CLASS OF 2024

freshman SEMINARS

2020-2021

Office of Undergraduate Education
UNIVERSITY OF MINNESOTA
Driven to Discover™
Dear Class of 2024:

WELCOME TO THE UNIVERSITY OF MINNESOTA!

Undoubtedly, you have seen the words “Driven to Discover” around campus and noticed the “What Drives You?” posters. It’s our way of expressing what we stand for at the U of M. The University is about discovery - the discovery of a brain cap that makes it possible to control computers with only your mind, the discovery that bacteria can generate electricity, or the discovery of new technology, such as robots designed to protect troops from harm. But discovery at the U is also about the discovery you are embarking on to find your place in the world – who you are, what you value, what you aspire to be. We are here to help you with these important discoveries.

This booklet will introduce you to an exciting array of small courses designed just for you, the Class of 2024. Studies from around the country have repeatedly shown that students do well in college and enjoy the experience more when they get to know faculty members and other students. Freshman Seminars are designed to help you do just that. They are limited to 15 to 20 first year students, so you will have a real opportunity to get to know other students in your class and to interact with a faculty member who will guide you and help you make the adjustment to college.

This is a wonderful opportunity to explore new areas or to test your interest in something you might eventually choose as a major. There are no prerequisites for any of these courses – except a willingness to learn, participate, and be open to new ideas and approaches. If you are in the University Honors Program, any Freshman Seminar you take will also count as an Honors experience.

So open your mind, explore the richness the University has to offer, learn what drives our faculty, and discover what drives you!

Leslie Schiff
Associate Dean for the University Curriculum
Office of Undergraduate Education
Freshman Seminars

Freshman Seminars are small, discussion-oriented classes designed for first-year students. Faculty who teach Freshman Seminars have developed each class around their particular interests, and students are able to learn in a small class environment from an expert in the field.

What to expect in a Freshman Seminar:

• A small class (15-20 students) of first-year students where it is easier to talk, participate, and engage in class discussions
• Faculty who create these courses specifically for first-year students and are excited about the subject
• An opportunity to work with faculty who will help you better understand how to succeed academically at the University of Minnesota

As you prepare for Orientation, you are encouraged to look through Freshman Seminars for ones that may interest you. If you have questions about any of the Freshman Seminars, contact your academic advisor.
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<td>The Ordinary Business of Life: Issues in Business, Government, and Macroeconomics</td>
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<td>HIST 1921</td>
<td>Brexit and Decolonization: Empire, Race, and Belonging in the 21st Century</td>
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<td>POL 1911</td>
<td>Dictatorship and Violence in Central Asia and Afghanistan</td>
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### Psychology

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<tr>
<td>JOUR 1912</td>
<td>Winning People Over: The Art and Science of Persuasion</td>
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<td>MKTG 1918</td>
<td>Finding Happiness In The Age Of Consumption</td>
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<td>PHYS 1910</td>
<td>What is Time?</td>
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<td>PSY 1923</td>
<td>The Freshman 15: Stress and Health Management for College Students</td>
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### Science and Technology

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<td>AEM 1301</td>
<td>Ballooning: Design, Build, and Fly</td>
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<td>AEM 1303</td>
<td>Aircraft: Design, Build, and Fly</td>
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<td>BIOL 1904</td>
<td>Innovation and Imagination in Ireland</td>
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<td>BIOL 1942</td>
<td>Science and Politics of Genetics and Reproduction</td>
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<td>CHEM 1902</td>
<td>Chemistry to Modern Medicine: Changing the Way We “Dye”</td>
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<td>CHEM 1911</td>
<td>Quantum Mechanics and Popular Philosophy</td>
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<td>CHEM 1907</td>
<td>Chemistry in the Kitchen</td>
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<td>CHEM 1901</td>
<td>Chemical Engineering and Society</td>
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<td>GCC 1906</td>
<td>Rare Diseases: What it Takes to Be a Medical Orphan</td>
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<td>Ways of Knowing Science</td>
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<td>GEOG 1913</td>
<td>Living with Innovation</td>
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<td>PHIL 1914</td>
<td>Space and Time: from Aristotle to Einstein</td>
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<td>PHYS 1905</td>
<td>Aurora: From Myths to Modern Science</td>
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<td>PHYS 1906</td>
<td>What is Space Weather (and why should you care?)</td>
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<td>PHYS 1911</td>
<td>How Likely is Extraterrestrial Life?</td>
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<td>PSY 1914</td>
<td>What is the Human Mind?</td>
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Humans, like all other species, are an integral part of the ecology of the earth. We display a series of adaptations that allow us to eat, grow, find mates, and raise offspring. How have human adaptations been modified over time; for example, as we spread out of Africa beyond the low latitudes? How do our adaptations change as we change our own environment? For humans, our interactions with the environment include a high dependence on sociality, technology, agriculture, trade, and today, fossil fuels. We will consider changes in human diets, methods of food acquisition, geographic distribution, and social structure from the earliest ape-like humans through the Stone Age on into the present day to explore how long humans have made a significant impact on the environment.

Martha Tappen is a paleoanthropologist with research interests in the reconstruction of early human behavior and environments, especially from the time of the earliest Stone Age. She has worked with hunter gatherers in the Congo, and on archaeological sites in France, the Congo, Ethiopia, and post-soviet Georgia. Currently, she is a principal investigator at the Homo erectus site of Dmanisi, Georgia, the earliest fossil site found out of Africa.
The Language of Business

ACCT 1911
3 Credits
Fall 2020, Spring 2021

Kendell Poch
Accounting Department

Have you ever wondered why Tesla’s stock price tripled in a 3-month time period? Why did Toys R Us go bankrupt? Why does Apple hold on to $200 billion of cash? Why is Snapchat still not profitable yet?

All of these questions can be answered by looking at a company’s financial statements!

Financial accounting is often called the language of business as it is the language that companies use to communicate their financial information to various parties. Regardless of whether you want to work in the field of accounting and finance, become a manager at a company, or just dabble in stock market investing, understanding how a business works, how managers make decisions, and how to analyze financial statements will be hugely beneficial for your future.

This seminar will start by exposing you to basic business terminology and concepts, as well as analyzing how businesses make decisions. Next, we will focus on the ABCs of financial statements and financial analysis. Finally, we will apply these principles to real-life case studies and discussions that explore companies such as Spotify, Tesla, Uber, Netflix, Starbucks, Apple, Snapchat, and more!

Kendell Poch teaches MBA and undergraduate accounting courses at the Carlson School of Management. She has experience as an accounting and consulting professional, having previously served in various roles within the management consulting industry and most recently in her role as a CPA at KPMG. She received both her MBA and MBT from the Carlson School.

She also serves as the undergraduate coordinator for the accounting department, and was a recent recipient of the Carlson School outstanding teaching award. She is an avid Gophers fan and enjoys spending time with her family at the football games.
Caveat: If in-person activities are limited during the Fall 2020 the topic/focus of this freshman seminar is subject to change, though it will definitely still be aerospace. If this becomes necessary, details will be announced at the start of the semester.

Dr. James Flaten is the Associate Director of NASA’s Minnesota Space Grant Consortium, a higher education program whose goals include promoting interest in space science and space exploration. Though housed in the Aerospace Engineering and Mechanics (AEM) department, Dr. Flaten’s formal academic background is actually in experimental physics and he has also taught many physics, astronomy, and basic engineering classes in the past. He particularly enjoys using high-power rocketry and helium-balooning (stratospheric free ballooning and lighter-than-air RC airships) as low-cost means of giving students hands-on experience building and flying hardware.

Chris Regan is Director of the Uninhabited Aerial Vehicle (UAV) lab as part of the Aerospace Engineering and Mechanics department. The UAV lab has developed and operates several small, uninhabited aircraft in support of a range of research activities. He previously worked at the NASA Dryden Flight Research Center conducting and leading research in controls and dynamics including aircraft modeling, aircraft flight control, and flight test techniques. Chris worked on many aircraft ranging from small UAVs, including X-48B and X-56A, as well as military transports and fighter based research aircraft.
The journey of food in your body-digestive physiology

ANS 1901
3 Credits
Fall 2020

Milena Saqui-Salces
Animal Science

In this course we will review how the digestive system works, and how nutrients are taken up from food by our bodies. We will talk about fast and slow food, diets, bugs, and poop. We will run some fact-checking to popular internet claims and guide you on how to distinguish well-supported information from bogus. You will also learn to search and read scientific papers and the basics of technical writing in the field.

Dr. Saqui-Salces has worked on digestive physiology for about 15 years. Dr. Saquie-Salces research focus is the role of diets and nutritional supplements on the modulation of digestive function and health. Dr. Saqui-Salces also teaches Nutritional Physiology (graduate level) and Thesis and Research Proposals writing (under and graduate levels).

Changing Human Adaptations

ANTH 1911W
3 Credits
Fall 2020

Martha Tappen
Anthropology

Humans, like other species, are integral to the ecology of the earth. We display a series of adaptations that allow us to eat, grow, find mates, and raise offspring. Do humans have a fundamental ecological niche? How have humans adapted to climate change over time and space, for example, as we spread out of Africa, into Eurasia and then into the Americas? We consider how climate, environmental, and habitat reconstructions are made by scientists; and how diets, food acquisition strategies, geographic distribution, and social structure are known to paleoanthropologists. We consider changes in the human gut, tooth size, body size, and social behaviors. We also explore how long humans have made a significant impact on the environment, via hunting and overhunting, planting food, population growth and greenhouse gas emissions. When did the "Anthropocene" begin?

Martha Tappen is a paleoanthropologist with research interests in the reconstruction of early human behavior and environments, especially from the time of the earliest Stone Age. She has worked with hunter gatherers in the Congo, and on archaeological sites in France, the Congo, Ethiopia, and post-soviet Georgia. Currently, she is a principal investigator at the Homo erectus site of Dmanisi, Georgia, the earliest fossil site found out of Africa.

The election of the "squad" of Alexandria Ocasio-Cortez, Ilhan Omar, Ayana Pressley, and Rashida Tlaib signaled a new era of progressive and diverse political leadership. Yet these women's unapologetic efforts to demand an accounting on behalf of the American people resulted in vociferous attacks by both conservative and liberal pundits. This backlash has a long history where women in power have been labeled pejoratively as demanding, as vindictive, as power-hungry, as monsters. Angry men are seen as righteous (Brett Kavanaugh), while angry women are "nasty" (Hillary Clinton). This course explores the relationship between women, rage, and politics. We consider what it means to make and claim space as women of color in politics. We look at how rage, women's rage, white rage, and rage against women gets mobilized to cement and/or combat racism, xenophobia, and misogyny. The course reframes women's rage as intrepid and redemptive, capable of sparking change during this political moment.

Bianet Castellanos is an associate professor in American Studies. Trained as an anthropologist, her research examines the social, economic, cultural, and legal barriers that define gender, race, and class in the Americas. She teaches courses on politics and popular culture, immigration, Indigenous urbanism, and Latinx studies.

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From “O Brother Where Art Thou?” to “12 Years a Slave”: American Cinema and American Roots Music

ANTH 1914W
LE: DSJ
3 Credits
Fall 2020

Gloria Raheja
Anthropology

This seminar focuses on the ways in which popular culture (movies and other visual media) presents and comments upon southern American “roots” music. Although the music had deep roots in the American past, it also underwent dramatic transformations with the coming of industrial capitalism to the South and as a result of the commercial recording process itself, especially in the 1920s. This music continues to shape popular music today, and it continues to be a focus of cinematic attention. In this seminar we will focus on three sets of issues. First, we will consider the music in terms of the historical contexts that shaped it. Second, we will consider the question of how popular cinema and documentary films interpret (in sometimes problematic ways) this music, and what the politics of those representations might be. Third, we will attempt to understand musical genres and the movies in which they are featured in relation to the production of race, class and gender, and the experience of inequality in the United States.

The Ordinary Business of Life: Issues in Business, Government, and Macroeconomics

APEC 1905
3 Credits
Fall 2020

Gary M. Cooper
Applied Economics

The world of economics is sometimes referred to as the study of the ordinary business of life. In this course we will discover, reflect on, and teach ourselves about a selected group of topics in the fields of business management and economics. While the first quarter of our meetings will be on business and economic history to provide context (the “Economic Revolution,” the Federal Reserve System, and the role of government in the economy), the second quarter of class will analyze macro issues related to the domestic and world economies (economic growth, income inequality, the New Economy, and globalization). The third and fourth quarters of our time together will be micro-related.

As part of this class, we will investigate the fields of leadership and business ethics through a series of readings and films. In addition, throughout the term some of our class discussions will be dedicated to helping you make your transition to and navigation of the University a smooth one.

Gary M. Cooper is a Senior Academic Advisor in the College of Food, Agricultural and Natural Resource Sciences and a Teaching Specialist in the Department of Applied Economics. He has received university teaching and academic advising awards for his work with students and faculty.
Photographing the University Community

BIOL 1912
2 Credits
Fall 2020
Alex Lange and Robert Roon
Biochemistry, Molecular Biology, Biophysics

This seminar will provide students and faculty an opportunity to explore the art of photojournalism and/or documentary photography. Students and faculty will take photographs on the University campus or the surrounding neighborhoods and then each person will assemble their photographs into a coherent essay. The seminar will include social themes, and will have a strong writing component, as well as the obvious focus on photography.

Alex Lange received his Ph.D. in nutritional biology from Cornell University. His research interests include diabetes, metabolite sensing and signaling, and metabolic enzyme regulation.

Robert Roon is a veteran of more than 45 years of university teaching in the area of biochemistry. His eclectic interests range from neuroscience to Northwest Coast Native American Art. One guiding principle of his life has been the firm conviction that man shall not live by bread alone. That phrase from Matthew 4:4 has a non-literal meaning that transcends any specific religion. It suggests that in order to live a healthy and productive life, it is essential to have some creative outlet that connects us to our biological heritage. This runs contrary to the current tendency to interact with others and with the larger world via electronic venues.

