HONR OFFERINGS

SPRING SEMESTER

IGNITE YOUR IMAGINATION. FORGE THE FUTURE.

2022
HONR 19903
INTERDISCIPLINARY APPROACHES TO WRITING (2 sections)
Instructor: Dr. Daniel Froid, Visiting Assistant Professor, Honors College  
Dr. Muiris MacGiollabhui, Postdoctoral Research Associate, Honors College
Credit Hours: 3

This course is a writing-intensive course in which students learn how to find, evaluate, and use credible information, how to express themselves well in a variety of different written genres, and how to write for different audiences.  
This course meets the core requirement for written communication and *may* be used as a substitute for English 106 or 108. Consult your primary advisor.

HONR 29900
VISITING LEADERS SEMINAR
Instructor: Cara Putman, MBA and JD, Clinical Assistant Professor, Krannert
Credit Hours: 1
Every semester, our campus hosts a changing line-up of distinguished leaders from various realms, from CEOs and politicians to university presidents. This 1-credit HONR seminar offers students the opportunity to hone their ideas about leadership and to reflect on their own leadership goals by engaging the ideas of these campus guests. Students in the seminar will attend talks and events with these visitors, whose work they will engage on numerous levels, from preparatory research to final reflection. The goal of this seminar is to launch students on their own leadership paths by allowing them to analyze and reflect upon the pathways that visiting leaders have taken on their road to Purdue. Students should plan on attending some events outside of class time as part of their effort for the course.

HONR 29900
VISITING SCHOLARS SEMINAR
Instructor: Dr. Ashima Krishna, Associate Director of the Purdue Policy Research Institute
Credit Hours: 1
This 1-credit HONR seminar offers students an opportunity to explore the intellectual wealth of the Honors College Visiting Scholars Program, which is designed to bring esteemed guests from a wide array of fields to Purdue. Every semester, the college hosts a range of visitors from across the disciplines, from scientists, scholars, and artists, to activists, economists, and engineers. Students in the seminar will attend events with these scholars and engage their work and ideas. Assignments for the course will include preparing for scholarly visits by researching the background and published work of our guests, attending events in the VSP series, and interacting with the ideas of our visitors through various forms of media output. Students should plan on attending some events outside of class time as part of their effort for the course.

HONR 29900
EXPLORING PLACE: CULTURE & DEVELOPMENT
Instructor: Dr. Rhonda Phillips, Dean of the Honors College
Credit Hours: 2
The description: this course is guided research for a project based in a mid-sized town using historic preservation and culture as a basis for reinvigorating their economy and society. A field trip will be included for a long weekend end of March/early April to help develop a historic structure into a pop-up art gallery or similar as a demonstration project with the community. There is an additional fee for this course, which includes transportation, lodging, and some meals. Information about the supplemental course fee will be available soon.

Grants may be available to defray the supplemental course fee for honors college students with unmet financial need. Please direct questions about grants in support of the course fee to Catharine Patrone, Chief of Staff, cpatrone@purdue.edu.
HONR 29900
SOLUTIONS LAB GLOBAL: ITALY
Instructor: Dr. Nathan Swanson, Clinical Assistant Professor
Credit Hours: 1
This course meets March 7 – April 29, 2022
In this course, students from Purdue University (West Lafayette, Indiana) and the University of Padova (Padova, Italy) will collaborate virtually in interdisciplinary teams to identify solutions to a major global challenge. The theme for Spring 2022 is “Disinformation in Democratic Societies.” At the start of the course, students at both universities will meet together as a class to learn about the topic from a range of disciplinary perspectives through guest lectures, assigned readings, and class discussions. Students will then be divided into interdisciplinary teams with members from both universities and provided a prompt related to this year’s theme. Teams will spend several weeks of the course focused on researching, developing, and packaging their solutions, before presenting them publicly at the end of the term. In addition to increasing knowledge of the topic and improving teamwork skills, students in this course will advance in intercultural knowledge, skills, and attitudes through their international collaborative experience.

HONR 29900
TERRITORY & IDENTITY IN THE UK
Instructor: Dr. Nathan Swanson, Clinical Assistant Professor
Credit Hours: 1
This course meets January 10 – March 4, 2022
This course is only open to students enrolled in the One Country, Three Nations spring break study away program.

