Dear Class of 2021:

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 the 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 aspire, 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 2021. 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 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
What is a Freshman Seminar?

A Freshman Seminar is a small, discussion-oriented class that is designed just 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

Tips for success in a Freshman Seminar (and all your classes!):

- Come to class prepared with readings and assignments completed
- Express your thoughts and opinions by participating in group discussions
- Visit your professor during office hours
- Get to know your classmates
- Ask plenty of questions

If you have questions about any of the Freshman Seminars, contact the academic advisor.

How to Search Online for Freshman Seminars

1. Log onto MyU (myu.umn.edu) and click on the Academics tab.
2. Under Enrollment Tools, select Class Search.
3. Once you have entered Class Search, verify that Twin Cities/Rochester is selected in the Institution field. Then choose either Fall 2017 or Spring 2018 in the Term field.

   - Note: Freshman seminars are unique because you can register for a spring semester course at the same time as you’re registering for your fall courses. Make sure to check both Fall 2017 and Spring 2018 for freshman seminars that interest you!

4. Then, in the Course Attribute field, select Freshman Seminar.
5. At this point, if you click Search, you will get a list of all freshman seminars being offered during the selected semester. It is helpful to select Show Open Classes Only before clicking Search if you only want to view courses that still have available seats. If you are interested in putting your name on a wait list for a course, do not select Show Open Classes Only. In order to narrow down your results, you can also use the Additional Search Criteria section to find seminars that fit into certain time slots or are taught by specific instructors, etc.
6. After you have generated a list of seminars that fit your desired parameters, you can click on the section or class number to view more details about the class, including a brief description.
7. To register for a seminar, click Select on the right hand side of the course information and follow the instructions to add it to your Enrollment Shopping Cart.
Freshman Seminars Abroad

Several of the Freshman Seminars listed in this booklet also include a study abroad opportunity. Freshman Seminars Abroad are a great introduction to studying abroad! These seminars combine on-campus instruction during spring semester 2018 with a study abroad component over spring break. You will receive three credits for a Freshman Seminar Abroad, and many fulfill a liberal education requirement.

To participate, apply through the Learning Abroad Center. There are deadlines to register for Freshman Seminars Abroad. For more information, visit: http://www.umabroad.umn.edu/programs/fsa.php or contact Lindsey Lahr at lahr0039@umn.edu or 612-625-9370.

Spring 2018 Freshman Seminars Abroad:

BIOL 1904: Innovation and Imagination in Ireland
John Ward, Plant Biology
Study Abroad in Ireland

DES 1403: Impressionism in Paris and Southern France
Monica Fogg, Graphic Design
Study Abroad in France

DES 1909W: Design in Naples and Rome
James Boyd Brent, Graphic Design
Study Abroad in Scotland and England

EDHD 1909W: Galileo on Trial in Italy
Laura Coffin Koch, College of Education and Human Development
Study Abroad in Italy

FW 1901: Coral Reef Management
Jim Perry; Fisheries, Wildlife, and Conservation Biology
Study Abroad in Belize

GER 1911W: Film, Art, and Politics: Urban Berlin
Rick McCormick; German, Scandinavian, and Dutch
Study Abroad in Germany
AFRO 1911 Black Reality Television.................................................................10
AMIN 1911 Creative Writing and Creation Stories in American Indian Literature.................................................................10
ANTH 1911W Changing Human Adaptations.................................................................10
ANTH 1912 Time: Now and Then...............................................................................10
ANTH 1913 Race and the Making of Humans.................................................................11
ARTH 11 Witches, Ghosts, and Evil Clowns.................................................................11
ARTS 11 BioArt: Culturing Life......................................................................................12
ARTS 112 Art and Yoga.................................................................................................12
AST 11 The Ultimate Questions......................................................................................12
AST 11 Nothing................................................................................................................13
BIOL 1904 Innovation and Imagination in Ireland*........................................................13
BIOL 11 Curing Cancer.................................................................................................13
BIOL 112 Photographing the University Community....................................................13
BIOL 113 Understanding the Evolution-Creationism Controversy..............................14
BIOL 1915 Genomics: Issues and Applications in Your Life.........................................14
BIOL 1916 The Human Story (As Told by Our Genomes).............................................14
CFAN 1902 Ways of Knowing and Science...................................................................14
CHEM 1901 Ideas Worth Spreading: Digging into TED Talks.....................................15
CHEM 1903 Chemistry in the Kitchen............................................................................15
CHEM 1911W Quantum Mechanics and Theology.......................................................15
CHIC 1911 Latina/o Revolutionaries and the Global Left............................................15
CI 1904 Picturebooks and Graphic Novels...................................................................16
CI 1908W Children and Other Talking Animals: Animal Tales in (Mostly) Children’s Literature.................................................................16
CI 1943W Science, Technology, and Society.................................................................16
CLA 1911 Issues in 21st Century America: Diverse Christian Perspectives..................16
CNES 1911 Silencing the Gods: Divine and Human in the Hebrew Bible.....................17
CNES 1912 The Never-Ending Story: Reading the Bible as Literature........................17
COMM 1911 Introduction to Crisis Communication.....................................................17
COMM 1913 Religious Arguments...............................................................................18
CPSY 1904 International and Cross-Cultural Studies of Childhood...........................18
CSCL 1911 Poetry and Social Change............................................................................18
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DES 1402W Homelessness: Understanding the Issues and Proposal Solutions.............19
DES 1403 Impressionism in Paris and Southern France*................................................19
DES 1404 Housing Matters.........................................................................................19
DES 1405W Building Vision.......................................................................................20
DES 1406W Design in Rome and Naples......................................................................20
DNCE 1911 Stories, Bodies, Border-Crossings..............................................................20
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ENGL 1912 America in Crisis.......................................................................................21
ENGL 1913W I Don’t Want to Grow Up: Coming of Age in Fiction.............................21
ENT 1901 Zika Virus and Transgenic Mosquitoes.........................................................21
EPSY 1905 Beginner’s Chess and 21st Century Skills..................................................22
ESCI 1901 Polar Environments: Rocks, Ice, and Human Impact...................................22
ESCI 1902 Geology of Minnesota..................................................................................22
ESCI 1903 Sea Level in the 21st Century: Societal Response to Coastal Processes........23
FSCN 1905 Antioxidants: How They Protect Your Food and Body............................23
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GEOG 1911 Digital Earth..............................................................................................23
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#### Literature and Film