Innovation and Imagination in Ireland

BIOL 1904
3 Credits
Spring 2021
John Ward
Plant and Microbial Biology

Sundials, color photography, stethoscopes, iPhones. Our world is continually shaped by great ideas. This class will explore components of education, culture, and business management that cultivate creativity and innovation. We will study current examples of success and failure. As a class we will move beyond our natural constraints and travel abroad over Spring 2021 break to Dublin to understand the rich Irish history of innovation across disciplines, including art, science, and technology. Dublin is the emerging “heart of technology in Europe” and home to a slew of start-ups and to proven juggernauts such as Google, Facebook, and Amazon. Learn why and how this shift from an agricultural-based economy has occurred.

John Ward is a professor in Plant and Microbial Biology and Associate Dean for Undergraduate Education in the College of Biological Sciences. He teaches Plant Cell Biology and has previously taught study abroad courses. Dublin is one of the centers of innovation in Europe. Dr. Ward is excited to share Ireland’s history, culture, literary tradition, politics, etc. with students in the context of their effect on innovation and imagination.

WHY BEFORE HOW: Thriving in a World of Increasing Expectations

BA 1919
3 Credits
Fall 2020
Vlad Griskevicius
Marketing

We all want to thrive. But many of us are also feeling anxious and stressed out. Whether it’s dealing with difficult people or facing pressure to be successful and extraordinary, life today is not easy. This course offers the space to be yourself and investigates timeless guidance for creating a life that is meaningful, joyful and fulfilling.

Instead of relying on life hacks and shortcuts to answer “How do I succeed?” we will first ask “Why am I doing this?” By better understanding ourselves, our lives and the minds of others, we will build skills for increasing our self-awareness, emotional agility, resilience, perspective-taking, and communicating with others. Following Friedrich Nietzsche’s wisdom that those who have a “why” can overcome any “how,” this class will prepare you to chart your path with purpose and overcome the inevitable obstacles that lay ahead.

Vlad Griskevicius is a professor at the Carlson School of Management. He has an extensive background in psychology, communication and the evolutionary roots of modern behavior. He currently serves as chairperson of the marketing department and is co-author of The Rational Animal, a book about how our ancestral past shapes everyday decisions. He finds joy in learning, mentoring and spending time with his family and four children.

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Understanding the Evolution-Creationism Controversy

BIOL 1913
1 Credits
Fall 2020

Randy Moore
Biology Teaching and Learning

This seminar has two goals: 1) to help you succeed at the University of Minnesota, and 2) to help you develop your own understanding and appreciation of the evolution-creationism controversy. We’ll discuss the many aspects of the evolution-creationism controversy, including its history, legacy, relevance, and key people. We will also discuss a variety of issues related to the controversy, including those involving court decisions, public opinion, racism, politics, etc. Many people are emotional and opinionated about the evolution-creationism controversy. Although this seminar is not focused on opinions, we will talk about why so many people feel strongly about this issue, and why the controversy persists. You will be interested in—perhaps surprised by—what you learn. Each week we will also talk about concerns and/or questions you have about life at the University. Although I can’t fix your parking tickets, I can offer advice about what you’ll need to do to succeed here.

Randy Moore has written many papers and books about the evolution/creationism controversy, and likes to use a variety of teaching styles and other approaches to learning, such as field trips.

Genomics in Your Current and Future Life

BIOL 1915
1 Credits
Fall 2020, Spring 2021

Perry Hackett
Genetics, Cell Biology, and Development

In this seminar, DNA and genomes will be discussed in many contexts, including medical science (diagnosing a disease and finding miracle cures), crime scene investigation, ethics, the modification of life at every level on the planet, etc. Students will discuss their thoughts on a variety of controversial issues both online and in class. In addition to learning about how our understanding of DNA and genomes has infiltrated every aspect of society, students will develop their process of thinking about complex problems by writing short opinions and evaluating those of others in class.

“Clickers” are used intensively in the course to determine how participants feel about certain positions on controversial subjects and to stimulate discussion of different points of view. All reading material will be furnished online, but students must buy their own clicker from the bookstore or elsewhere.

Perry Hackett is a professor of genetics, cell biology, and development. His career has focused on retooling genomes from bacteria to humans. He is especially interested in conveying to students the awesome possibilities of modern genetics and the importance of using data to find answers to the important questions that science raises.

Experimental Evolution

BIOL 1917
1 Credits
Fall 2020

Mike Travisano
EEB

Life originated over four billion years ago. Since that time, evolution has shaped living systems, generating tremendous biological diversity.

Experimental evolution is a dynamic approach to investigating life, examining how and why biological systems change over evolutionary time. We will focus on how experimental evolution is done, what we have already learned, and the bright future for new research. Topics will include adaptive radiation, infectious diseases, the genetic basis of phenotypes, speciation, and the evolution of multicellularity. Readings will be primary literature and review articles, to be discussed every meeting. Toward the end of the semester, students will propose their own experimental evolution study based upon the readings, class discussions, and meetings with faculty.

Mike Travisano studies the origin of biological complexity using experimental evolution with microbes. Their current research is funded by NASA for understanding the origins of life.

Evolutionary Perspectives on Agriculture and Human Health

BIOL 1918
1 Credits
Fall 2020

Ford Denison
Ecology/Evolution/Behavior

Crops, humans, pests, and pathogens have evolved and continue to evolve, largely by natural selection (nonrandom differences in reproduction and survival among random genetic variants). Weeds and insect pests readily evolve resistance to our control methods, from crop rotation to chemical pesticides. Human pathogens evolve resistance to antibiotics. Can we slow such harmful evolution? Also, can the evolutionary history of crops help guide plant breeding? Can our own evolutionary history suggest ways to improve health-care in humans? In alternate weeks, students will discuss an assigned article or video and then find a related scientific journal article and explain one figure from the article. Grades will depend in part on courteous and insightful questions and comments among students. This course will be offered remotely via Zoom at a scheduled time. Personal interaction in this course is required through audio and video using Zoom. Short presentations by students will use Share Screen.

Ford Denison is an agricultural ecologist with a long-standing interest in evolution. He is the author of a book titled “Darwinian Agriculture” and a journal article. Past evolutionary trade offs represent opportunities for crop genetic improvement and increased human lifespan. Work in his lab is focused on the symbiotic interaction between legumes and the root-nodule bacteria that fix nitrogen.
The Nexus Between Art and Biology
BIOL 1921
2 Credits
Fall 2020

Robert Roon
Biochemistry, Molecular Biology, Biophysics

This seminar will explore the many and diverse interactions between art and biology. The topics covered range from the portrayal of biology in classic art, to the use of artistic venues for studying and remediated environmental problems, to the utility of photography, painting, sculpture, and other art forms to explore levels of biology ranging from molecular and cellular structures to landscapes. The course includes hands-on creation of artistic biological objects. Topics will be explored using recorded media and presentations by students, the instructor, and invited speakers to cover novel topics at the art/biology interface.

Robert Roon is a veteran of more than 45 years of university teaching in the area of biochemistry. His eclectic interests range from neuroscience to Northwest Coast Native American Art. One guiding principle of his life has been the firm conviction that man shall not live by bread alone. That phrase from Matthew 4:4 has a non-literal meaning that transcends any specific religion. It suggests that in order to live a healthy and productive life, it is essential to have some creative outlet that connects us to our biological heritage. This runs contrary to the current tendency to interact with others and with the larger world via electronic venues.

Biological Wonder to Scientific Discovery
BIOL 1925
1 Credits
Spring 2021

Cheryl Scott
Biology, Teaching and Learning

"In the field of observation, chance favors only the prepared mind." Louis Pasteur

When exploring the beauty and wonder of the natural world, scientists must unleash their creative side. For example, if you are a scientist and have a history of experiments that have been conducted, the lessons from those past experiments may help you to succeed in the new experiment. This is especially true if you keep an open mind when you get an unexpected result. The primary literature, small group activities and class discussion will be used in this course to explore how biological wonders have turned into scientific discoveries. Molecular biology will be emphasized, but all biological science topics are open for discussion.

Cheryl Scott is a professor in the Biology, Teaching and Learning Department, and she loves to teach science. Science is a discipline where concepts build on one another to ultimately provide a complete understanding of the subject matter. Hypotheses are proposed, and scientists work independently to test these hypotheses, which further contribute to the body of knowledge surrounding an area of study. Dr. Scott believes that the role of the professor is two-fold. The professor must impart information to the student but more importantly, the professor must show the student how to obtain knowledge independently. It is through the ability to discover new things that you can truly enjoy science.

Entanglement of genomic and environmental influences on traits of organisms
BIOL 1926
1 Credits
Fall 2020

Ruth Shaw
Ecology, Evolution and Behavior

Genetic determinism, a view that variation in traits is overwhelmingly due to genetic differences among individuals, has a deep history in biology. Despite many direct, experimental demonstrations of major effects of environmental conditions on many traits, emphasis on genetic effects predominates today, especially in the popular press. Through readings and discussion, we will explore the joint roles of genome and environment as influences on traits, and we will consider implications for fields of biological research and also for society.

Ruth Shaw is an evolutionary geneticist who studies contemporary evolution in wild plant populations, focusing on prairie plants of Minnesota and their capacity for ongoing adaptation in the face of severe fragmentation of their populations and rapidly changing climate. She has served in leadership roles in the EEB department and in the Society for the Study of Evolution, including as Editor in Chief of the journal, Evolution.

The Greatest Benefit to Humankind: the Nobel Prize and Where Good Ideas Come From
BIOL 1927
1 Credits
Fall 2020

Nikki Letawsky Shultz
CBS Student Services

Through studying the Nobel Prize, the people and the research behind them, we’ll consider where good ideas come from and some of the best ideas that have led to the greatest benefit to humankind. The history of the Nobel Prize is filled with societal changing ideas, but it is also filled with drama and scandal! We’ll consider who has been chosen to receive a Nobel Prize and why, research awarded the Nobel Prize that has later been disapproved, and discuss how the Nobel Prize selection might be adapted for the future. Students will examine innovation across a variety of disciplines and consider how solutions to problems facing society require creativity, collaboration, and new ways of thinking through activities designed to improve your creative thinking. Classwork will involve discussion, group work, writing and an in-class presentation.

Nikki Letawsky Shultz is Assistant Dean in the College of Biological Sciences. In this role, she oversees academic advising, career development, student engagement and learning abroad programs, and works closely with faculty leadership to support the development of the undergraduate curriculum. She teaches courses in leadership and learning abroad seminars in Ireland and Sweden that focus how environments foster innovation and creativity. Nikki received her Ph.D. from the University of Minnesota and is originally from Edmonton, Alberta in Canada.
Science and Politics of Genetics and Reproduction

BIOL 1942
LE:TS
3 credits
Fall 2020

Murray Jensen
Biology Teaching and Learning

In this seminar, students will read, discuss, debate, and generally engage with a myriad of issues surrounding the science of genetics and the application of revolutionary technologies to human reproduction. Students will explore topics and controversies relating to the past, present, and future of human sexual activity and human reproduction, and how reproductive technologies (such as in vitro fertilization) have helped shape our modern society. Through the use of both fiction and non-fiction literature, students will learn the details of current scientific breakthroughs such as “designer babies.” This seminar aims to engage students in an exploration of their personal beliefs about the roles of science, the government, and also religious institutions on human reproductive rights.

Murray Jensen is a Horace T. Morse Distinguished Teaching Professor in the Department of Biology Teaching and Learning. His teaching areas include entry-level biology, human anatomy and physiology, and graduate level courses in STEM teaching and learning. His research areas focus on developing teaching strategies within active learning environments, and in 2007 he earned the Society for College Science Teachers Outstanding Undergraduate Science Teacher Award.

Ideas Worth Spreading: Digging into TED Talks

CHEM 1901
3 Credits
Fall 2020

Christy Haynes
Chemistry

TED talks are among the most widely available forms of intellectual discourse. In these short oral presentations, speakers share thoughtful and thought-provoking insights on a range of topics. In this course, we will focus both on discovering our own passions and how to communicate these passions effectively to a broad audience.

Christy Haynes has been a member of the Chemistry faculty at the University of Minnesota since 2005. She earned her Ph.D. at Northwestern University and was a NIH postdoctoral fellow at the University of North Carolina, Chapel Hill before coming to UMN. She has taught graduate and undergraduate courses including this freshman seminar, general chemistry, analytical spectroscopy, and process analytical chemistry. Her research interests include single cell measurements relevant in immunology and toxicology as well as biomaterials development.

Chemistry to Modern Medicine: Changing the Way We “Dye”

CHEM 1902
2 Credits
Spring 2021

William Pomerantz
Chemistry

Chemistry has evolved from a field based on scientific curiosity and inquiry to a central science that continues to impact our daily lives with life-saving medicines and high-tech materials. The personal narratives that led to these discoveries are both exciting and informative about how we view this science in its current form. To provide a foundation for understanding the chemistry that affects our everyday lives, this course will discuss the stories behind several landmark discoveries, from the foundational work in synthetic dyes that color our clothes, to the search for Ehrlich’s “magic bullets” that led to the first antibiotics and anti-cancer drugs. Course content will be focused around excerpts from written texts, invited speakers, inspirational TED talks, and interactive hands-on exercises will also be incorporated into our exploration uncovering the wonders of chemistry and its impact on our daily lives. No advanced chemistry background is required.

William Pomerantz has been a member of the Chemistry faculty since 2012 and an affiliated faculty member in the department of Medicinal Chemistry since 2014. He is a Presidential McKnight Fellow and Cottrell Scholar. He earned his Ph.D. in organic chemistry at the University of Wisconsin-Madison in 2008 and was an NIH postdoctoral research fellow in chemical biology at the University of Michigan. His scientific interests bridge the disciplines of chemistry and biology for creating new technologies for drug discovery. His favorite element is fluorine.

