive exploration. You’ll learn why nations go to war and why they make peace and whether the nature of the international system is inherently hostile or inherently collaborative. Moreover, you’ll consider how countries react when new issues, threats, risks, and opportunities emerge in the international arena.

MLAW Programs—MLAW298M: Mock Trial
Experience the excitement and reward of arguing, and perhaps winning your client’s case in court! Mock Trial is designed to introduce students to the key principles of trial advocacy through a “learn by doing” approach to instruction. While classes will include explanatory lectures, the emphasis will be on learning through student exercises and by students observing and analyzing the performances of others. This hands-on course will culminate in two mock trials where students will serve as attorneys and witnesses. While no one should expect to leave this class as a polished advocate ready for trial, everyone can expect to leave with a greater understanding of litigation tactics and courtroom performance. Irrespective of initial skill levels, students will leave this class with greater confidence in public speaking and advocacy. As part of the course, students will have the opportunity to engage members of the legal profession both inside and outside of the classroom. In the last week of the program, students will take a field trip to the Circuit Court for Baltimore City where they will watch a trial unfold. Thereafter, students will travel to the University of Maryland Francis King Carey School of Law where they will take a tour of the law school building and meet with representatives from the Office of Admissions. Should you apply and be admitted to the University of Maryland, College Park, this course will also prepare you to join the national champion UMD Mock Trial team when you enroll.

Psychology—PSYC221: Social Psychology
This course looks closely at the influence of social factors on the individual and on interpersonal behavior. Topics such as conformity, attitude change, person perception, interpersonal attraction, and group behavior will be discussed. Students in this class will study the psychology of persons and their relationships with others and with groups and with society as a whole. This class will also look at macro-social phenomena (e.g. social class) as they relate to the attitudes and behavior of individuals. Of special concern to psychological sociologists is how to explain a variety of demographic, social, and cultural facts in terms of human social interaction. Some of the major topics in this field are social inequality, group dynamics, social change, socialization, and social identity.
Psychology—PSYC354: Multicultural Psychology
What are the psychological implications of racism, sexism, homophobia and other structures of inequality in the United States? How do socio-cultural privilege and oppression influence individual and group thoughts, feelings, and behaviors? This course will take a current events focus to understanding multicultural and social justice issues in psychology with an emphasis on self-reflection, mental health, cross-cultural communication, and strategies for social change.

ENGR- Maryland Technology Enterprise Institute

Maryland Technology Enterprise Institute —ENES140: Discovering New Ventures- Startup Companies
Students explore dynamic company startup topics by working in teams to design a new venture. This multi-disciplinary course helps students to learn the basic business, strategy, and leadership skills needed to launch new ventures. Topics include learning how to assess the feasibility of a startup venture, as well as how to apply best practices for planning, launching, and managing new companies. Students discuss a wide range of issues of importance and concern to entrepreneurs and learn to recognize opportunities, assess the skills and talents of successful entrepreneurs, and learn models that help them navigate uncertainty.

Maryland Technology Enterprise Institute —BIOE160: Biopharmaceutical Production (there is an additional $90 course fee)
Ever wondered how human insulin can be made from E.coli? Since the 1980s, biotech companies have been making medical drugs using biotechnology. These companies use living cells to produce proteins, antibodies, and nucleic acids for therapeutic purposes. This course takes students through a biotechnology “campaign” where they will transform E.coli into a green fluorescent protein factory. Students work in teams, simulating a start-up biotech company. Teams will attempt to optimize expression of proteins, run industrial-sized fermenters, perform protein analysis and separations, and purify their own biopharmaceuticals, on time and under budget. This course focuses on the basics of recombinant DNA technology, as applied to biopharmaceutical manufacturing, in a classroom setting. Students will work through a “production campaign” including all key steps of manufacturing a protein product.
Course Prerequisite: Students must complete high school biology and chemistry before enrolling in this course.