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<td>Children and Other Talking Animals: Animal Tales in (Mostly) Children's Literature</td>
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## Seminars by Interest Area, continued

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FALL 2017 & SPRING 2018
FRESHMAN SEMINAR
DESCRIPTIONS
Black Reality Television
Terrion Williamson
African American and African Studies
AFRO 1911

Many critics date the summer of 2000, when Survivor and Big Brother quickly became ratings juggernauts, as the beginning of the contemporary reality television boom. Within a few short years, shows like College Hill, America’s Next Top Model, and Making the Band 2 began pushing the genre to centralize the experiences of black cast members and, today, reality shows that feature solely or predominately black casts are among the most successful of the genre. For some people the proliferation of black reality television has been welcome, while for others it has been a major cause for concern, particularly given the complex history of black representation in U.S. public culture. In this course, we will consider what is at stake in the cultural battles over black reality television, as well as how various intersecting modalities of difference such as race, gender, class and sexuality affect the conditions under which black reality television programming is produced and consumed.

Terrion Williamson originally hails from the South Side of Peoria, Illinois (shout-out to Richard Pryor), which she affectionately refers to as “the hood.” Her experiences growing up in her beloved working-class black community deeply inform her research and teaching interests in feminism, racialized gender violence, black pop culture, and contemporary African American literature. She is also an unabashed consumer of reality television and hopes one day to join the cast of Big Brother so that she can wreak professorial havoc on the house.

Creative Writing and Creation Stories in American Indian Literature
Carter Meland
American Indian Studies
AMIN 1911

Creation is a powerful word in native oral/written literary traditions, speaking not so much of an event from the past (like the Big Bang), but more of a process and a place we are implicated in. We live in creation and in living in this place we seek to see to its ongoing health. In this course we will explore prominent ideas and themes in Native creation stories, by reading stories and scholarly commentary on what creation means in Native philosophy. Our reading will lead us to think about what we are doing to creation in an environmental sense and we will think about how stories offer other perspectives on how we may think about how we are treating creation. We will explore the themes/ideas from the readings with creative writing, reflecting on our own relationship with creation through poetry, fiction, and essay. Creation is powerfully good for all of us!

Carter Meland has taught American Indian Literature and Film classes in the Department of American Indian Studies since 1999. His work examines the places where creative writing and critical thinking intersect and the ways we need to use imagination and Native philosophy to gain new perspectives on the challenges facing us in our social, cultural, and environmental lives. In addition to articles on American Indian writing, Meland has published short stories, poetry, and memoir in numerous literary outlets. In the spring of 2017 Michigan State Press published his novel Stories for a Lost Child.

Changing Human Adaptations
Martha Tappen
Anthropology
ANTH 1911W

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 on archaeological sites in France, the Congo, Ethiopia, and post-soviet Georgia. Currently, she is a principle investigator at the Homo erectus site of Dmanisi, Georgia, the earliest fossil site found out of Africa.

Time: Now and Then
David Valentine
Anthropology
ANTH 1912

This seminar examines Americans (including ourselves) who travel abroad and what our experiences – both present and historical – tell us about how we imagine others and ourselves. How do travel experiences transform Americans and the countries and cultures that they interact with? This seminar posits that paying careful attention to the movements of Americans globally – as tourists, consumers, workers, educators, military personnel, performers and the like – will help us understand the more abstract elements of globalization, including the ever-stronger economic, political, cultural, and commercial integration of the United States with the rest of the world. This seminar explores how the real movement of people across borders relates to these forces.