Chemistry in the Kitchen

CHEM 1907
2 credits
Fall 2020

Janie Salmon
Chemistry

Cooking is a widely-known (and widely-appreciated) application of chemistry. In this course, we will discuss the chemical principles behind topics such as nutritional value of food, the role of gluten in baking, caramelization/roasting, and molecular gastronomy. Relevant concepts from biochemistry, neuroscience, and materials science will also be addressed.

Janie Salmon has been teaching at UMN since 2012. She earned her B.S. at Kansas State University and her Ph.D. at the University of Arizona. She regularly teaches Chemical Principles I and II (CHEM 1061/1062), Organic Chemistry I (CHEM 2301) and Advanced Inorganic Laboratory (CHEM 4711W).
One may argue about its causal role in these matters, but there is no doubt that the language of quantum mechanics has provided a powerful new set of metaphors with which to express our understanding of ourselves and our place in the overall scheme of things. We will begin with an introduction to some of the basic ideas of quantum mechanics, including the uncertainty principle and wave/particle duality, and discuss some of the quantum paradoxes that highlight the counterintuitive nature of these concepts. We will then go on to discuss the reflection of these ideas in popular books, articles, and web sites concerning religion, mythology, and philosophy.

Doreen Leopold and her research group use anion photoelectron spectroscopy to study the structures and reactivities of transition metal clusters and organometallic radicals in the gas phase. She has been a member of the Chemistry faculty since 1986, and frequently also teaches "Chemical Principles II" (Chem 1062) and "Introduction to Quantum Mechanics and Spectroscopy" (Chem 4502).

Valerie Pierre has been a member of the Chemistry faculty since 2007. She earned her Ph.D. at the University of California, Berkeley and was a postdoctoral fellow at the California Institute of Technology before coming to UMN. Her research group develops metal complexes to solve medical and environmental problems such as microbial infections, dialysis, and sustainable remediation of lakes and rivers.

Kevin Dorfman has been a member of the Chemistry faculty since 2007. He earned his Ph.D. at the University of California, Berkeley and was a postdoctoral fellow at the California Institute of Technology before coming to UMN. His research group develops metal complexes to solve medical and environmental problems such as microbial infections, dialysis, and sustainable remediation of lakes and rivers.

The goal of this freshman seminar is to provide students with a background on what chemical engineers do and how their skills are being employed to address some of the most pressing technological issues in society today.
Performing Latina/o/x Identities: Media, Art, and Popular Culture

CHIC 1912
LE: DSJ
1 credit
Fall 2020

Dr. Gabriela Spears-Rico
Chicano/Latino Studies and American Indian Studies

What are the most popular representations of Latinos in mainstream media? How are stereotypes about Latinos perpetuated by the media? How do scholars in various fields, such as Communications and Latina/o Studies, critique one-dimensional images of Latinos in the media and in popular culture? How do Latinos challenge stereotypical portrayals and represent themselves when they create their own art or media? How does the intersection of ethnicity, gender, sexuality and class inform media representations and Latina/o/x-created art-forms? With these questions in mind, this course explores the representation of Latinos and Latinas in the media and how Latinas and Latinos represent themselves in mainstream, independent, and social media when they have creative control.

Students learn how Latina/o identity has been portrayed in popular and in independent media, in politics, in activism and social movements. By engaging with scholarship on media representation, students learn to identify the major stereotypes of Latinos in television, film, and news media. Students learn to differentiate between stereotypes and efforts towards self-representation produced by Latinos. The course will incorporate performances and workshops led by locally and nationally-renowned Latina/o artists.

Children and Other Talking Animals: Animal Tales in (Mostly) Children’s Literature

CI 1908
LE: CIV
3 Credits
Fall 2020

Marek Oziewicz
Curriculum/Instruction

Humans and animals coexisted for millennia until humanity exiled itself from nature in order to rule it. In this course we look at the tradition of animal tales as the never-entirely-suppressed memory of this kinship and a hope for our future. We explore how animal tales have been used through the ages to reflect diverse ethical conceptualizations of the human relationship with animals and the natural world. We study the connections between children and/ as talking animals. We read a range of animal tales and consider their meanings for the environmentally threatened global world.

Marek Oziewicz discovered books as a child and was never the same afterwards. He decided early on that he was going to be a wizard. After years of practice the spell worked or backfired (tough call!) and he became the Sidney and Marguerite Henry Professor of Children's and Young Adult Literature at the University of Minnesota. If not on campus, he lurks in southwest Minneapolis, usually with his beastly wife and their two book-gnawing cubs.

Humor and Laughter in Interaction

CLA 1914
3 credits
Fall 2020

Polly Szatrowski
Institute of Linguistics

In this course we will investigate humor and laughter in their natural habitat, everyday talk, and analyze how language shapes and is shaped by social interaction. We will discuss basic features of humor including jokes, anecdotes, word play, and irony. Then we will study how we laugh and why we laugh. We will investigate how humor and laughter are used in spontaneous conversation for self-disclosure, irony, multimodal and intertextual humor, masculinity, demarcation, etc. We will examine conversations among friends and family, co-workers, and bilingual school children and cross-cultural couples. We will primarily focus on English conversations but the readings will relate to a variety of languages, including English, ELF (English as a Lingua Franca), Japanese, Spanish, and German.

Dr. Szatrowski is a linguist interested in how people use language in spontaneous conversation. She enjoys traveling, studying foreign languages and cultures, and eating good food.
Language, Food, and Identity

CLA 1915
3 credits
Fall 2020, Spring 2021

Polly Szatrowski
Institute of Linguistics

Language and food are crucial for defining who we are. We learn language and the tastes (textures, smells, visual features, and sounds) that we associate with food early in our lives, and both form an important part of our identities. In this course, we will address the following questions: 1) How are language, food, and identity related? 2) How does language structure recipes and menus, and how is it used in food names? 3) How is language used online and in the media, e.g., in food blogs and TV cooking shows? 4) How do we assess and identify food? 5) How does language relate to gender in the context of food? 6) How does language and food socialization influence children's identity? 7) What metaphors do we have for food? 8) How does food humor reflect our identities? We will explore the relation between language, food, and identity in spontaneous conversations among people eating a variety of foods. The class will be most rewarding for students who like to cook and/or eat, talk about food, and educate their palate.

Dr. Szatrowski is a linguist interested in how people use language in spontaneous conversation. She enjoys traveling, studying foreign languages and cultures, and eating good food.

Homer’s Odyssey and Politics

CNES 1913
LE: CIV
3 credits
Fall 2020

S. Douglas Olson
Classical and Near Eastern Studies

Homer’s Odyssey is the story of a man who returns from war to find a world much different from the one he left ten years earlier - and one that seems to have no place for him. On his way home, he lies to some, robs and murders others and, arguably through his own negligence, loses all his men. Once back on his native island of Ithaca, he re-establishes his authority as local strong-man through a mass killing of rivals. He is nonetheless emphatically a “hero” and the moral and political center of the story: what Odysseus does is (in the storyteller’s eyes, and those of most readers ever since) right and just. This seminar will use a close reading of the Odyssey, a study of Season One of the Netflix series House of Cards and of selections from Robert Caro’s biography of Lyndon Johnson, and extensive discussion of contemporary political and social events, to ask what sort of political and social world Homer’s poem imagines; how it formulates and discusses power and justice; how it encourages its audience to accept judgments about human behavior and “what is right” that may, upon reflection, seem horrifying; and what we are to make of this today.

Ever since he was a boy growing up in small-town Illinois, Douglas Olson has been interested in the world’s oldest books and the languages in which they are written. Most of his research as a Distinguished McKnight University Professor involves ancient manuscripts and lost Greek plays and poems. He still believes that Homer’s Odyssey is among the richest and most exciting stories ever told. Don’t worry if you’ve read the book before; it’s going to be different this time.

Sounds of Social Justice

COMM 1917
3 Credits
Spring 2021

Rachel Presley
Communication Studies and Writing Studies

Tom Morello of Rage Against the Machine wrote, “Music and the arts feed our souls, but a decent wage puts food on the table. Musicians, fans of music, and grassroots political organizations are a potent force to fight for social justice.” This seminar will explore the soundscapes of contemporary activism from musical lyrics and protest chants to meditative silence and sonic weaponry. Together, we will work towards understanding the interplay between sound and social justice, examining the different sonic dimensions of cultural, political, and social rights around the world. We will consider issues of race, immigration, gender and sexuality, labor, and war with an eye (and an ear) towards what protest, progress, and change quite literally sound like. This course will make use of a wide range of media and learning styles, such as listening exercises, class discussions, field trips, and multimodal research projects. Ultimately, students will explore how our sonic realities inform our understanding and response to both cultural and human rights.

Rachel Presley is an Assistant Professor of Rhetorical Theory across the Departments of Writing Studies and Communication Studies. As a critical/cultural scholar and teacher, her work is deeply invested in topics related to political activism and processes of social change, especially for Indigenous peoples around the world. She is also a “dad joke” connoisseur with three very cute (and very rambunctious) dogs: Poppy, Pepper, and Pants.

resistance and agency among Latinos and Latinas, as well as Latinx people, the gender neutral term intended to include the wide range of gender identities among people of Latin American heritage living in the U.S. By understanding the labor and politics of the food industry, uneven access to food, and society’s expectations about Latinx cuisines, we come to understand the structural forces that generate notions of race, gender, sexuality, national identity, human migration, and material inequity. Through our sharing of food, recipes, and the stories behind them, particularly the foods prepared for dias de los muertos (trans: days of the dead) we will gain understanding of our diverse experiences, looking at our past as well as our present, and the memories and structural conditions that shape our experiences. To deepen our knowledge, we learn from and engage with Latinx urban farmers and come to appreciate the Indigenous Mexican cultural values for the environment and sustainability.

A cultural anthropologist and interdisciplinary scholar of Mexican American, Chicano, and Latino cultures. Her research currently focuses on the visual arts, although she has studied Latinx spirituality and ritual, such as quinceañeras and the Via Crucis in Chicago. As a digital humanities scholar, she is creating an online platform for Mexican American arts since 1848 and several first-year students have participated in this research project.
**Analysis of the Intersection of Communication and Sport**

**COMM 1918**  
3 credits  
Fall 2020

**Jeff VanCleave**  
*Communication Studies*

Sports are something that illustrate both the best and worst aspects of society. On one hand, sports can provide common ground for those who may share few other similarities. On the other hand, sports serve to construct and reinforce the very social and cultural differences they so effectively transcend. Perhaps more than any other popular cultural arena, sports shape, illustrate, and bolster expectations for how people ought to conduct themselves depending on their racial, class, gender, and sexual identities. Consequently, sporting events, the identity performances these events reinforce, and the way media outlets represent these events and performances can expose some of the most difficult and urgent questions within contemporary cultural theory, popular culture studies, and media studies.

Focusing specifically on an American context, this course will combine theoretical and sports-oriented readings from communication scholars to discuss the roles sports play in American culture, their power to influence identity performances, and how sports are represented and consumed from live events viewed in a stadium to fantasy sports. We will examine how sports, as texts, help us to grapple with the intersections among identity, politics, media, and culture.

**Dr. Jeffrey VanCleave** (Ph. D, University of Kansas) is a Senior Lecturer in the Department of Communication Studies. His research interests focus on the intersection of communication and sport. Whether it is discussing the traditions associated with a sporting event or how a league responds to a crisis, Dr. VanCleave believes how we discuss sports and the issues associated with them can inform us on society as a whole. He is fond of saying that sports are the best reality show ever created because you never know what might happen.

**Representation in the Time of Pandemics: Culture and Politics from AIDS to COVID-19**

**CSCL 1915**  
3 Credits  
Fall 2020

**Cesare Casarino**  
*Cultural Studies and Comparative Literature*

This course starts from the premise that representation is where culture and politics meet, and it tests the hypothesis that pandemics radically transform representation. There are times in history when it takes a global pandemic to see the world in a different light: these are times when a pandemic makes us understand our place in the world differently. How and why do pandemics change the ways we represent the world and ourselves? Or, do they? To answer these questions, we will examine a great variety of representations of life, culture, and society in the time of pandemics: we will watch films, documentaries, and musicals; we will look at photography, paintings, memes, and other visual arts; we will read novels, poems, diaries, and autobiographies; we will study works of philosophy, essays of cultural criticism, and political commentary from various media sources. We will do all that by focusing on two current and ongoing pandemics: the HIV/AIDS pandemic and the SARS-CoV-2/COVID-19 pandemic. In particular, we will consider the cultural and political responses to the AIDS pandemic in the 1980s and 1990s and to the COVID-19 pandemic in 2020, both in the U.S. and worldwide: we will investigate how these pandemics are linked to systemic oppressions (e.g., racism, misogyny, xenophobia, homophobia, transphobia), how they have transformed the relation between our individual rights and our responsibilities to society, how they have impacted sex and love and friendship, how they have changed the way we think about life and death, how they have enabled new and different forms of sociality, communication, and representation. Ultimately, however, it is not only a matter of representing the world differently: it is also a question of changing it. This is where culture meets politics. The word “representation,” in fact, means not only cultural or aesthetic representation (e.g., as in the way a film represents an aspect of reality); it also means political representation (e.g., as in the way elected officials represent us in democratic governance). Pandemics radically transform representation in both these senses: they transform both culture and politics. In the end, thus, the fundamental question of the course is: how can our representations of the world help bring about the change we want in the world?