School of Engineering

Engineering—ENES100: Introduction to Engineering Design
This course introduces you to engineering and the engineering design process. While working in teams to design, build, test, and analyze a number of challenging robotics-oriented projects, you’ll learn fundamental engineering analysis methods and how to apply them using software packages. Communication skills are an important part of the design process, and you’ll present your designs to fellow participants as well as faculty from the School of Engineering. Teams also use their creative and technical talents to develop their own unique team Web site. In addition to the robotics projects, you’ll build a sensing device to remotely measure temperature, program the acquisition system to take the measurements, and, finally, analyze the data that is recorded. You’ll be introduced to the various departments of the School of Engineering and have the opportunity to talk to faculty and students, tour facilities, participate in laboratory demonstrations, and get detailed information about the discipline.
Course Prerequisite: Students must complete high school chemistry or physics and algebra II. before enrolling in this course.

Engineering—ENFP102: Engineering and Fire Safe Building Designs (there is an additional $30 course supply fee)
This course will introduce students to Fire Protection Engineering (FPE). Discussions on contemporary fire safety topics are designed to raise your interest and understanding of fire, its impact on people, property and the environment and methods to mitigate the threat of fire. Students will have hands-on experiences through a set of demonstrations and a final experiment to explore fire behavior and the performance of fire safety systems. The final experiment will apply the principles of fire behavior and fire safety systems to build and test a fire safe, small-scale residence.
Course Prerequisite: Students must complete high school algebra I. before enrolling in this course.
**College of Computer, Mathematical and Natural Sciences**

**Biological Sciences Program—BSCI279E: Environmental Biology**
The environment is in the news almost daily—global warming, toxic waste, oil spills, and loss of biodiversity. How can you understand these complex topics? What is the basis for your own behaviors and decisions regarding the environment? The science of environmental biology can help you make sense of the natural world around you and your impact on it. The course will explore adaptation and natural selection; organismic, population, community, and ecosystem ecology; and human impact on natural systems. Each week will feature a day-long field trip with organized learning activities that spotlight ideas and information crucial to the course. In addition, several on-campus field activities will introduce students to local freshwater and terrestrial ecosystems.

**Biological Sciences Program—BSCI279M: Modern Medicine**
What causes disease? How do we diagnose and treat disease? This course will explore human biological systems, functions, and issues such as cancer, diabetes, obesity, and neurological disorders. We will explore the genetic, infectious and environmental causes of disease, and learn how various research laboratories on campus use modern scientific techniques to unravel these mysteries. The program will incorporate a variety of laboratory and active learning activities. Students will also explore the general principles of science.

**Computer Science – CMSC198R: Introduction to Web Programming Using HTML/JavaScript**
This course provides an introduction to the internet/web capabilities and trends, and to computer programming in the context of building simple web pages. Intended for students with no previous programming experience who wish to understand the technologies making web sites possible, this course will provide a set of practical problem solving skills necessary for the development of dynamic client-side web content.

*Laptop Requirement: Due to course content, this course requires students to bring a laptop to class. Students can bring their own personal computers to campus or rent a computer or tablet from the University of Maryland library.*

**Journalism**

**Journalism– JOUR268: Introduction to Social Media and Audience Engagement**
This class will provide students with an overview of how journalists use social media to gather information, tell stories and reach their target audience. Students will develop skills in social content creation, audience engagement and sourcing and verification.

**School of Public Health**

**Kinesiology—KNES200: Introduction to Kinesiology—Discover Kinesiology**
Take a course that really moves you! Kinesiology includes exercise physiology, biomechanics, sports psychology, movement sciences, and sports management. Learn about some of the career options that are available—physical therapy, physical education, fitness training, and sports management. You’ll learn how researchers study athletes, patients who have movement difficulties, infants and young children who are learning to move, sport organizations, and much more. Get hands-on laboratory experience and meet the scientists who work there. Interact with coaches, athletic trainers, physical therapists, sports medicine physicians, and sports management professional.