David Valentine is an associate professor of anthropology. He received his PhD in linguistic and cultural anthropology from New York University in 2000. His dissertation work was on the politics, histories, and meanings of the category transgender. His book, Imagining Transgender: An Ethnography of a Category (Duke University Press 2007), was awarded the Ruth Benedict Book Prize (SOLGA/American Anthropological Association). His current research is a 5-year longitudinal study of imaginings and narratives of the future among commercial outer space entrepreneurs, funded by the National Science Foundation.
Race and the Making of Humans
Karen Ho
Anthropology
ANTH 1913

When Barack Obama was elected president of the United States, the first black man to hold such office, many people proclaimed our society to be “post-racial.” Simultaneously, the Supreme Court still routinely adjudicates cases relating to affirmative action, considering the value and meaning of diversity in our schools, while laws prohibit “hate crimes.” The racial wealth gap, especially between the categories of “black” and “white,” has not declined but rather has tripled over the past 25 years. The U.S. Census now allows respondents to check all the boxes that apply regarding race/ethnicity rather than just one. What is race, exactly, and what does the category mean? If race is one of the major ways we mark difference and hierarchy, should we recognize racial diversity or not? What good is race anyway?

Karen Ho is a cultural anthropologist who studies cultures of power in the United States. Bringing an anthropological lens to understand the corridors of power, her research examines cultures of influence such as Wall Street, the market, corporate America, racism, and other taken-for granted socio-economic sites and dynamics. She has also conducted ethnographic research on Wall Street investment banks and their role in generating financial crises.

Gary Cooper
Applied Economics
APEC 1905

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 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.

Witches, Ghosts, and Evil Clowns
Peter Harle
Art History
ARTH 1911

From ancient images through popular culture and social media, our art, stories, and beliefs have been filled with figures of fear. The returning dead, people with weird powers, demons, monsters, and mad killers haunt our dreams, but also seem to show up during waking hours. People have committed acts of violence based on fears of such beings. Yet we are also drawn to them, depicting and playing with them, and taking on their guises to scare ourselves for fun. This course will investigate these figures of fear, using approaches from art history, folklore, anthropology, and other fields. We will read a variety of texts, and will also encounter and think about legends, art, movies, literature, games, costumes, haunted houses, and objects used for magic and protection. This course will help you build skills of close observation and visual analysis, learn surprising things about your own surroundings, think critically about culture, and deepen your appreciation for the cultural knowledge and play of communication that make folklife, art, and popular culture so rich and remarkable.

Peter Harle is a folklorist whose research interests include cemeteries, divination games, and home shrines. He advises students for the departments of Art History, Anthropology, and Philosophy.
BioArt: Culturing Life

Neil Olszewski
Plant Biology
Diane Willow
Art
ARTS 1911

What do GFP Bunny (green fluorescent protein) and transgenic bacteria have to do with art? This interdisciplinary seminar explores BioArt as a contemporary artform that engages scientific and artistic processes to create artwork with biological organisms, living systems, and life processes. It questions the relationships among biological bodies, cultural bodies, technology, and bioethics. BioArt examples include Victimless Leather alive at MOMA, the DIY home kitchen Digestive Table, and the One Tree series of genetically identical trees living in San Francisco. Exploring topics from ecology to molecular biology, we will examine the dynamic process between scientist, artist, and the public, the poetic and dynamic process between scientist, artist, and the public, the poetic and the One Tree series of genetically identical trees living in San Francisco. Exploring topics from ecology to molecular biology, we will examine the dynamic process between scientist, artist, and the public, the poetic and political implications, and the ethical issues associated with the making of this art. Direct engagement with microorganisms, reading and discussions that develop critical thinking, as well as laboratory and studio sessions will lead to individual and collaborative works of BioArt.

Neil Olszewski is a professor in the Department of Plant and Microbial Biology. His research investigates regulation of plant growth and plant viruses. He assisted the artist Eduardo Kac with Natural History of the Enigma, which was shown at the Weisman Art Museum. He also enjoys playing the cello.

Diane Willow is a professor in the Department of Art, in the area Interdisciplinary Art + Participatory Culture. “By any medium necessary” best describes her process. With internationally and nationally commissioned public art works and exhibitions she engages media as diverse as bioluminescent plankton, interactive architectural facades, and tangible sound.

Art and Yoga
Jan Estep
Art
ARTS 1912

This experiential course offers a dynamic mix of art and yoga with the goal of tapping into your creativity, cultivating a strong sense of embodiment and intuitive intelligence, and developing self-awareness. Each class opens with yoga and meditation, which leads into guided creative exercises with various art materials, and ends with structured time to share. Calming the mind/body and centering into self-presence at the beginning of class lets us shift from the outer turmoil and stresses of ordinary life, awakening the natural calm and ease within. It is from this place that we explore creative expression – through drawing, painting, image-making, writing, and movement – connecting with ourselves in a deeper, freer way. Together we create a supportive community that encourages each of us to learn, explore, and grow. This class is for all levels: although welcome, no previous art or yoga experience is necessary. Most important is an open mind and a willingness to experiment with creative and somatic practices. A materials list will be sent out to students prior to first day of class.

Jan Estep is an artist, writer, educator, spiritual seeker, philosopher, and yogi. She approaches life with curiosity and a deep desire to connect. Her daily creative practice combines visual arts, writing, meditation, and yoga, and her recent art projects explore the relationship between art, spirituality, and the potential of creativity to help people grow and heal. In addition to her degrees in studio art (MFA) and philosophy (PhD), she is trained in Mindfulness-Based Stress Reduction (MBSR) from UMass Medical School Center for Mindfulness, Kundalini Art As Taught By Yogi Bhajan, Art and Yoga with Hari Kirin Kaur Khalsa, and Prana Vinyasa Flow with Shiva Rea. Estep divides her time between her home in southwest Colorado and her teaching in Minneapolis.