A passion for poetry has accompanied Cesare Casarino throughout his life, which started in Italy and eventually brought him to the University of Minnesota, where he teaches, researches, and publishes on a variety of topics in literature, cinema, and philosophy.
Blending Design and Culture in the United Kingdom

DES 1406W
LE: GP
3 Credits
Spring 2021

James Boyd Brent
Graphic Design

The aim of this course is to present design as an important aspect of our culture, a lens through which one can understand culture and society, and a driving force in moving culture forward, especially in times of change. Students will be encouraged to carefully observe and process the world around them, and to understand that this careful observation is also at the heart of the design process itself as it leads to better understanding of how and why things are made, planned, organized, and positioned in our world, and why these things are important. The two main themes of the course are the role of creativity in helping solve problems that arise in times of change, and how this underlying creative response to change is expressed through design.

James Boyd Brent, originally from the UK, lives and works in Minneapolis/St Paul, and is a Professor in the College of Design. Academic interests include the relationship between creativity and place, and all aspects of printing and studio culture. His studio practice centers on printmaking and painting, and his work has been exhibited and collected internationally.

Modern Chinese Fashion

DES 1902
3 Credits
Fall 2020

Juanjuan Wu
Design, Housing, and Apparel

This seminar provides a comprehensive account of modern Chinese fashion from the beginning of the twentieth century to the present day with an emphasis on the post-Mao era. It offers a concentrated study of the development of the Chinese fashion industry, fashion systems, the roles of Chinese designers and models, and luxury brands in China, as well as an analysis of the relationship between dress, gender, identity, consumption, and pop culture in modern China. Students will critically evaluate how fashion has mirrored the social and cultural changes that have taken place in modern China, and to what extent fashion has contributed to those changes. Students will reflect on the Chinese ways of fashion thinking and practices for the international community, the US, and for their own professions.

Juanjuan Wu is Associate Professor of Retail Merchandising. She has written extensively on Chinese fashion and consumption, and authored the textbook Chinese Fashion from Mao to Now. Her teaching and research interests mainly include fashion studies, as well as consumers’ responses to the interface between design and retail.

Fashion and Music

DES 1904
3 Credits
Spring 2021

Dr. Kathryn Reiley
Apparel Design

This course will explore the relationship between music, dance and fashion, looking specifically at the 20th century. It will begin with an introduction to the impact of music and dance on fashion and dress and then delve into the changes in popular music and dance throughout the 20th century which result in changes in fashionable dress. The subcultural groups known as flappers, zoot-suiters, Bobby soxers, beats, punks, and goths will be studied to understand the importance of music on each group’s dress and identity. Class sessions will include short lectures, video clips, class discussions, student presentations, and the examination of garments and objects from the Goldstein Museum of Design collections. After taking this course, students will have an understanding of the significance of dress as a marker of the identities of individual wearers within their historical context.

Kathryn Reiley, Ph.D., is an adjunct professor in apparel at the University of Minnesota and St. Catherine University and has taught Textiles, History of Fashion, Visual Merchandising, Fashion Trends, Fashion Ethics, and Dress, Society and Culture. Dr. Reiley’s research interests are dress, aesthetics, vintage clothing, sustainability, and consumer behavior and her research has been published in the journals Fashion Theory and Fashion Practice. Kathryn also works with the Goldstein Museum of Design in the College of Design and was co-curator of the exhibition Redefining, Redesigning Fashion: Designs for Sustainability.

Visual Literacy

DES 1905
3 Credits
Fall 2020

Brad Hokanson
Graphic Design

In the 21st Century, Visual Literacy is as vital for success as verbal literacy. The course will involve making, writing, and viewing in the pursuit of visual literacy, with expeditions to museums as well as discussion of the concepts of visual literacy. Through a combination of collaborative, hands on, and design activities, we will critically view, use, and produce visual content. The course will examine and apply the definitions and concepts of visual literacy, the impact of visual images on our culture, the creation and use of communication visuals, and developing critical viewing skills.

Brad Hokanson is a professor of Graphic Design with a background in architecture and art. He also teaches a course on creative problem solving where he encourages undergraduates to do something different almost every week. Outside of the University, he is active in dancing Argentine Tango.
Globalizing your Undergraduate Curriculum

EDHD 1904
Global Perspectives, International Perspective
3 Credits
Fall 2020, Spring 2021

Irene Duranczyk
CEHD

EDHD 1904 is designed to engage domestic and international students in multiple ways of thinking and doing for the expressed purpose of infusing a global perspective in their undergraduate education. Students will virtually engage with undergraduate students in Russia and China, exploring what it means to be a student and adult participant on the world stage. Student will have exposure and experiences with international students, international student organizations, service learning, Collaborative Online International Learning (COIL), Massive Open Online Courses (MOOCs), Internationalization at Home (iH), Study Abroad, and other international-based research, learning, or extracurricular processes and opportunities. This course will prepare students to embrace intercultural competency and its impact on self-awareness, social settings, course work, research projects, and career choices.

Professor Duranczyk has been collaborating with global partners in Chita, RU and various universities in Northeastern China for the past 4 years. She has participated in Collaborating Online International Learning (COIL) seminars at UMN and is a certified Intercultural Development Inventory (IDI) administrator. Professor Duranczyk balances depth and breath of engaging undergraduates from three countries as they explore a common global concern.

Asian Americans in the First Person

ENGL 1911
LE: DSJ
3 Credits
Spring 2021
Writing Intensive

Josephine Lee
English

Americans of Asian descent comprise one of the fastest-growing racial groups in the US today. While large numbers of Asian Americans have been in the US since the middle of the 19th century, it is only in the past few decades that they have been widely recognized in literature and film. What do artistic works such as memoirs, documentary films, graphic novels, oral histories, and poetry say about the experiences of Asian Americans? How do individual artists depict themselves and others as part of families, communities, or nations? How do questions of race, racism, family, identity, immigration, labor, citizenship, inequality, gender, sexuality, media stereotypes, and activism affect the perspectives and the aesthetic choices of these works?

Our readings and screenings will reference historical events such as early Chinese immigration and WWII Japanese American incarceration, as well as contemporary Asian American experiences. We will also be working with oral histories and digital stories to capture the voices and images of Asian Americans in our own communities.

Many decades ago, Josephine Lee grew up in one of the few Chinese American households in a New Jersey community that was full of immigrant families. She never read any Asian American literature until she was in college, and has been thinking ever since about what it means for Asian Americans to be writers, filmmakers, and artists. She hopes that students will share her interest in exploring the power of individual voices and writing about the significance of Asian American perspectives on life in the United States.

America in Crisis

ENGL 1912
3 credits
Spring 2020
LE: DSJ

Ellen Messer-Davidow
English

America has a long history of injustice that lives on today in diverse forms. This course focuses on current crises in our economy, society, and (presumably democratic) government. We will analyze and try to solve some of the pressing questions. How did we end up with the largest wage and wealth disparities in the developed world? Why are low-income and even middle-income families struggling to make ends meet? Why did our K-12 education system, once in first place, drop behind education in all developed nations? Why does our healthcare system cost more yet provide less access and quality than systems elsewhere? In short, what forces created the gulf between the lived experiences of ordinary Americans and the high ideals articulated in the US Constitution?

Ellen Messer-Davidow likes to analyze problems that have plagued American society in the 20th and 21st centuries, especially unequal opportunities to satisfy the basic human needs for education, employment, housing, nutrition, healthcare, and public safety. She teaches and writes about such problems to help younger generations invent themselves as leaders who can make a better future.

The Immigrant and the Refugee

ENGL 1914
3 credits
Fall 2020

Qadri Ismail
English

What is an immigrant? How does it differ from a refugee? What characterizes these subjectivities: loss, dispossession, disruption? Gain, possibility, reinvention? Are they free agents or driven by forces beyond their control? Do they represent hope or despair? This class will grapple with these questions, not sociologically, but by engaging the narratives of immigrants themselves. (So we will bracket the question of the ethics of immigration, whether it’s a good thing.) Beginning with perhaps the most influential immigrant text, the Declaration of Independence, which produces the U.S. as a nation of immigrants, we will read a variety of other U.S. texts, including: a nineteenth century Norwegian American tract advocating immigration, a contemporary gay Vietnamese American novel and the story of Ilhan Omar. All these texts, by immigrants from Europe, Asia and Africa, stage the U.S. differently. Since the country was, of course, populated before European immigration, or settler colonialism, we will also read some Native American narratives from nineteenth century Minnesota. On the question of the refugee, we will shift our focus to two paradigmatic instances globally: the mid-twentieth century European Jew and today’s Palestinian.

Mohamed Qadri Ismail has two first names: Mohamed, the name of the Prophet, his literal first name, which nobody calls him; and Qadri. After his undergraduate studies, Ismail reported on the civil war in his native Sri Lanka, in the course of which he got shot, before leaving for graduate school in the U.S. thirty years ago. Upon accepting a position at the University of Minnesota in 1997, he realized he had transformed from a Sri Lankan graduate student to a U.S. immigrant. He’s been coming to terms with that ever since.
ENGL 1918  
3 credits  
Fall 2020  

Megan Finch  
*English*  

Over the last 20 years, film, video, television and other media have increasingly depicted the end of the world/this world. Whether *in* totalitarian states in which liberal freedoms no longer exist or *after* the decimation of the natural environment, society and its infrastructures, the idea that we are headed to ruin is an entertaining prospect (in that it is suffused into so much of our entertainment-oriented media). This course analyzes these dystopian and post-apocalyptic representations in relationship to the “catastrophes” impacting various marginalized groups in the present, problematizing the futuristic settings of the world’s end.  

This course considers the modes of thought that have led and are leading to our destruction(s) and that drive our consumption of these pessimistic imaginings of the future. Together we will connect the apocalypses/dystopias that we turn away from and disavow in the present, those we pave the way for in the future, and those that we pay good money to watch.  

Finally, we will consider how marginalized subjects have imagined and theorized other modes of political and social organization within their apocalyptic presents and what, if anything, we can do about these present and potentially future catastrophes. Readings may include comics and films from Marvel and D.C., and novels and short stories by N.K. Jemisin, P.D. James, alexis pauline gumbs, and Octavia Butler.  

A native of California, Megan Finch came to Minnesota from Brandeis University, where she received an Outstanding Teaching Fellow Award, and the Rhode Island School of Design, where she was a Visiting Assistant Professor. Her primary research interests are in the literature of the American south and African American literature, particularly the relationship between literature and national identity and the impact of racial science on naturalism. Her teaching experience includes first-year literature seminars, an introduction to African American literature, and a course on the relationship between race, writing, and nation.
Prof. Karen Mesce is a member of several different Departments (Entomology; Neuroscience) and Interdisciplinary Programs (Graduate Program in Neuroscience; Institute for Engineering in Medicine). She is currently the President-elect of the International Society for Neuroethology, whose mission is to support the interests of those studying the neural bases of animal behavior. Karen began her career as a marine biologist, but soon came to the realization that her true passion was to understand how simpler nervous systems control the complex and fascinating behaviors of invertebrate animals.

Did you know that honeybees can be trained to recognize human faces or that desert ants can count their steps while walking? Have you ever thought about how an octopus knows how to match its body coloration to its marine environment and a monarch butterfly can find its over-wintering site located thousands of miles away? These are just a few examples of the extraordinary abilities that invertebrate animals display, reflecting the mighty power of their miniature brains and nervous systems.

In this course, we will discuss the fascinating behaviors of animals with miniature brains and how their numerically-limited nervous systems enable them to do what they do. We will also explore how a deeper understanding of small-brain networks can inform us about how our own brains work, and how such knowledge can be used to engineer adaptive robots, cyborgs and smart machines. This course is designed to be integrative, including disciplines intersecting with animal behavior, entomology, evolution, ecology, neuroscience, psychology and bioengineering. A major goal of this course is to widen one’s view of the importance of invertebrate animals in the field of neuroscience and gain an appreciation of the translational impact that this knowledge can have and will continue to have on our society and daily lives. Students will also be introduced to basic concepts in neurobiology and learn how small neural networks operate.

Prof. Karen Mesce is a member of several different Departments (Entomology; Neuroscience) and Interdisciplinary Programs (Graduate Program in Neuroscience; Institute for Engineering in Medicine). She is currently the President-elect of the International Society for Neuroethology, whose mission is to support the interests of those studying the neural bases of animal behavior. Karen began her career as a marine biologist, but soon came to the realization that her true passion was to understand how simpler nervous systems control the complex and fascinating behaviors of invertebrate animals.
Engineered” Insects: Science, Ethics, Society and the Environment

ENT 1908
1 credit
Fall 2020

Amelia Lindsey
Department of Entomology

What does it mean if an organism is genetically engineered? Genetic engineering has been fundamental to biological research for decades but is now making headlines as genetic approaches appear more and more in our everyday lives. Insect pests are one of the major threats to humans as they eat our food, eat our homes, eat us, transmit diseases, and wreak havoc on crops. Increasingly so, genetic engineering is used to stop these insect pests and the diseases they transmit, including Zika and Dengue. In this course we will explore how insects affect so many aspects of our life, how researchers are using genetic engineering to solve insect issues, and the pros and cons of using genetically engineered insects. The course will include interactive lectures, short readings and videos, and a variety of discussions with other students and faculty.

Amelia Lindsey is a new Assistant Professor in the Department of Entomology. She grew up sandwiched between two very different parts of California: the Silicon Valley with iPhones and Genentech, and the Central Valley with nearly $50 billion of agriculture. This led to a passion for education and helping students bridge divides between topics and communities including science, farming, and art. Research in her lab uses genetics to understand symbiotic bacteria in insects, used to manage pest ins.

Got Bees? Declines and Conservation of Honey bees and Native bees

ENT 1909
LE: ENV
3 credits
Fall 2020

Sujaya Rao
Department of Entomology

The course will include brief interactive lectures, select readings and videos for providing background and context related honey bees and native bees. Students will then explore each topic by engaging in open conversations, small/large discussions using active learning approaches such as think-pair-share, and jigsaw discussion groups, for gaining an understanding of global bee declines, and creating a plan for their promotion/conservation on the UMN campus.