HONR 39900
TECHNOLOGICAL JUSTICE
Instructor: Dr. Lindsay Weinberg, Clinical Assistant Professor, Honors College
Credit Hours: 3
In this course, students will study interdisciplinary approaches to technology ethics for responding to today’s pressing technological dilemmas in a range of contexts, from healthcare, mass incarceration, and airport security, to social media, smart cities, and space travel. Students will grapple with how historical and present-day inequalities, institutional environments, decision-making cultures, and regulatory systems impact the technological design process and distribution of technology’s risks and rewards in society. We will ask ourselves whose values and assumptions about the world get baked into technological designs; how technologies shape, and are actively shaped by, distributions of power in society; and how we might consider questions of fairness, equity, and justice when it comes to the work we do in the world. This course is designed to prepare students to successfully undertake and complete a Scholarly Project in technological justice that intersects with their major.

HONR 39900
THE HOLOCENE
Instructor: Dr. Liz Brite, Clinical Associate Professor, Honors College
Credit Hours: 3
The Holocene is the geologic epoch of the last 11,700 years. It is a period of stable and warm climate that has witnessed the growth of human civilizations worldwide – all written history, cities and urban life, complex technologies, and states and empires have arisen exclusively during this period. Why? The favorable environmental conditions of the Holocene have allowed us to transform the environment and exploit its resources to an extreme degree, principally through production practices based in agriculture. In this course, we will explore this relationship between climate, environment, and the development of human societies throughout the geologic epoch of the Holocene. A principle focus will be the critical role that agriculture has played in the
development of our species and in accelerating our impacts on Earth’s ecosystems. In addition to surveying this deep history, students will engage in new knowledge creation about the Holocene through ethnographic research and writing. Together as a class, we will address the current debate about the Holocene’s end – the idea that humanity’s abilities to transform the environment have become so significant and so extreme that they are driving the Earth system into a new epoch. In particular, students will observe and consider agriculture’s ongoing evolution and impacts on the environment and its role in broader systems of anthropogenic change.

**HONR 39900**
**REPLICANTS**
**Instructor:** Dr. Katie Jarriel, Clinical Assistant Professor, Honors College  
**Credit Hours:** 3
From ancient mythology to Blade Runner 2020, the creation of artificial humans has captured the human imagination. This course asks: how do the materials we use to re-create the human body affect the way that we construct our humanity? We will examine the different materials people have used to replicate the body throughout history. The course is organized thematically by materials such as wood, wax, silicone, and digital media. This course emphasizes hands-on learning; we will cast wax masks, attend a pottery studio, and work at the Bechtel Center, among other experiential activities. The types of replicants we will study in this course range from voodoo dolls to Real Dolls, death masks to Deep Fakes, and statues to cyborgs. For the final project, you will choose a material and bring to life a replicant of your own.

**HONR 39900**
**SECURITY, TECHNOLOGY & SOCIETY**
**Instructor:** Dr. Dwaine Jengelley, Clinical Assistant Professor, Honors College  
Dr. Allison Roberts, Bement Senior Policy Fellow, Purdue Policy Research Institute  
**Credit Hours:** 3
Military and other forms of technologies used in securing society also pose ethical and deadly challenges for the local, national, or international community. In this course, we examine the political, economic, environmental, and psychological impacts of technologies used in the name of national security. We cover topics at the intersection of security, technology, and society. These include national and international weapons policies, the ethics of security measures, terrorism, and the psychological and physical effects of war. The course offers students the opportunity to interact with technological experts, national security professionals, and military service personnel (active duty or veterans). Through team-based and experiential approaches to learning, students will collaborate on the communication of security, technology and society research. Students will create position papers and policy briefs to inform policy makers and decision makers about the societal consequences of national security technologies.