The Ultimate Questions
Lawrence Rudnick
Astrophysics
AST 1910

Why are we here? Not here at the U, or even on Earth, but why do intelligent beings even exist in the Universe? How did it all begin? And how is it going to end? Did the Universe have to turn out the way it did, or are we simply the lucky one of an infinite number of universes existing across space and time? Of course, we won’t answer any of these questions, but their exploration makes for a fascinating journey. Our guidebooks will be two intriguing works by Paul Davies, “The Goldilocks Enigma” and “The Mind of God,” anchoring our discussions which are guaranteed to keep you up at night.

Lawrence Rudnick is a distinguished teaching professor of astronomy who still can’t believe he gets paid for thinking deep thoughts about the universe. He enjoys teaching and learning with students from freshmen through PhD candidates. His research involves the observation of high energy objects, such as exploded stars and enormous structures with the mass of a quadrillion suns. He uses telescopes around the world and in space, and is also involved in a variety of public outreach activities, including working on a new Bell Museum of Natural History and Planetarium in Saint Paul.
Nothing
Lawrence Rudnick
Astrophysics
AST 1911

Is “nothing” too wonderful to be true, as the great 18th century physicist Michael Faraday pondered? Following the Bard, in this seminar we will make much ado about “nothing.” From the birth of the universe ex nihilo, to the philosophies that find meaning in nothing, to the tangled history of zero over the centuries, to our beginnings as seen by theologies when even nothing was not. In our journey through the teeming vacuum, “nothing” is sacred, and will be both ventured and gained. Caution is advised, however, in telling people that you’ve signed up for “nothing!”

Lawrence Rudnick is a distinguished teaching professor of astronomy who still can’t believe he gets paid for thinking deep thoughts about the universe. He enjoys teaching and learning with students from freshmen through PhD candidates. His research involves the observation of high energy objects, such as exploded stars and enormous structures with the mass of a quadrillion suns. He uses telescopes around the world and in space, and is also involved in a variety of public outreach activities, including working on a new Bell Museum of Natural History and Planetarium in Saint Paul.

Innovation and Imagination in Ireland

John Ward
College of Biological Sciences
BIOL 1904

Sundials, color photography, stethoscopes, iPods. Our world is continually shaped by great ideas. Humans are naturally creative beings, but our brains can constrain innovative thinking through fear, the urge to conform, and the tendency to interpret information in familiar ways. This freshman seminar abroad will explore biological and social perspectives of creativity and innovation through studying familiar examples such as Apple and Disney Pixar. As a class we will move beyond our natural constraints and travel abroad over spring 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” – home to a slew of startups 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 the Associate Dean for Undergraduate Education in the College of Biological Sciences. His research is focused on understanding the function of metabolite transporter proteins in plants. Outside of work, he is interested in reptiles and amphibians, vacuum tube electronics, and wood turning.

Curing Cancer
Colin Campbell
College of Biological Sciences
BIOL 1911

The objective of this seminar is to develop a basic understanding of the molecular origins of cancer, how it is currently treated, and the exciting efforts to develop new, more effective anti-cancer drugs. We will read and discuss two recent books, The Emperor of all Maladies by Siddhartha Mukherjee and The Immortal Life of Henrietta Lacks. Each class session will involve interactive discussions and a lively exchange of thoughts and ideas.

Colin Campbell is an associate professor of pharmacology. His doctoral and post-doctoral training occurred at Boston University, the University of Illinois at Chicago, and the Albert Einstein College of Medicine in the Bronx, New York. In addition to directing the graduate program in pharmacology, he directs a cancer biology research group and teaches undergraduate, graduate, and professional students.

Photographing the University Community

Alex Lange
Biochemistry
Robert Roon
Biochemistry
BIOL 1912

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 PhD 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 30 years of university teaching. His eclectic interests range from neuroscience and nutrition to the origins of human life and Northwest Coast Native American art. He also sings in a men’s choral group and co-parents his grandson. He has been taking photographs for 50 years and in the past few years, he has averaged 20,000 photographs per year.
Understanding the Evolution-Creationism Controversy

Randy Moore  
College of Biological Sciences  
BIOL 1913

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 — and probably 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: Issues and Applications in Your Life

Perry Hackett  
Genetics, Cell Biology, and Development  
BIOL 1915

DNA and genomes are discussed in many contexts including medical science (diagnosing a disease and finding miracle cures), CSI, 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.

The Human Story (As Told by Our Genomes)

Yaniv Brandvain  
Plant and Microbial Biology  
BIOL 1916

Thousands of human genomes have been sequenced. So have the genomes of ancestral humans, other hominids, and closely related species. In this course we explore what, if anything, we can learn from this genomic data. We specifically address our relationship to other hominids, what patterns of genomic variation across continents tells us about human migration and isolation, and how natural selection has impacted our genomes. In doing so, we will also discuss advances in sequencing methodology, genomic association studies, principles in evolutionary biology, and the limits of what we can and cannot learn from the genome.