Sujaya Rao, a professor in the Department of Entomology, has diverse interests related to insects and their associations with humans. In her research on bees, she has collaborated with engineers for developing a wireless chip for tracking foraging by bees, with physics professors for understanding their super attraction to particular blue monitoring tools, and with biochemists for understanding bee mortality resulting from their loyalty to some plants. A unique aspect of her bee research has been its integration with educational programs involving undergraduates and K-12 students.

Geology of Minnesota

ESCI 1902
LE: ENV
3 credit
Fall 2020

Harvey Thorleifson
Earth & Environmental Sciences

This course addresses important societal questions, such as “Where does my drinking water come from? Do I really need to buy bottled water? What should my stand be regarding major water-related environmental issues in Minnesota?” In this course, we will explore the world around us, and apply what we learn to better contribute to the solutions we will need as a society to deal with impacts on water quality and quantity due to factors such as agriculture, flood control, groundwater pumping, hydroelectric power, integrity of surface water features, interbasin transfers, invasive biota, mining, and shipping. In doing so, we will explore ways for everyone to better take responsibility for their role in optimizing public health, maximizing economic benefits, maintaining biodiversity, and protecting the integrity of surface water features on our landscape.

Emphasis will be placed on how our choices and solutions will in the long term affect our principal drinking water source—the groundwater that is hosted in ancient rocks in the north and in the deep subsurface, younger limestone and sandstone in the south, and the sediments of the most recent Ice Age from which our soils have formed. A full-day field trip planned for a Saturday in September will examine how societal choices affect our use of and protection of water resources in our rivers and lakes, and a second full-day trip on a Saturday in October will address the same issues in relation to our largest source of drinking water—our wells. Those unable to attend a field trip may instead prepare a paper.

Harvey Thorleifson is the State Geologist of Minnesota. In this capacity, he is Director of the Minnesota Geological Survey, which was established by Legislative Act on March 1, 1872 to ensure the availability of the regional geological, geophysical, and geochemical information that the people of the State require to ensure wise stewardship of their water, land, and mineral resources, and to thus realize societal benefits related to economic prosperity, public health, natural hazards, as well as appreciation and preservation of our natural heritage. He previously carried out research on gold, diamonds, offshore mapping, climate change, shoreline erosion, and water supply across much of Canada.
**Sea Change: Geological Perspective**

ESCI 1908  
2 credits  
Fall 2021

Vera Pospelova  
*Department of Earth & Environmental Sciences*

Paleoceanography is the study of the environmental history of the planet from records of ancient oceans. This seminar course is intended for first-year students who are interested in understanding how and why the planet has changed in the geologic past and learning how scientists gather evidence of environmental change from marine sediments. We will examine how to use fossils and other evidence for reconstructing sea-level, ancient ocean currents, and abrupt paleoclimatic events and their impacts on marine life, and we will discuss major ideas about the driving forces of these past changes. Understanding the geologic past is highly relevant to understanding current and future environmental change.

Dr. Pospelova is a professor at the Department of Earth and Environmental Sciences (UMN) since 2019. Previously, she was a faculty member in the School of Earth and Ocean Sciences at the University of Victoria (Canada). Her expertise is in micropaleontology and paleoceanography, and she uses microfossils and geochemical data to learn about past climates and environmental conditions.

Offered Spring 2021 semester; 2 credits.

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**Manoomin (Wild Rice) and Its Environment**

ESCI 1909  
LE: ENV  
3 credits  
Fall 2020

Crystal Ng  
*ESCI*

Manoomin (Ojibwe for wild rice) is Minnesota’s beloved state grain, and it plays a central role in both the diet and cultural identity of many Native peoples around the Great Lakes. Manoomin/wild rice is an aquatic grass that grows naturally in shallow lakes and streams, but unfortunately, due to its high sensitivity to various environmental stressors (e.g., perturbed water levels, contaminants, competitive and invasive species, and climate change), it has been experiencing progressive declines across the region. This has been alarming for Native and non-Native people for whom manoomin/wild rice holds special meaning.

In this course, students will gain an interdisciplinary perspective on how multiple components of the environment, as well as people’s relationships and actions with it, together influence the health of manoomin/wild rice stands. Understanding what supports manoomin/wild rice requires a look at local lakes to greater watershed-scale conditions; interacting ecological, hydrological, geochemical, and geological processes; and different environmental management approaches driven by diverse values. While manoomin/wild rice has served as a flashpoint between tribes and industries that impair their environment, we will learn how it can also become a rallying point for Indigenous knowledge-holders and conventional academic scientists to share different worldviews, for tribal and non-tribal policy-makers to collaboratively manage resources, and for all communities living around manoomin/wild rice waters to be better stewards of the whole environment.

Students will learn a holistic approach to studying manoomin/wild rice and its environment through readings and exercises that span disciplines. They will also participate in community-engaged learning activities that integrate perspectives beyond conventional academic cultures that can deepen our understanding of the environment. There will also be a two-night field trip during the first weekend of the semester for students to experience first-hand manoomin/wild rice waters, traditional processing methods, and Ojibwe craft-making with elders from the White Earth Indian Reservation.

Crystal Ng is a hydrogeologist who is passionate about solving societally relevant problems about the water under our feet, and understanding how that water connects with climate, vegetation, and contaminants. One of her main goals is to get undergraduate students excited about seeing that science unfold both outside and on the computer screen. When she’s not busy with science and teaching, she loves to travel and hang out with her cats.

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**Globalizing the “Middle Ages”**

FREN 1911  
3 credits  
Fall 2020

Susan Noakes  
*French & Italian*

Students in this seminar will help develop “Medieval Studies” as a part of “Global Studies.” After learning how Medieval Studies was invented, developed, and utilized in the development of European power relations from the 14th through 21st centuries, students will read, view, and discuss material about other parts of the globe during the time corresponding to Europe’s Middle Ages (ca. 500-1500 C.E.), envisaging how the integration of such material into “Medieval Studies” can change not only education, but also social and political encounters among peoples and nations today.

Ever since she was a college freshman, Susan Noakes has been fascinated by the ways power and authority distribute themselves among individuals and groups. Her studies show her how power and authority are often assigned to individuals or groups not because of their behavior, but because of perceptions of their group’s history. Often, she finds such power-bestowing or power-negating “history” traces all the way back to the Middle Ages! Working with others to find out about the time of the “Middle Ages” in Africa, Asia, and the Americas helps her better understand her place, and her home country’s, in a constantly changing world.
Sustainable Development with Environmental Justice

GCC 1903
LE: ENV
3 credits
Fall 2020

Ashok Singh
Veterinary Population Medicine

This freshman seminar will provide a clear understanding of sustainable development with environmental justice via the nexus approach. Through interdisciplinary thinking, students will learn about interrelationships between natural resource utilization, sustainable development, and environmental justice and equity. The goal of the nexus approach is to promote sustainable development with environmental justice via managing the interlinked resources, enhancing water-food-energy security, increasing efficiency, reducing trade-offs, building synergies, and improving governance across sectors.

Dr. Ashok K Singh (PhD in Biochemistry and Toxicology) is an Associate Professor in the Department of Veterinary Population Medicine, College of Veterinary Medicine. His teaching and research activity transcends across chemistry, toxicology, ecology, and consequences of human activities. He has developed and taught (i) four freshman seminars in the area of ecology, sustainability, and toxicology and (ii) a GCC course entitled 11 billion people: how long can the planet sustain humanity?

Ethics, Society, and Contemporary Biotechnologies

GCC 1904
LE: TS
3 credits
Spring 2021

Leigh Turner
Center for Bioethics

This seminar course will examine a wide range of complex ethical, social, and legal issues related to stem cells, regenerative medicine, "young blood" plasma transusions, fecal microbiota transplants, and other contemporary biotechnologies. The course will situate ethical and social analysis of biomedical technologies within domestic and global contexts. Taking a multidisciplinary approach that embraces contributions from scholarship in bioethics, health policy, health law, and social studies of medicine, the course will benefit first-year students seeking to examine ethical and social issues from a cross-disciplinary perspective. By the conclusion of the seminar, class participants will have an informed understanding of various contemporary biotechnologies and their moral, social, and legal significance.

Leigh Turner is an Associate Professor at the University of Minnesota Center for Bioethics, School of Public Health, and College of Pharmacy. Turner’s current research addresses ethical, legal, and social issues related to clinics engaged in direct-to-consumer marketing of unproven and unlicensed cell-based interventions. He also studies ethical aspects of cross-border medical travel and globalization of health care. Turner is a co-editor of “Risks and Challenges in Medical Tourism: Understanding the Global Market for Health Services” and “The View from Here: Bioethics and the Social Sciences.” He has been a visiting scholar at the Institute for Advanced Study, the University of Toronto, the University of Texas, and Radboud University Nijmegen in the Netherlands.

Art + Health Justice: Building Community Resilience

GCC 1905
LE: DSJ
3 credits
Fall 2020

Diane Willow
Art Department

By forming personal relationships with art and health, this interdisciplinary seminar asks students to learn while doing. As we actively reflect on the relationship between art, health, wholeness, justice, and resilience, students will explore the potential of inclusive and social art practices to generate meaningful forms of participatory culture that support individual and community health, wellbeing, and resilience. This course is built upon six foundational principles that recognize resilience building as an ongoing, dynamic process rather than a fixed outcome. Informed by these core, fundamental principles, the course is organized around the idea that learning and acting in the world is inherently iterative. Weekly classes will include visits with artists, activists, and scholars, visits to artist studios, in process art works, and sites of activism/resistance/imagination, as well as collaborative experiments in art.

Multi-modal artist and creative catalyst Diane Willow is an Associate Professor in the Department of Art who also teaches in and works with architecture, biology, electrical and computer engineering. By any medium necessary best describes her process. Her work invites people to participate as choreographers of their experience of art, with internationally and nationally commissioned public art works that have engaged people with media as diverse as bioluminescent plankton, tangible sound, and participatory video friezes. She seeks out contexts that require collaboration with people, places, and processes. She created a series of interactive installations in the pediatric waiting rooms of community health centers in Boston and in Minneapolis she was a Creative CityMaking artist in collaboration with city planners and neighborhood residents. By necessity and passion Diane initiates and participates in interdisciplinary collaborations including ArTeS [Art + Technology + Science], Studio Co-Laboratory, Improvising Ecosystems, and Digital Dialogues: Technology and the Hand. She has been an invited Osher Fellow at the Exploratorium in San Francisco, artist in residence at MIT, visiting professor at the MIT Media Lab, and guest professor of New Media Art at the B
Rare Diseases: What it Takes to Be a Medical Orphan

GCC 1906
3 credits
Fall 2020

Reena Kartha
Experimental and Clinical Pharmacology

Rare diseases are not rare. There are 7000 diseases, but in aggregate, these diseases affect 30 million (i.e. 1 in 10) Americans of all ages and additional millions of people globally. Most of these conditions are serious and life-altering, and children account for more than 50% of those affected. However, only 5% of all rare diseases have FDA-approved treatments. Thus, there is a large unmet need in this area and one way to address this is to raise awareness about these conditions. In this highly interactive course, students will learn from and network with researchers, healthcare professionals and business leaders and gain sufficient background to appreciate the scope of this multidisciplinary field. Students will work in teams with a patient advocacy organization to learn firsthand the challenges related to the diagnosis and treatment of a specific rare disease, barriers to research and development, and deliver possible solutions to a specific challenge that they have identified.

Reena Kartha is an Assistant Professor in the Department of Experimental and Clinical Pharmacology and Associate Director of Translational Pharmacology in the Center for Orphan Drug Research (CODR), University of Minnesota College of Pharmacy. She has a Masters in Biotechnology and a Ph.D. in Cellular and Molecular biology. Her research focuses on understanding the pathophysiological role of oxidative stress and inflammation in rare inherited metabolic disorders as well as the pharmacology of agents that target these molecular pathways. She has mentored and supervised undergraduate, graduate and pharmacy students conducting directed research and direct the CODR research seminars during the school year. She was a NIH funded rare disease clinical research fellow and was the recipient of the 2017 Clinical and Translational Sciences Institute Junior Mentor of the year award.

Environmental Grand Challenges: What Impact Will You Have?

GCC 1907
LE: ENV
3 credits
Spring 2021

Megan Voorhees
Institute on the Environment

What does it mean to live a life that aligns with your values in a time of rapid global environmental transformations driven by climate change, mass extinction of plant and animal species, and the increasing pollution of our oceans, atmosphere, and soils? Is it possible to live sustainably, as individuals and societies, and what disciplines and approaches will we need to achieve this? Where does one start—at this University, in Minnesota, or around the world? Students will interrogate abstract conceptions of sustainability through site visits and interviews with sustainability leaders. By the end of the course, we will have examined our own assumptions about what it means to live sustainability, learned about approaches to engaging in grand challenges, and explored innovative solutions to help sustain both a productive economy and our planet.

Megan Voorhees, Acara Director, Institute on the Environment and Affiliate Faculty, Humphrey School of Public Affairs. Megan’s career has primarily focused on leading interdisciplinary campus-community higher education partnerships that provide engaged scholarship and leadership opportunities for students and faculty seeking to address complex social and environmental issues. She was the Assistant Dean of Students and Director of the Public Service Center at the University of California, Berkeley and the Community Service Coordinator for Lewis & Clark College. She also has led youth development and youth employment programs in the non-profit sector.