**HONR 39900**
**JAZZ**
**Instructor:** Dr. Jason Ware, Clinical Assistant Professor, Honors College  
**Credit Hours:** 3
Jazz artists “speak to each other in the language of music.” In “Jazz,” we will explore the nature of this artistic conversation with many of its cultural influences, geographical variations, and temporal iterations, and we will interrogate varying facets of the social impact such a conversation facilitates. Furthermore, we will explore the musical language of jazz with its power to make collective performance stronger both within and beyond music. And we will investigate the ways in which this artists’ talk became the "talk of the town" and country as a medium through which people could break from dominant cultures. We will make sense of and process our journey by creating our own metaphorical jazz ensemble, featuring the complex and layered textures of our lives as inspiration for the note and lyric.  
**You do not need to be a musician to take this course**
HONR 39900
SPACETIME!
Instructor: Dr. Adam Watkins, Clinical Assistant Professor, Honors College
Credit Hours: 3
This course will boldly go where no course has gone before, providing students the chance to explore strange new ideas about space and time. Want to write a sequel to Interstellar or your own episode of Star Trek? Want to see how our idea of spacetime has evolved in response to religion, philosophy, and physics? Want to hear Purdue scientists talk about science fiction that matters to them? To study spacetime requires that we engage a variety of perspectives from the past and present. In that sense, HONR 399: Spacetime! is deeply historical and philosophical in its approach. The course also takes an active interest in creative processes behind scientific thought. Students will explore how arts and symbolic thought have played significant roles in scientific discoveries, including Einstein's. Students will also practice creative modes of inquiry firsthand, as course projects will be based in creative writing practices. [Note: projects will be assessed on critical and creative thinking, not artistic quality.]

HONR 39900
SOLVING THE CLIMATE CRISIS
Instructor: Dr. Anish Vanaik, Clinical Associate Professor, Honors College
Credit Hours: 3
What is the way out of the climate crisis? This course will examine the different answers that are emerging to this question in popular conversations and in policy circles. Over sixteen weeks, we will try to analyze and understand the motivations and visions behind the solutions being proposed and the key forces that speak for and against them. The course will explore a number of key themes – what are the bits of solving the climate crisis that we’ve already got a grip on? Why haven’t these been scaled up yet? Who, or what are the biggest obstacles? What kinds of solutions are being proposed by the political left and the right? What should we make of the fractures between developed and developing countries over solutions? And most broadly of all, what kind of a world do we want to build as we emerge from this crisis? In short, this course will ask big questions and proceed through the kind of deep dialogue across the sciences, social sciences, and humanities needed to address what must be the most urgent problem facing all humanity today.

HONR 39900
EXPERIMENTATION IN ART & SCIENCE
Instructor: Dr. J. Peter Moore, Clinical Associate Professor, Honors College
Credit Hours: 2
This course meets March 7–April 29, 2022
In 1956, novelist and chemist C.P. Snow published “The Two Cultures,” a short essay in which he drew attention to the widening gap between the sciences and the arts. Aside from perverting the ideals of liberal education, the accepted insularity promoted a world in which the achievements of the arts lacked pragmatic function and the advancements in the sciences lacked a moral conscious. According to Snow, the only solution was to revolutionize the educational system. Such is the goal of this class. While we tend to associate experimentation with the sciences, artists and writers have been drawing upon the language and methods of experimentation since the Enlightenment. This course will offer a survey of that history, looking at early scientific ideas of experimentation and tracing their influence on experimental artists and writers. In the end, this course carries major implications for the question of epistemology, i.e. how is knowledge produced in both the sciences and the art, and what role does experimentation play in this process. Assignments will entail working on a podcast that brings contemporary artists and scientists into conversation about creativity and experimentation. Students will also have the opportunity to work with the professor on an ongoing work of experimental writing.
HONR 39900
PROPHETSTOWN REVISITED
Instructor: Dr. Dawn Marsh, Associate Professor of History
Credit Hours: 3
The course is situated in Native American history and culture through a regional lens. The history of Prophetstown, the Tippecanoe Battle, and the eventual erasure of indigenous presence in the region will provide the laboratory through which students will engage in a hands-on research endeavor. The course will have four components we will address over the semester with multiple learning objectives. The components rely on different disciplinary contributions to this history and are loosely chronologically organized with some overlap. This course is designed to offer a multi-platform approach to explore history and memory through four thematic components. The four components bring together the intellectual themes and methodologies of history, environmental sciences, archaeology, indigenous knowledge, place-based research, public history, and historical fiction. The course emerges out of a decade of collaborative efforts across disciplines that intersect through my own research and teaching at Purdue.