Yaniv Brandvain is a faculty member in the Department of Plant and Microbial Biology. He studies how we can learn about population history, speciation, and the action of natural selection from patterns of genomic variation.

Ways of Knowing and Science

Craig Hassel  
Food Science  
Karl Lorenz  
CFANS Student Services  
CFAN 1902

Every human society has developed its own knowledge of food and health relationships, but until very recently, researchers at large universities have paid little attention to this knowledge. Most scientists do not accept indigenous, ancestral, or ancient knowledge systems as valid. When such knowledge is considered, it is studied through the lens of “science” to determine its legitimacy. Diverse food practices and understandings may be acknowledged as cultural artifacts, but are seldom seen by scientists as legitimate on their own merit. We will attempt to take a more culturally competent “inside look” at diverse ways of knowing. We will explore indigenous knowledges, Ayurveda, Chinese Medicine, Western/biomedical, and African American perspectives. Each of these “ways of knowing” is grounded in distinct and divergent ancestral and cultural orientations.

Craig Hassel explores issues of food and health with cultural communities whose narratives tell of diminishment and/or marginalization of their knowledge as often represented through academic teaching and research. Trained as a nutrition biochemist, for the first 36 years of his life he was virtually oblivious to the influence of culture in governing scientific thought and attention.

Karl Lorenz leads the work of the Diversity Catalyst Team and is responsible for implementing college-wide diversity initiatives.
Ideas Worth Spreading: Digging into TED Talks

Chrsty Haynes
Chemistry
CHEM 1901

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 seminar, we will focus both on discovering our own passions and how to communicate these passions effectively to a broad audience.

Chrsty Haynes has been a member of the Chemistry faculty at the University of Minnesota since 2005. She earned her PhD 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 in the Kitchen

Renee Frontiera
Chemistry
CHEM 1903

This seminar will look at the chemistry behind cooking and baking. In this course, we will cover topics such as coffee roasting, gluten formation, caramelization, unscrambling an egg, the science of ice cream, and molecular gastronomy. We will discuss some of the fundamental processes and chemical transformations that occur when we step into the kitchen. In addition to chemistry, this course will touch on interdisciplinary concepts from biochemistry, neuroscience, materials science, and physics.

Renee Frontiera is a McKnight Land-Grant Assistant Professor in the Department of Chemistry. She earned B.A. degrees in Chemistry and Chinese at Carleton College, and received a PhD in Chemistry from the University of California-Berkeley. She was a postdoctoral fellow at Northwestern University before coming to UMN in 2013. She has taught graduate and undergraduate classes in quantum mechanics and spectroscopy. Her research involves using light to probe chemical reactions occurring in nanomaterials, in solar cells, and in cellular membranes.

Quantum Mechanics and Theology

Doreen Leopold
Chemistry
CHEM 1912

During the first half of the semester, we will introduce the fundamental ideas of quantum mechanics, including wave/particle duality and the uncertainty principle. We will also discuss some of the paradoxes that highlight the counter-intuitive nature of these concepts and illustrate the properties of indeterminacy, entanglement, nonlocality, interconnectedness, and other aspects of “quantum weirdness.”

During the second half of the semester, through students’ presentations and papers on topics of their choice, we will explore the reflections of these ideas in theology and related topics.

Readings will include excerpts from Al-Khalili’s “Quantum: A Guide for the Perplexed” and Capra’s “The Tao of Physics: An Exploration of the Parallels between Modern Physics and Eastern Mysticism.”

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).

Latina/o Revolutionaries and the Global Left

Jimmy Patiño
Chicano and Latino Studies
CHIC 1911

This seminar will examine the history of Latinas/os in the United States who created solidarities and relationships with activists, collectives, and revolutionary leaders in Latin America and across the globe. Highlighting how Latinas/os reacted to local struggles against systems of racism, labor exploitation, and patriarchy in a diversity of ways, the class will concentrate on how some of these movements made connections with Leftists in other parts of the world including Mexico, Cuba, Puerto Rico, Central America, Vietnam, and Palestine. Reflective of the historical context of US society and the global political-economy, these Latina/o revolutionaries put forth important visions, actions, and changes. Highlighting the diversity of these revolutionaries’ perspectives and the debates between them and with others, the class will critically evaluate the ways their analyses, strategies, and practices sought to create a better world in their own neighborhoods, regions, and societies and tied them to key sites of radical change in other parts of the world.

Jimmy Patiño is an assistant professor and historian in the Department of Chicano and Latino Studies. His book on Chicano Movement Struggles for Immigrant Rights in the San Diego Borderlands is under contract with UNC Press. His broader research, teaching, and writing explores multiethnic solidarity particularly among African Americans and Mexican Americans, Chicano-Latino History, transnationalism and the borderlands, social movements, and forms of cultural resistance.

Freshman Seminars 2017-2018
Picturebooks and Graphic Novels
Marek Oziewicz
Curriculum and Instruction
CI 1904

This seminar explores picturebooks and graphic novels as especially conducive to the development of young people's visual literacy. We'll discuss the image/word interaction, the complexity of pictorial reading/storytelling, the thematic scope and artistic techniques, and the historical overview of different approaches to visual narratives around the world. The seminar will stress the role of visual literacy for challenging stereotyped representations of cultural, racial, and religious otherness. Students will learn how picturebooks and graphic novels have been part of a larger progressive trend to help young people embrace positive images of multiculturalism, diversity, and difference.