Megan has a BA in Sociology/Anthropology from Lewis & Clark College, and a Masters in Theological Studies from the Graduate Theological Union. She completed a New Leaders Fellowship with the National Youth Employment Coalition and is currently working on completing her Coaching Certificate from the Coaches Training Institute. She has taught multiple courses in the Grand Challenge curriculum, as well as for the Leadership Minor and the Humphrey School of Public Affairs, and has taught learning abroad courses in Nicaragua and Puerto Rico.
Every human society codifies its own unique approach, understanding, and experience of the world into systems of knowledge. However, until very recently, scientific researchers at large Western universities have paid little attention to this knowledge, in part because much is dismissed as “unscientific” -- implying Western science is superior. In this way, we come to better recognize another cultural worldview and its way of seeing and making sense of the world. In this way, learners will encounter different ways of knowing. Experience is often the best teacher. By direct experience and involvement with another culture, we come to better recognize another cultural worldview and its way of seeing and making sense of the world.

Craig A. Hassel, Ph.D. is Associate Professor & Extension Specialist, Food and Nutrition and Graduate Faculty, Center for Spirituality & Healing at the University of Minnesota. He is also a Fellow and Elder with the Cultural Wellness Center and Elder with Healing Roots Community. His work is grounded in long-term relationships with cultural communities experiencing the most severe diet-related health inequities. He attempts to fill a void within food and nutrition sciences by interfacing with systems of thought carried by older, non-EuroAmerican cultures. Interfacing attempts not to impose or intervene but rather to learn through reciprocal understanding built upon trust and mutual respect. His crosscultural engagement methodology creates paths to more open and informed inter-cultural sharing, interaction and knowledge production. He teaches through experiential micro-immersion, critical thinking and cultural self-reflection. The goal is to disrupt colonizing patterns deeply embedded within academic thought and behavior; to better recognize and protect the integrity of all forms of human knowledge.

Dominic Travis is an Associate Professor at the University of Minnesota’s College of Veterinary Medicine with appointments in the School of Public Health and Institute on the Environment. Formerly, he was Vice President of Conservation and Science at the Lincoln Park Zoological Society in Chicago. Dr. Travis is an expert in wildlife epidemiology and veterinary public health; his research is aimed at characterizing and mitigating health risks at the interface of domestic animals, humans and wildlife.

He applies ecosystem health research methods and one health partnership approaches in resource limited, culturally sensitive, rapidly changing environments with the goal of optimizing health outcomes among stakeholders with often opposing values.

To that end, he fosters new applied research models for positive shared health outcomes in the “Anthropocene.” His formal education consists of a BS in Zoology (Marine Biology) (North Carolina State), DVM (Michigan State), MS in Epidemiology (University of Maryland); Internship at USDA’s Plum Island Animal Disease Control Center; and Residency in Applied Epidemiology at the VA-MD College of Veterinary Medicine. Since 2000, Travis has formally and informally advised several International Governmental Organizations, multiple sectors of the U.S. Government, the European and African Unions, and a myriad of Global Conservation Organizations in the area of Ecosystem Health.

Barrett Colombo is a manager for education and policy initiatives at the Institute on the Environment (IonE). At IonE, he directs efforts to translate the Institute’s research into action, both within the University and alongside stakeholders in the public and private sector. He is the lead producer for Food Matters, which provides cutting-edge briefings on our global food system. Working with IonE’s faculty affiliates and staff researchers, Barrett also manages initiatives at IonE that translate new research to decision-makers in the public and private sectors, or makes that research accessible to a general audience. Colombo’s career has focused on issues at the intersection of sustainability policy and education. Before coming to IonE, he worked as a policy analyst on issues of environmental health and equity, and in a number of secondary and adult education roles in Washington, D.C., and Boston. Barrett has a master’s degree in public policy from the University of Minnesota’s Hubert H. Humphrey School of Public Affairs.

Craig Hassel
Food Science and Nutrition

Introduction to Ecosystem Health: Challenges at the Intersection of Human, Animal, and Environmental Health

Dominic Travis & Barrett Colombo
Department of Veterinary Population Medicine & Institute on the Environment

In a given region of the world, how do we manage the effects of climate change, disease emergence, food and water security, conflict and poverty, and gender to ensure the health of humans and animals? These large-scale grand challenges can often become overwhelming, and a solution that considers only one aspect of health often seems daunting and difficult to implement in policy. How can we usefully understand the interactions between these challenges to contribute to solutions? This course explores how one’s own discipline and career path can relate to these complex grand challenges, and how we can build teams and partnerships across disciplines to engage at the scale of the problem.

In Chicago. Dr. Travis is an expert in wildlife epidemiology and veterinary public health; his research is aimed at characterizing and mitigating health risks at the interface of domestic animals, humans and wildlife.

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Living with Innovation
GEOG 1913
3 credits
Fall 2020
Peter Calow
Center for Science, Technology, and Environmental Policy

This seminar will examine innovations ranging from artificial intelligence (AI) and information technology to nanomaterials and genetically modified organisms (GMOs). The message will be that we need innovation to address big world challenges such as a global population on its way to 10 billion and the pressures that brings to food supply, pollution, and climate change. Yet the innovations themselves can cause problems that include threats to health, environment, and social order. Exploring how science can be used to anticipate and manage these risks will be a core theme. Students will read, discuss, and debate cutting edge material from the scientific literature and popular press. Students can therefore expect to take away from this course an understanding of innovation and risk, of key world problems that include hunger, climate change, pollution, and cyber issues, and to develop skills in critical thinking and communication.

Peter Calow has spent a long career researching the risks of chemicals in the environment in Europe and North America. He has worked at universities and for governments, including the European Union. He has special interests in the interface between science and public policy.

The Border Crossed Us: Latinx Life and Justice in the City
GEOG 1914
3 credits
Fall 2020
Madelaine Cahuas
Geography

For decades now Latinx immigrant rights activists have chanted, “We didn’t cross the border, the border crossed us,” exposing how the U.S. imposed a southern border that seized massive swaths of Mexican territory and continues to supersede its borders through military interventions across Latin America that force people to leave. The crisis we are witnessing at the U.S.-Mexico border is not new and is historically rooted in U.S. imperialism and colonialism. Yet, Latinx migrants continue to move, live and collectively organize to build a more socially just world across U.S. cities.

This seminar will examine the multifaceted dimensions of the Latinx urban experience in the U.S., with a special focus on the Twin Cities context. Drawing on diverse scholarship across urban geography, Latinx Studies and feminist theory, we will explore why Latinx people are here? What challenges do they face? How do they make a home across and beyond borders? And how do they mobilize for social justice in the city? Students will have the opportunity to learn from local Latinx community-based organizations working on various issues from migrant rights, housing justice and food justice. Students will also have the opportunity to go on several field trips to learn about Latinx life and activism in the Twin Cities.

Madelaine Cahuas is an Assistant Professor and urban social geographer in the Department of Geography, Environment & Society. As a Latina feminist activist from Toronto, Canada and the daughter of immigrant parents, questions of race, gender, migration and belonging have long been important to her. Her research explores how Latinx communities politically mobilize through non-profit, community-based organizations, grassroots collectives and the arts to address inequities and advance social justice in the cities they live in. She is especially interested in the life experiences of everyday Latinas at the forefront of urban social movements.
Sea level rise and climate change pose serious challenges for the well-being of people living along the coast. When responding to these challenges, communities, scientists and governments have to take account of the way in which some communities have deep cultural ties to the land they inhabit. Co-taught by Queen Quet, the Chiefess and Head of State of the Gullah/Geechee Nation and Kate Derickson, faculty in Geography and long time collaborator of Queen Quet’s, this course will explore the thorny challenges at the intersection of cultural heritage and environmental change by engaging with the case of the Gullah/Geechee people.

The Gullah/Geechee people are descended from enslaved Africans brought to the Southeast coast and the Sea Islands in part due to their knowledge of agriculture to be enslaved on rice, cotton and indigo plantations. Today, many Gullah/Geechee people still live on the same land that their ancestors were enslaved on. Their ancestors bought this land during Reconstruction and continued to practice traditional farming and fishing in the surrounding waterways. The Gullah/Geechee culture is inextricably tied to the land and the water of the Sea Islands and the coast, a connection that has to be accounted for in efforts to mitigate the effects of climate change and inform future planning and community development in the region.

Students will spend the course in a virtual “studio” setting on campus once weekly - learning, discussing and exploring the history and culture of the Gullah/Geechee people and the causes and consequences of environmental change in the region. We will also explore different models, ethics, and approaches to engaged scholarship. Students will be divided into groups with a region of Gullah/Geechee Nation to focus on. Each group will produce a StoryMap with archival data, photos, and other relevant data and information collected during and after the field trip. Training in building StoryMaps will be provided. Grades will be assessed on an individual and group basis.

**The course is designed to include fully funded travel for students from October 23, 2020 through October 30, 2020 to South Carolina (airfare, transportation and shared accommodation, students cover meals). Due to uncertainty surrounding the possibility of travel, this element of the course will be optional, and may be postponed until travel is safe. In the event it is postponed, students will still be supported in conducting original, collaborative research during the Fall.**

This course is co-taught by Dr. Kate Derickson, faculty member in the department of Geography, Environment and Society, and Queen Quet, the Chiefess and Head of State of the Gullah/Geechee Nation, who is in residence at the U of M Fall 2020 as the Winton Chair in the Liberal Arts. Queen Quet is a global activist on behalf of her culture, and has represented her people at the United Nations, the Council of Parties Climate Change meetings, and in the US Congress. Kate Derickson has served as a member of the Gullah/Geechee Sustainability Think Tank and has led initiatives on community-based research and environmental justice.
Brexit and Decolonization: Empire, Race, and Belonging in the 21st Century

HIST 1921
3 Credits
Fall 2020

Andrew Schumacher Bethke
History

Among recent political moments, Brexit stands as one of the most confusing. From the shock vote in 2016 through the fall of two Prime Ministers and two general elections, Brexit has proven to be a paralyzing development in Britain, and a car-crash spectacle for the rest of the world.

In this seminar, we will work to understand Brexit not as a single event but as a part of the century-long process of decolonization. In 1900 Britain was the most powerful and important global force, claiming a quarter of the world’s land and population. By 2016, Britain was again reduced to a small island nation, more defined by its relationship to the US and Europe than its own power and importance. We will read through the history and theory of decolonization. This will lead to an understanding of how the breakup of the empire came to define contemporary Britain, and how Brexit is the culmination of that process. We will learn how to use empire, race, and nation as ways to critically read current events.

Andrew Schumacher Bethke is a PhD Candidate in the History Department. He studies the British Empire in the 19th and early 20th century, focusing on British India. He is interested in culture, politics, and religion, as well as the restorative power of a good nap. His current project examines the role of Oxford University in the administration of India during the late nineteenth century, and what that means for decolonizing efforts in the era of #RhodesMustFall.

The Politics of Hunger: Food Security, Aid & Diplomacy

HIST 1923
3 Credits
Fall 2020

Hiromi Mizuno
History

This seminar is about American food aid programs, diplomacy, geopolitics, and global food movements. We cover the Cold War period and the contemporary world and examines issues such as what is global food security, how food diplomacy has developed, and why famines occur. The final project is to create a digital storytelling site based on student research; no prior experience or knowledge required as we learn how to make such a site together.

Hiromi Mizuno’s current research is on the history of agricultural modernization and foreign aid in the twentieth century. When not working or being a chauffeur for her children, she is always cooking. Born and raised in Japan, she loves bringing different perspectives to classrooms.

Winning People Over: The Art and Science of Persuasion

JOUR 1912
3 Credits
Fall 2020 and Spring 2021

Ken Doyle
Journalism

Seven days a week, everywhere in the world, people are busily trying to persuade other people. Students want their professors to accept late work. Professors want students to throw themselves into their coursework. Advertisers want consumers to buy their products. PR practitioners want people to think more highly of their clients. Newspaper editorialists want readers to change their minds. Defense lawyers want juries to acquit their clients. And politicians want constituents to vote for them.

Some of these people are very effective persuaders; others less so. In this course, we will search out the best techniques for persuading different kinds of people to do various things. We’ll study really good textbooks, meet top-quality professional persuaders, and search out real-life instances of good and bad persuasive efforts. And we’ll try our hands at persuading someone to do something that’s important to us. All the while we will be trying to build our own theories of persuasion and maybe have some fun!

Professor Doyle is on the strategic communication faculty in the Hubbard School for Journalism and Mass Communication; there’s truth to the rumor that he is a maverick. A former monk, retired financial planner and investment advisor (once licensed in stocks and bonds, life/health insurance, and real estate), and a licensed financial psychologist (PhD Minnesota), he comes at the meanings of money from many angles. Especially interested in cross-cultural meanings of money, he’s president of the Minnesota chapter of the Circumnavigators Club (limited to people who have circumnavigated the globe).

An Olympic Impact on the World

KIN 1904
3 Credits
Spring 2021

Donald Dengel
Kinesiology

In the late nineteenth century, Baron Pierre de Coubertin, a French aristocrat, worked tirelessly to revive the Olympic Games from Greek history. Through Baron de Coubertin’s efforts the first Olympic Games of the modern era took place in 1896 in Athens, Greece. From a small sporting event that hosted a little over 300 athletes from 13 countries the Olympic Games have grown over the last 120 years to one of the most viewed sporting events in the world. Today, the Olympic Games hosts over 10,000 athletes from over 200 countries.

The International Olympic Committee (IOC), which runs the Olympic Games, is now one of the most powerful and richest sporting organizations in the world. The Olympic Games have had a profound impact on the world we live in and they provide us with a platform for examining changes in the world’s cultural, economic, social and political processes over the last 120 years. This course explores the impact of the Olympic Games on the world’s cultural, social and political processes. In addition, this course will explore the impact of hosting the Olympic Games on that host city and the country’s economy. Finally, this course will explore the changes in sport that have occurred during this time span.