HONR 39900
DRUG ADDICTION
Instructor: Dr. Craig Svensson, Professor of Medicinal Chemistry and Molecular Pharmacology
Credit Hours: 1
This course is designed to enable students to gain an understanding of current conceptions of addiction and society’s response to this affliction. The first half of the course will focus on key issues such as defining addiction, the view of addiction as a disease, whether or not addiction is a life-long affliction, the role of mental health as a factor in addiction, understanding what drives drugs use, and whether evidence supports common treatments for addiction. During the second half of the course, students will participate in several mock “Senate Hearings” designed to present opposing sides of a controversial topic in the field of addiction, such as the legalization of recreational marijuana use, increasing alcohol taxes to curb problem drinking, and the creation of legal drug injection sites.

HONR 39900
QUANTUM COMPUTING
Instructors: Dr. Birgit Kauffman, Professor of Mathematics and Physics & Astronomy
Dr. Ralph Kauffman, Professor of Mathematics and Physics & Astronomy
Credit Hours: 3
Quantum computing is a truly interdisciplinary effort, drawing on logic, physics, mathematics, chemistry, computer science and engineering. Building a quantum computer has been a scientist’s dream since Feynman came up with the idea of simulating physics with computers in a famous talk at MIT in 1981. Since the development of Shor’s algorithm in 1994, quantum computation has become a very active field of research. There are different proposed architectures for a quantum computer; first prototypes have been built already, e.g. by IBM quantum experience (hereafter called IBM-Q) and D-Wave, and they can be used by the general public. The D-wave machine is based on a concept called quantum annealing which is best applied to solve optimization problems not necessarily restricted to science. In contrast to that, the IBM-Q quantum computer relies on quantum gates much like a classical computer relies on classical gates.
The course will give an overview of quantum computing from different angles rooted in different disciplines: math, physics, chemistry and computer science. We will start by explaining the basis of quantum mechanics and mathematics needed to understand the concepts, but the emphasis will be on providing a well-rounded picture with contributions from experimental physics, algorithm theory and logic. Students will complete a final project which will either be coding a program that runs on a quantum computer or writing a paper about an aspect of current research in quantum computing.
HONR 49900  
MODERN CIVICS RESEARCH  
Instructor: Dr. Robert Browning, Professor of Political Science and Communication  
Credit hours: 3  
This is a research-based course that uses the C-SPAN Video Library as a data source for research projects around the impact policy making and industry and societal outcomes. Purdue University is home to a rich archive of C-SPAN footage of various Congressional debates and testimonies as well as Supreme Court hearings. Because the range of topics covered by Congress, the President, the Courts, and government agencies is so vast and inclusive, students of all major will be able to research an equally large range of subjects. By the end of this course, students will learn how to conduct video archival research, be more civically informed, and critically evaluate decisions made in the nation’s capital and their impact on our lived private and professional experiences. Students will also have the exclusive opportunity visit the C-SPAN Archives and also have a discussion with C-SPAN’s founder and Purdue alumnus, Brian Lamb.

Students in this course are encouraged to conceive, propose, and complete a research project that will satisfy the “Scholarly Project” requirement of the Honors College curriculum.

HONR 49900  
PROTEIN DESIGN WITH FOLDIT  
Instructor: Dr. Zahra Tehrani, Clinical Assistant Professor, Honors College  
Credit hours: 3  
The protein folding problem is a grand challenge in biology. How does a protein’s amino acid sequence dictate its three-dimensional structure? FoldIt is an online game in which players determine the most stable folded structure of hypothetical proteins that have been predicted by unique computer algorithms to perform specific functions in the cell. Students in this course will be introduced to the mechanics of the FoldIt software to fold computer-predicted proteins into their native structures as well as design novel proteins that can bind and deactivate the Covid19 spike protein.

Completion of one semester of an introductory biology course is highly recommended for students enrolling in this course.

Students in this course are encouraged to conceive, propose, and complete a research project that will satisfy the “Scholarly Project” requirement of the Honors College curriculum.