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. He studies the power of stories to nurture empathy and understanding across cultures. His most recent book is Justice in Young Adult Speculative Fiction (Routledge 2015). If not on campus, he lurks in southwest Minneapolis, usually with his beastly wife and their two book-gnawing cubs.

Children and Other Talking Animals: Animal Tales in (Mostly) Children's Literature
Marek Oziewicz
Curriculum and Instruction
CI 1908W

Humans and animals have coexisted for long millennia until humanity exiled itself from nature in order to rule it. In this course we look at the tradition of animal tales as humanity's never-entirely-suppressed memory of our kinship with animals and as 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 talking animals. We read a range of animal tales and consider their meanings for the environmentally threatened global world.

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Science, Technology, and Society
Bhaskar Upadhyay
Curriculum and Instruction
CI 1943W

Why and how do science and engineering and technologies generate inequities, control over resources, and impact economy and culture? Is any development good for business also good for science? How do national politics influence what kind of science gets done and what technology gets developed? How do humans experience the value of science and technology or not? This course focuses on engaging students in these and similar questions to understand the integral relationships between science, technology, and society. This Freshman Seminar provides an introduction to foundational concepts, themes, and questions developed within the interdisciplinary field of STS (science, technology, and society). For example, we will attempt to understand the relationships between two areas of science content (genes and genetics and nuclear energy), engineering and technology (CRISPR-Cas9 technology and atomic bomb), and society by exploring the benefits (experienced and potential) and harm (experienced and potential) of these engineering and technological developments.

Bhaskar Upadhyay is an associate professor of STEM Education whose research, scholarship, and teaching focuses on the issues of social justice, race, and equity in STEM education.

Issues in 21st Century America: Diverse Christian Perspectives
Tim Face
Spanish and Portuguese Studies
CLA 1911

The media often paints Christianity as a monolithic belief system that is outdated, opposed to science, and intolerant of opposing views. Such a characterization paints Christians in unfairly broad strokes, ignoring their diversity of views. If the media portrayal is inaccurate, how does Christianity really interact with the issues we face in American society today? This is the theme we will explore in this course. We will focus our study on Christian beliefs as grounded in the Bible. We will see that Christians understand their holy book in different ways and come to very different conclusions about its application to societal issues. We will explore different Christian perspectives, noting how conservative and liberal Christians both ground their beliefs in biblical texts, yet hold opposing views. Gender, gay rights, abortion, and immigration are just a few of the topics we will explore as we investigate the interaction of Biblical Christianity with 21st-century American issues.

Timothy Face is a professor of Hispanic linguistics who works with the sound system of Spanish and its acquisition by native speakers of English. Beyond his work in linguistics, he also holds a graduate degree in Christian Studies and is dedicated to the study of Christian theology and the diversity of Christian perspectives. He is a passionate sports fan (baseball being his favorite) and has recently developed a passion for running. He also enjoys traveling, both in the U.S. and abroad, but especially loves Spain and wouldn't mind having a second home there some day.
Silencing the Gods: Divine and Human in the Hebrew Bible

Bernard Levinson
Classical and Near Eastern Studies
CNES 1911

This seminar attempts to “get behind” the overlay imposed by modern culture upon the Old Testament/Hebrew Bible and to read it on its own terms. In order to do so, we will explore the fascinating literature and religion of the ancient Near East by reading texts from ancient Mesopotamia, Canaan, and Israel, and discussing the ideas found in them and their literary artistry. After investigating the literature of Israel’s neighbors, we will read biblical literature in dialogue with these stories, intellectually analyzing the narratives of the creation of the world, the origin of life, the great flood story, the idea of divine revelation, and the significance of law. Specific topics to be dealt with include God, creation, fate, the point of human life, and the meaning of history.

Imagine climbing up to an unmarked cave in the desert where some of the most famous of the 2,000 year old Dead Sea Scrolls were discovered. Bernard M. Levinson, who recently returned from Israel where he led an international team of scholars at a famous research institute, did just that. He has taught at the University of Minnesota for the past 18 years. One of his students won the most prestigious undergraduate scholarship in the country, the Rhodes Scholarship. Come study with a professor who will challenge you intellectually and help you learn how to become a better student.

The Never Ending Story: Reading the Bible as Literature

Hanne Loeland Levinson
Classical and Near Eastern Studies
CNES 1912

“There have been great societies that did not use the wheel, but there have been no societies that did not tell stories.” (Ursula K. Le Guin) The Hebrew Bible (Old Testament) is full of stories: a story of the first humans in a garden accompanied by a snake; of a boat filled with animals and a devastating flood; and of a father who almost sacrifices his son. There are stories of wanderings in wilderness, of prophets, kings and queens, of villains and heroes; some stories of love and friendship, and endless stories of war, violence, and death. These stories do not end with the Hebrew Bible. They have been told and retold through millennia and are still part of our own cultures. In this course we will read stories from the Hebrew Bible with the help of narrative analysis (through analyzing the stories’ plots, characters, and other literary strategies). We will also look at examples of how these stories have been used and reused through history until today.