I am a Professor in the School of Kinesiology and I have taught KIN 1904 a Freshmen seminar on this topic in the Fall of 2012 as well as a Learning Abroad Course (KIN 4520) in 2012 and 2013 and as study Abroad Course for the College of Education & Human Development in 2015. I was also an exercise physiologist at the US Olympic Training Center.
Invented Languages
LING 1912
3 Credits
Spring 2021
Jean-Philippe Marcotte
Linguistics

As far back as we can tell, there have been thousands of natural languages spoken by humans around the world; there are over 7,102 today, according to a recent authoritative count. So why are there also hundreds and hundreds of invented languages? What niche are they intended to fill? And why did so few of them make it out of the works of their inventors? In this seminar we will approach these questions by looking at languages invented by philosophical taxonomists during the Enlightenment, by internationalists in the late 1800s, by simulationists in the 1900s; we will take a look at online communities of language inventors to understand what makes them tick, and see how invented languages and their inventors are portrayed in the media. To get the most out of all this we will also have to talk about the properties of natural languages: how they are structured, how they are used, how they change over time, and why there are so many of them.

At an impressionable age, Jean-Philippe Marcotte became fascinated with the invented languages of J.R.R. Tolkien, discovered he had been a philologist, invented languages of J.R.R. Tolkien, and made sure to pick a college with linguistics was a prerequisite, and JP has been on that sidetrack ever since. He has been teaching at the University of Minnesota for 10 years.

Words at Work
LING 1913
3 Credits
Fall 2020
Michael Kac
Philosophy

This course is a guided tour through the vocabulary of English, one of the largest and most varied in any of the world’s languages. Among the questions it will address are: Why does English have so many (and so many different kinds of) words? Where did these words come from? Why do they mean what they mean? How are they put together? What do they tell us about history, social organization, culture and human psychology? One practical advantage of learning the answers to these and other questions is that it helps in vocabulary building and in demystifying specialized and technical terminology. The course is also a portal into linguistics, the study of the nature of language.

Michael Kac, Professor of philosophy and linguistics, is a specialist in the study of sentence structure and of the philosophical foundations of linguistics. He has published the books Corepresentation of Grammatical Structure (University of Minnesota Press, 1978) and Grammars and Grammaticality (John Benjamins Publishing Company, 1992) and numerous articles. He is also a performing musician interested in the relationship between music and language.

Finding Happiness In The Age Of Consumption
MKTG 1918
2 Credits
Fall 2020
Rohini Ahluwalia
Marketing

In today’s culture of consumption, free choice, and materialism, the pursuit of happiness through the “good life” seems to be an attainable goal. Retail therapy uplifts our spirits. Finding the best deals gives us a sense of accomplishment. Online shopping makes it ever so easy to instantly gratify our desires. Enjoyment through food, travel, and novel experiences is more accessible than ever. A wide variety of entertainment and social connections are available, literally, at the tip of our fingers. Still, we feel empty, wanting, and dissatisfied time and again. We continue to experience boredom, unhappiness, and loneliness. Why this paradox? This question has spurred recent research in consumer behavior, decision making, and psychology.

In this seminar we will explore some of the latest scientific findings as well as selected perspectives from ancient philosophy to help us understand this phenomenon and build a happier and better life. We will tackle questions such as, how can we experience more happiness in our lives? Can we increase the level of enjoyment we experience through our consumption activities? How can we make happiness last longer? What are some effective ways of reducing boredom and dealing with negative emotions?

How can we increase our wellbeing through our daily work and activities in college? Most importantly, we will develop a tool kit to help us on our journey to happiness and success.

Professor Ahluwalia is a well-known expert in consumer psychology who studies how consumers process information and make decisions relating to brands, products, and political candidates. Building on the finding that most decisions are motivated by the pursuit of happiness, her recent research examines how consumers and managers make decisions to enhance their happiness and how their consumption and decision-making, in turn, actually influences their wellbeing. Ahluwalia’s research has been published in leading journals such as the Journal of Consumer Research, Journal of Consumer Psychology, Journal of Marketing Research, and received American Marketing Association’s prestigious John A. Howard Dissertation Award. She is an avid reader, and whenever she has a spare moment, she loves delving into Eastern philosophy, ever fascinated by the convergence of science and philosophy.
Violence Against Women In Opera
MUS 1911
3 Credits
Fall 2020
David Walsh
School of Music

In this seminar we will combine lecture, discussion, listening, and viewing of opera productions which depict different aspects of “violence” against women. We will utilize seven well-known operas from a wide variety of periods and styles to illuminate how opera is uniquely suited to addressing this particular issue. The operas will include The Marriage of Figaro, La Traviata, Carmen, Madama Butterfly, Street Scene, The Rape of Lucretia, and Susannah.

A native of Toronto, Canada, David Walsh graduated with Honours in Political Science and Economics before studying Theatre Science at the University of Toronto. His passion was always opera (although football, hockey, and tennis came a close second) and so he pursued a career as a professional opera stage director. He arrived at the School of Music in 2002 and has continued his exploration of opera as a compelling medium for expressing life’s most powerful emotions.

Guitar Heroes
MUS 1912
3 Credits
Fall 2020
Maja Radovanlija
School of Music

This seminar is going to explore music related to the most popular instrument in the world: guitar. Students will be introduced to the centuries-old world of the classical guitar, the flamenco guitar, the guitar in Latin America, African guitar styles, the birth of American guitar (blues, country, jazz, etc.) and rock/electric guitar. We will explore the role of the guitar in popular music, jazz, world, and classical music.

Maja Radovanlija, native of Serbia, started playing guitar at the age of 9. At a young age she won numerous national and international Classical guitar competitions and toured Serbia, Bulgaria and surrounding European countries. She completed her graduate studies with a specialty in Early music and Contemporary music, at the Jacobs School of Music, IU. Currently she tours with Minneapolis Guitar Quartet, MM Guitar Duo, Radovanlija-Chatterton guitar-flute duo, and is involved in several projects around new and improvised contemporary music (Ensemble Studio 6, Szilard Mezéi string trio, ISIM, Improvisando project, etc.). Maja teaches guitar and guitar related courses at SOM, U of MN.

The Color of Music
MUS 1915
3 Credits
Fall 2020
Gabriella Currie
School of Music

How are sounds depicted? How are colors sounded? How do the worlds of music and fine arts intersect and construct meaning that is both specific to each and shared by both? How does each help us experience the world around us in different yet complementary ways?

In this seminar you are invited to join a semester-long journey which seeks some answers to these questions through immersion in the sounds, shapes, and colors of Western European art across many centuries. We will be looking at art and listening to music, while learning how to express what we perceive to be interesting, beautiful, and meaningful about their relationship and our reaction to them.

The sounds and sights of cultures around the world have always been one of my passions. In my journeys of discovery I seek to experience them first hand or mediated through modern technology. In particular, both as a scholar and as a human being I want to understand how these different modes of expression intersect and permeate our lives with meaning. This makes life as fascinating as it makes it exciting and I invite my students to share in that thrill of discovery.
Jos Uffink

Philosophy

Space and time belong to those concepts that we all intuitively use to make sense of the world around us. They are also crucial in all of modern science. But modern physics has brought along radical revisions in our view on these concepts. This course will introduce you to these revisions but also raise questions that still remain unestablished. This course will take you through a history of ideas about the nature of space and time ranging from Aristotle and Euclid in the 3rd century BC to Einstein's theory of general relativity, and the Big Bang model and black holes of modern cosmology. Along the way, we will discuss specific questions like: what is the geometry of physical space? Or is the choice of geometry a mere convention? Is space merely a relational notion? Or should we conceive of it as some kind of entity in its own right: as the stage on which the evolution of the universe takes place? How does Einstein’s relativity theory change the verdict on these questions? Similar questions will be raised about time. In addition, we will discuss questions like: Is time travel physically possible? Does time have a direction? Do the past, present and future have a different status? And if not, how do we distinguish the past from the future?

Michael Kac

Philosophy

Despite what you may have heard, classical music isn’t just a dry, arid landscape of interest only to culture snobs. The great masterpieces are supreme products of the human imagination touching on all aspects of the human condition - comic, tragic, sacred, profane. This is music that has moved generations of listeners to laughter and to tears, while at the same time inviting them to contemplate and reflect on its inner order and architectural grandeur. This seminar will present some of the great works of the classical tradition along with an explanation of what makes them so remarkable. No prior knowledge about music is required - just an open mind.

Eric Ganzinve

Physics and Astronomy

In this seminar, we will consider various possible solutions to the current and future global warming problem. This is a topic of intense global importance. Topics will include efficiency and conservation, reduced carbon in electricity production and transportation, wind and solar power, nuclear power, policy changes, third world solutions, reforestation, and more.

Jos Uffink was trained as a theoretical physicist at the University of Amsterdam, where he did his undergraduate work, and at the University of Utrecht, where he completed his PhD on the quantum mechanical Uncertainty Principle. His research interests have always focused on foundational and philosophical issues in modern physics. Uffink’s main publications are on the topics of the uncertainty principle and entanglement in quantum mechanics and on the foundations of statistical mechanics.
The aurora, or northern lights, have long fascinated humans. We now know that auroras occur on many other planets, including Jupiter, Neptune, and Uranus. We will examine the myths from both the northern and southern hemisphere that were devised to explain this beautiful natural phenomenon.

The development of our scientific understanding of the aurora is littered with completely incorrect explanations by prominent scientists. It is only with the new measurements made after the space age that we have finally begun to understand the aurora—both on the Earth and on other planets. If the space weather cooperates, we will try to observe the aurora.

Professor Cattell’s research interests include space plasma physics; magnetic and electric field measurements; auroral particle acceleration; particle acceleration and wave processes in Earth’s radiation belts; non-linear plasma physics; magnetic reconnection and shocks.

What is Space Weather (and why should you care?)

PHYS 1906
2 credits
Spring 2021

Cynthia Cattell
Physics and Astronomy

In this class, we will explore the way our sun changes over the eleven-year solar cycle and how this can affect events from airline travel, cell phone coverage, and power outages to beautiful aurora and manned spaceflight to Mars. We will also touch on space weather on other planets (including exoplanets) and the possible impact on development of life. If the space weather cooperates, we will try to observe the aurora and related phenomena including sunspots.

Professor Cattell’s research interests include space plasma physics; magnetic and electric field measurements; auroral particle acceleration; particle acceleration and wave processes in Earth’s radiation belts; non-linear plasma physics; magnetic reconnection and shocks.

What is Time?

PHYS 1910W
2 Credits
Spring 2021

J. Woods Halley
Physics and Astronomy

The precise meaning and use of the concept of time has evoked serious study and debate among the most able of human thinkers for more than 2,000 years. In this seminar, we will review several of the current perspectives as well as some of this history of the concept of time from the points of view of philosophers, biologists, psychologists, and physicists.

Professor Halley’s group studies transport and nonequilibrium processes in solids and fluids using theoretical, simulation and experimental methods.

How Likely is Extraterrestrial Life?

PHYS 1911W
2 Credits
Fall 2020

J. Woods Halley
Physics and Astronomy

The goal of this course is to familiarize students with the main available scientific facts and arguments which bear on the question of the likelihood of extraterrestrial life. A second goal is to familiarize students with aspects of the various relevant disciplines early in their university careers when they may still be selecting a major. The third goal is to provide familiarity with information resources at the university, particularly through the library, as well as improved reasoning, writing, and speaking skills.

Professor Halley’s group studies transport and nonequilibrium processes in solids and fluids using theoretical, simulation and experimental methods.
Antibiotics: Promise, Profits, and Pitfalls

PLPA 1901
3 Credits
Fall 2020
LE: TS

Linda Kinkel and JP Dundore-Arias
Department of Plant Pathology

The discovery and availability of antibiotics has fundamentally changed the treatment of human infectious diseases. However, the broad effectiveness of antibiotics in reducing bacterial infections has led to overuse in medicine and agriculture. Consequences of overuse include widespread resistance to common antibiotics as well as antibiotic contamination in the environment. Antibiotic resistance currently represents a significant threat to the treatment of some infectious bacteria, yet profit incentives and patenting regulations have limited investments by pharmaceutical companies in development of new antimicrobials. This course will explore the intriguing biology, chemistry, ecology, and evolutionary biology of antimicrobial warfare; the history of antibiotic discovery; the broad uses for antibiotics in medicine and agriculture; the costs, profits, and patenting issues associated with antibiotic development and production; the ethics of antibiotic regulation in developed and developing countries; and the future of antibiotic therapies in medicine and agriculture.

prereq: freshman

Dr. Linda Kinkel is a Professor in the Department of Plant Pathology. Her research focuses on the ecology and evolutionary biology of antibiotic-producing bacteria in soil and on their use in the biological control of plant diseases.

Dr. JP Dundore-Arias is a researcher and Instructor in the Department of Plant Pathology. His research focuses on the impacts of soil management practices on selection and phenotypic variation of antibiotic-producing bacteria in agricultural soils.

Sequencing Plants, Pets, and Pathogens: The Genomics of Non-Humans

PLPA 1902
3 Credits
Fall 2020

Nevin Young
Plant Pathology

This seminar will examine genomic insights into plants, animals, and microbes. Students will explore DNA sequencing of crop varieties, animal breeds and disease pathogens, the genomes of primates, the genetic basis of domestication, genome engineering, synthetic genomes, and the sequencing of microbial communities; primarily through readings taken from contemporary, popular press articles as well as in-class practicums, activities, and debates.

Nevin Young is a genomics and professor of plant pathology. His lab studies legumes plants (like soybean and alfalfa), focusing on the genetic basis of disease resistance and symbiosis with nitrogen-fixing microbes. In the classroom, he teaches courses in genomics and biotechnology, exploring recent discoveries in these fields and their impact on public and environmental policy debates.

Dictatorship and Violence in Central Asia and Afghanistan

POL 1911
3 Credits
Fall 2020

Kathleen Collins
Political Science

This course is an introduction to Central Asia, a region of the world that has layers of history, culture, and politics, that extend back to the time of Alexander the Great’s conquest, Islamicization by the Arabs, Tamerlane’s empire, and the Great Game of the 19th century. Our focus will mainly be on the twentieth century to the present, a period of invasion and control by the Soviet Union, then independence and a 30 year struggle to establish independent states and new forms of political power. Otherwise known as the “stans” (the land of) - this region includes the land of the Kyrgyz, Kazakhs, Uzbeks, Turkmen, Tajiks, and Afghans. We will also discuss Azerbaijan, a Turkic post-Soviet republic in the Caucasus that is a neighbor to the Central Asian region. We will focus on the role of ethnic, religious, and national identities in Soviet and post-Soviet politics.

We will explore their history, and especially the legacy of communism for the present day. We will particularly address the problems of the post-Soviet era, including political transition to new regimes, the struggle by some for democracy, human rights issues, the challenges of economic reform, environmental catastrophes, ethnic conflict, civil war, and the growth of radical Islamist movements. We will consider US policy in the region, and how it has positively or negatively affected political developments.

Kathleen Collins is Associate Professor in the Department of Political Science and is the author of “Clan Politics and Regime Transition in Central Asia, which won the Central Eurasia Studies Society Book Award for Social Sciences. She has published articles in Comparative Politics, World Politics, the Journal of Democracy, Europe-Asia Studies, and Political Research Quarterly. Collins has received grants from the Carnegie Corporation, Kellogg Institute, USIP, IREX, and NCEER and previously did consulting for USAID, ICG, the UNDP, NBR, and other organizations.
Brain Science, Drugs and Society

Monica Luciana
Psychology

This course will examine substance use and misuse from the perspective of brain science. Mental health and societal issues surrounding drug and alcohol use will be covered including information from the popular media, government, and scientific research. Viewpoints surrounding each topic will be scrutinized through the lens of current brain and behavioral research. Students will gain a deeper ability to think critically and scientifically about popular beliefs regarding substance use. For instance, despite decades of study, existing research does not make clear whether brain deficits in human substance users are caused by misuse of substances, or caused by pre-existing factors (e.g., genetics, home environment) that predate substance use and predispose individuals to misuse in the first place. The course will draw from interesting new research conducted by faculty at the University of Minnesota and elsewhere to gain insight into this uncertainty. Although we will discuss these topics from a neurobiological standpoint, a background in neuroscience is not expected or necessary.

Monica Luciana is Distinguished McKnight University Professor and Distinguished Teaching Professor at the University of Minnesota in the Department of Psychology and a founding member of the UMN Center for Neurobehavioral Development. Funded by the National Institute on Drug Abuse, she conducts large-scale longitudinal studies of brain and behavioral development in adolescents, including twins, using personality measures, cognitive tests, and brain imaging techniques. In addition to neurodevelopment, her research addresses the impacts of substances such as alcohol and marijuana on brain function.

What is the Human Mind?

Chad Marsolek
Psychology

You are reading the description of a seminar. That is, some part of you is capable of taking a series of shapes as visual input, abstracting intended meaning from them, organizing the information, and evaluating what you’ve organized (e.g., “fascinating seminar!”). Your mind accomplishes this task, not your lungs or heart, but what is this thing - “mind” - that is capable of such complex internal information processing? Is it just a flurry of activated brain cells? Is it something non-physical? When you think about it, one of the most intriguing aspects of the universe is that you can think that minds operate as entities that appear to be crucially tied to physical brains but that are also importantly different. In this seminar, we will examine conceptions of the human mind from psychological, philosophical, and neuroscientific perspectives. Can science and critical analysis offer a concrete and compelling specification of the human mind?

Professor Marsolek investigates human memory, vision, and learning (as well as how emotional and social factors influence these abilities), from the perspective of how the brain underlies these abilities. His most influential work has been in uncovering important aspects of unconscious versus conscious memory and left/right hemisphere differences in the brain. His most important form of “sanity maintenance,” for both of his hemispheres, is live music, although he’s not quite sure how conscious or unconscious he is of such maintenance.
Race in Everyday Space

PSY 1916
3 Credits
Fall 2020
LE: DSJ

Melissa Velez
Psychology

This seminar examines the nature and meaning of being racial and ethnic minorities in the United States, with a particular focus on immigrant, refugee, second-generation, and adoptee communities that are unique to Minnesota and the Midwest. Students will learn about the unique and common histories, struggles, and successes of Blacks, Asian Americans, Latinx, and American Indians. Drawing upon psychological theory and research, as well as interdisciplinary ethnic studies scholarship, the seminar engages students in a critical analysis of the ways in which race, ethnicity, and migration affect the everyday lives of racial/ethnic minority individuals and families.

Melissa Vélez is a doctoral candidate in counseling psychology. Melissa’s research examines the impact of family dynamics to the mental health and well-being of ethnic and racial minorities. She is also interested in studying cultural values and assets within the Latinx community. Current projects include studying the importance of familism and ingenio in the Latinx community.

The Freshman 15: Stress and Health Management for College Students

PSY 1923
3 Credits
Spring 2021

Caprice Niccoli-Waller
Psychology

The start of college is a time of significant transition from family home to campus living. The changes across many domains of one’s life can disrupt healthy habits and initiate unhealthy ones. Are your stress levels out of control? Are you worried about your college eating habits? Are you planning to catch up on sleep after you graduate? In this seminar we will use a biopsychosocial framework, popular in health psychology, to examine personal health influences and choices. You will gain insight into your own health and learn methods to improve and sustain health behaviors that will better support your life as a student and your life beyond college.

Caprice Niccoli received her Ph.D. in biopsychology at the University of Ca., Davis. She has taught courses in health psychology for over 20 years and loves helping students take a closer look at their health and to become empowered to make choices that support their health goals. She also teaches the Capstone in Psychology course, taken by all graduating Psychology students, and is excited to be working with students at both their entrance to and exit from college life.

Music, Language and the Brain

SLHS 1912
3 Credits
Fall 2020

Yang Zhang
Speech-Language-Hearing Sciences

Music and language are fascinating products of the human brain, which most uniquely define us as human beings. Every human culture has its own form of music and language with historical roots dated as early as about 40,000 years ago. Understanding music and language involves complex processes converting sound sequences into meaningful units and structures. This seminar compares music and language in all aspects of structure and use. We will highlight modern brain research studies on the associations and dissociations between music and language. We will also study how infants acquire their linguistic and emotional expressive power and how the early learning experience alters the brain, thereby affecting an individual’s future perceptions and actions. Both historical perspectives and current research including musical therapy for speech and language intervention will be introduced and discussed.

Yang Zhang is a Professor and the Director of Undergraduate Studies in the Department of Speech-Language-Hearing Sciences. He is also a faculty of the Center for Neurobehavioral Development in the Medical School. He specializes in brain imaging and the neural bases of language and speech communication.
Zombies fill our television screens, dead pop icons come back as holograms in massive arena concerts, immortal cell-lines derived from long-dead humans fill laboratories around the world, and now we can even pay an AI service to maintain our social media life indefinitely after our death. What are the dead doing in contemporary culture? We live in an age when the boundaries between the living and the dead are being redefined. But what are the ethical consequences of this redefinition? Who owns the dead and who gets to profit from them? Do the dead have rights? How do those who are dead but not gone remind us of what we owe to history? What are the responsibilities of the dead to the living and the living to the dead?

To answer these questions, this course analyzes examples from popular culture, film, literature, science, and media, past and present. It trains students in skills of research and cultural analysis that are used in several disciplines, from anthropology or literary studies, to media, communications, theatre, sociology, and art history.

Margaret Werry is a Professor in the Department of Theatre Arts and Dance, where she teaches theatre history, literature, and performance studies. In a past life she worked as an actor and a TV producer, but now she writes books and articles about tourism, museums, Oceanic culture, and human remains. Yes, human remains. (Ask her about it some time).
Our planet Earth is dominated (>70%) by water. The hydrosphere contains about 1.36 billion cubic kilometers of water mostly in the form of a liquid (water) that occupies topographic depressions on the Earth. The second most common form of the water molecule on our planet is ice. If all our planet’s ice melted, sea-level would rise by about 70 meters.

Water is also essential for life. Most animals and plants contain more than 60% water by volume. Without water, life would probably never have developed on our planet. Water contains nutrients that are essential for life. Nutrients are extracted from rocks and sediments.

At present, human activity is dumping harmful pollutants (poisons) in the surface and groundwater. Poisons distribute between water and sediments, depending on the properties of the toxin, soil characteristics and water chemistry. Therefore, poisons present in water may contaminate both the aquatic and the soil dwellers, and plants, thus contaminating the food chain for humans as well as animals.

The overall aim of this course is to discuss (i) effects of water pollution on aquatic and terrestrial organisms including humans, (ii) water quality issues and (iii) water safety. After completing this course, participants will be able to:

- Understand physicochemical and solubility properties of water.
- Compare and contrast toxin behavior in water, soil, air and organisms.
- Understand the concept of clean and polluted water.
- Understand modes of action of toxic chemicals, types of effects from the molecular to the ecosystem level, and detoxification processes.
- Understand food-chain contamination and ensuing toxicity.

Ashok Singh is a toxicologist/biochemist with a strong interest in environmental science and sustainability. He teaches undergraduate and graduate courses in the area of toxicology, nanotechnology, human activities, environmental health, and sustainable development. Currently, he is teaching grand challenge courses, freshman seminars and an honors course in nanotechnology.

Garbage, in a broad sense, can be defined as anything (solids, liquid or gas) carelessly discarded because it is perceived to be worthless in our homes, businesses, institutions and factories. When humans were hunters and gatherers, they consumed what was needed, discarded what could not be used and moved on. Being part of nature, the discarded items degraded into reusable nutrients. The humans’ interaction with the environment was well balanced and humans’ footprints on the Earth were very minute, if at all. However, as the industrial revolution led to the development of large industries, humans began to invent things that were not part of nature, thus the natural balance began to misbalance. This results in accumulation of garbage into the environment, resulting in pollution of the atmosphere, land and water sources.

Recently, economic globalization has further increased the magnitude of environmental pollution and ensuing deterioration of public health. If the current trend is not reversed, planet Earth may eventually become uninhabitable.

Therefore, the students registering in this course will:

(1) learn the processes that facilitate generation and accumulation of garbage,
(2) understand the mechanisms responsible for pollution of the Earth’s environment,
(3) characterize the health effects of the polluted environment,
(4) strategize remediation steps that may halt or repair the damage and
(5) interpret data in writing and verbally.

Ashok Singh is a toxicologist/biochemist with a strong interest in environmental science and sustainability. He teaches undergraduate and graduate courses in the area of toxicology, nanotechnology, human activities, environmental health, and sustainable development. Currently, he is teaching grand challenge courses, freshman seminars and an honors course in nanotechnology.
Poison, Poisoning and Society
VPM 1903
2 credits
Spring 2021
Dr. Ashok Singh
Veterinary Population Medicine Department

In the United States, approximately 50,000 people die each year as a result of unintentional poisoning, and another 800,000 are treated in emergency departments. The human-caused pollution of the environment (such as oil spill, poisonous gas leak, water pollution, global warming gas release, etc.) seriously impacts the health of millions of people and animals around the world. Despite such serious health consequences, people do not fully understand poisons or poisoning. In this course, students will learn some important aspects regarding poisons including, but not limited to the following.

(1) What are poisons and what is poisoning?
(2) Where do poisons come from?
(3) What are the adverse effects of different types of poisons?
(4) How to prevent poisoning?
(5) What are the impacts of poisoning to the society?

Chemicals encountered in everyday life will be used as examples to evaluate the hazards and risk of exposure and put them into perspective. Students will learn the basic principles of toxicology, tools for assessing the toxicology of chemicals, effects of chemicals on the body, and why some people are more sensitive to chemicals than others.

Ashok Singh is a toxicologist/biochemist with a strong interest in environmental science and sustainability. He teaches undergraduate and graduate courses in the area of toxicology, nanotechnology, human activities, environmental health, and sustainable development. Currently, he is teaching grand challenge courses, freshman seminars and an honors course in nanotechnology.

Arguing with Authority: The Past, Present, and Future of Higher Education
WRIT 1915W
3 Credits
Fall 2020
LE: CIV
Writing Intensive
Patrick Bruch
Writing Studies

This freshman seminar will introduce students to the intellectual projects of studying and participating in higher education as a participatory institution by inviting freshmen into critical dialogue with past, present, popular, and academic representations of higher education and its civic purposes. We will examine the shifting role of the university in public life and the roles that students and other constituencies have played in shaping the character of higher education through writing and other activities. Designed specifically for first-year students, the course will combine academic skill-building with personal and collective reflection on the actual and possible purposes and values of higher education for individuals and the society.

As a kid, Patrick Bruch got into trouble for questioning authority. When he went to college, he was happy to find that questioning authority is central to the university’s mission of creating new knowledge. This background informs his current research into the ways that regular people influence and shape powerful institutions, such as education. He studies writing, the teaching of writing, and higher education, all with an eye on the power of regular people to create a world that serves the interests of justice, fairness, and democracy.

Magazines and New Media
WRIT 1925W
3 Credits
Fall 2020
Writing Intensive
Thomas Reynolds
Writing Studies

In this seminar, we will study magazines and other smaller publications - some of which you’ve already read, some of which you haven’t - to discuss and write about their significance as cultural artifacts. How can magazines, when seen as “composed” objects, help us with our own writing? How is the rise of the zine and e-zine responding to the evolving digital age? We will examine all aspects of the magazine, including its art, political statements, target audience, and history. Students will practice some of the forms that the class reads and create an e-magazine.

Professor Reynolds’ research and teaching examines ways that magazines and other popular forms of writing “teach” us how to live our everyday lives and with what cultural assumptions. He is interested in exploring written and visual elements with students, and how these elements are changing with digital forms. He particularly enjoys working with first-year students.
# Freshman Seminar Notes

Use this worksheet to track the seminars you are interested in taking.

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