Hanne Loeland Levinson loves to read stories from classics like Crime and Punishment (Dostoyevsky) and The Chosen (Potok) to dystopia novels like The Hunger Games (Collins). In her classes she shares her fascination with good storytelling. She came to the U of MN from Norway four years ago. She teaches courses on the understanding of death and afterlife in the Ancient World, on women and gender, introduction to Bible and to prophecy. Her first book focused on gender and language for God in the Hebrew Bible (HB). She is now writing a book on the stories in the HB where someone wants to die, asks God to take his life, or commit suicide. In 2008 she won the most prestigious international prize in the area of academic religious studies, The John Templeton Award.

Introduction to Crisis Communication

Svilen Trifonov
Communication Studies
COMM 1911

With this freshman seminar, students will be introduced to key concepts in crisis communication. We will explore key theories and case studies that illustrate the ways individuals and groups communicate during moments of crisis. The course is designed to introduce students to the undergraduate study of communication. Students will begin to develop critical reading and writing skills that are central to a successful undergraduate education. The course bridges the fields of business communication, organizational communication, rhetorical studies, and critical media studies.

At the end of the course, students will emerge with better understanding of communicative practices during crises. Students will be encouraged to identify ethical and unethical communication practices. Students will also learn to discuss and recognize the larger societal and political implications of a variety of case studies.

Svilen Trifonov’s research focuses in the area of public address, with a particular emphasis on presidential rhetoric. He is interested in the examination of public crises and the ensuing responses to them. Currently, he is conducting research on U.S. immigration policy and activism.
Religious Arguments
John Nordin
Communication Studies
COMM 1913

Religious arguments feature in a wide spectrum of global conflicts. We will focus on the role that sacred texts play in justifying positions that religious groups take on such issues as the role of women, violence, the presence of evil, sexuality, attitude to other religions, and the ultimate future of the earth.

To examine these questions we must gain familiarity with standard analytical techniques and the assumptions, often unexamined, that both scholars and ordinary people use to amass sacred texts as evidence for their views. While ordinary people use to amass sacred texts as evidence for their views. While

Michael Maratsos
Institute of Child Development
CPSY 1904

In this seminar, students will be introduced to a variety of experiences that comprise human childhood across a wide variety of geographical, economic, and cultural circumstances.

Students will learn about the basic course of childhood and the development into adult roles in human societies ranging from modern states through technologically primitive cultures. This seminar seeks to develop an appreciation of the variety of human childhoods, and how the changes that humans themselves make can affect this at both familial and societal levels. At a broader level, this seminar seeks to help students examine what it means to develop as a human being, and the ethical issues humans face in guiding children's development.

Michael Maratsos' interests include problems in the broader history and theory of childhood. In particular, he is interested in the general analysis of how economic, technological, and other societal conditions affect the practices and personalities of children and adults, and the general nature of childhood.

Erin Trapp
Cultural Studies and Comparative Literature
CSCL 1911

At a time when creative forms of resistance are playing an increasingly significant role in what happens in public and political worlds, questions of language, metaphor, and aesthetics have become relevant to those who think about social change. How can poetry be a force of social change? How can poetry be a vehicle that repairs or aids in the recovery of social violence? Poetry, which derives from the term “poiesis,” and means “making” or “creation,” is often seen as a means to express personal experience and as a way of generating new forms of collective imagination, but it is less often seen as something that can lead to social change or revolution.

In this course, we will ask what makes poetry a poem and explore ideas about poetry’s capacity for expression and activity, interpretation and change, thinking and acting. We’ll read poetry that attempts to repair the damage wrought by political, environmental, and social destruction by looking at the role of poetry in social struggles.

Erin Trapp has written about postwar German poetry, the poems written by Guantanamo detainees, and poetry and psychoanalysis. She is especially interested in cultivating a creative-critical writing practice and has recently published a chapbook of poetry, titled Enough Is Enough, which is a kind of eco-poetic work and a guide to Marx for infants. She also teaches classes on everyday life and the body and the politics of representation.

Ann Ziebarth
Design, Housing, and Apparel
DES 1401

Beyond the suburbs lies rural America. Whether you grew up in the country or in the city, you probably have some ideas about rural places. Maybe you think of small rural towns as ideal places to grow up and grow old – quiet places that are safe from crime, without traffic and pollution. Or maybe you think of rural places as backward, boring, and bleak. In this class we will explore various myths and realities of life beyond the suburbs. We’ll discover what is unique about rural places. We will examine who lives in rural America and how they make a living. We will explore the concept of rural design and learn more about housing issues facing rural communities.

At a time when creative forms of resistance are playing an increasingly significant role in what happens in public and political worlds, questions of language, metaphor, and aesthetics have become relevant to those who think about social change. How can poetry be a force of social change? How can poetry be a vehicle that repairs or aids in the recovery of social violence? Poetry, which derives from the term “poiesis,” and means “making” or “creation,” is often seen as a means to express personal experience and as a way of generating new forms of collective imagination, but it is less often seen as something that can lead to social change or revolution. In this course, we will ask what makes poetry a poem and explore ideas about poetry’s capacity for expression and activity, interpretation and change, thinking and acting. We’ll read poetry that attempts to repair the damage wrought by political, environmental, and social destruction by looking at the role of poetry in social struggles.

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Ann Ziebarth is a professor in the College of Design, Housing Studies program. Her academic background includes a BS in Housing from the University of Minnesota, a Master of Public Administration from the Harvard Kennedy School of Government, and a doctoral degree in Sociology/Rural Sociology from Louisiana State University. As a rural sociologist, Dr. Ziebarth's research focus is on the social, economic, and political changes impacting small towns and rural places using housing as a key indicator of these broad transformations.
Homelessness: Understanding the Issues and Proposal Solutions

Marilyn Bruin  
Design, Housing, and Apparel  
DES 1402W

Housing directly affects physical, mental, and spiritual well-being, and access to education, employment, human service, and social networks. We will explore issues of homelessness including how it is defined and perceived, causes of homelessness, the long- and short-term effects on individuals and families, and the consequences of homelessness at the community level. We also will explore philosophies and programs designed that contribute to those disparities. Public policy at the local and national levels will be examined as it creates and minimizes experiences of homelessness. I want this course to help you to think critically and ethically about homelessness through reading, writing, discussion, and visits to local homeless shelters. Over the semester, we will discuss and evaluate research-based information and information presented in the media. The seminar is designed to teach skills in locating and evaluating research-based information, develop skills in listening, developing cogent arguments, and understand the peer review process to help students function as a collaborative work group. Furthermore, interactions with families and individuals experiencing homelessness combined with reflective writing assignments encourage students to explore their biases toward individuals in poverty and a sense of responsibility to address poverty as a social issue. Finally, students based on their research, discussion, and engagement experiences, will develop a cogent explanation of homelessness and propose a solution. It is my responsibility to provide a safe and supportive learning environment where students can challenge their assumptions and biases, develop empathy for individuals experiencing homelessness, and learn to develop their own proposal for change that is grounded in solid information and experiences.

Marilyn Bruin earned a doctorate in Human Development and Families Studies with minors in Economics, Housing, and Political Science at Iowa State University. The program of study helped her develop skills to rigorously research how individuals and families make decisions about where they live and how housing influences access to resources and well-being. As a teacher, her goal is to use quantitative, qualitative, and mixed methods to examine household characteristics, networks, and resources to investigate housing and neighborhood effects on individuals and families.

Impressionism in Paris and Southern France

Monica Fogg  
Design, Housing, and Apparel  
DES 1403

This Freshman Seminar Abroad will explore the revolution of French Impressionism. We will examine how the art climate as well as developments in science and technology led to a movement that transformed the art world with fresh depictions of daily life. After eight weeks of classroom work, we will travel as a class to Paris and southern France over spring break to visit sites that served as inspirations for impressionist painters, finding our own inspiration in bustling cafés, tranquil gardens, the alluring Mediterranean Sea, and other notable sites. In both the Twin Cities and France, we will visit museums and discuss how and why Impressionism captured the immediacy of experience. We will consider parallels in current times and how these might influence creative visuals. No previous art or art history experience is required, only an open mind and a willingness to learn and participate in the process.

Monica Fogg is an artist (watercolor, encaustic, acrylic, woodcut, and lithography) and designer/fabricator. She has taught courses in watercolor, drawing, painting, color theory, design, visual presentation, and art history and has led previous Freshman Seminars Abroad to Japan and France. Her work is in collections throughout the United States.

Housing Matters

Becky Yust  
Design, Housing, and Apparel  
DES 1404

Housing directly affects our physical and mental health, children’s educational attainment, our economic opportunities, our transportation patterns and dependencies, and the environment. However, not all people are able to achieve the same levels of well-being because of disparities due to race, ethnicity, and class as they seek to obtain stable, secure, and affordable housing in supportive neighborhoods and communities. We will explore issues of power and privilege that contribute to those disparities. Public policy at the local and national levels will be examined as it creates and minimizes social inequities in housing.

Becky Yust is a professor of housing studies at the College of Design. She served for 16 years as department head of Design, Housing, and Apparel and two years as interim dean of the College of Design. Her research and expertise are in the areas of housing adequacy and affordability, housing decisions and theory, energy consumption and conservation, and homeownership initiatives.
Building Vision
Monica Fogg
Design, Housing, and Apparel
DES 1405W

The desire to succeed and do well can sometimes circumvent one’s willingness to embrace challenge in order to safely achieve an outcome (not fail). This seminar aims to break down barriers and fears while developing processes toward new ways of seeing. It builds and expands connections to a larger world of ideas and disciplines. Through weekly exercises in visual story-telling, participants will sharpen their ability to see the real world as well as the imagined. Projects are constructed to challenge perceived personal limitations in ideation and process and to build a way of communicating in a visual manner. This seminar is for individuals interested in expanding personal ways of seeing, thinking and doing, and individuals interested in developing a personal process in the evolution of ideas.

Monica Fogg is an artist (watercolor, encaustic, acrylic, woodcut, and lithography) and designer/fabricator. She has taught courses in watercolor, drawing, painting, color theory, design, visual presentation, and art history and has led previous Freshman Seminars Abroad to Japan and France. Her work is in collections throughout the United States.

Design in Rome and Naples
James Boyd Brent
Graphic Design
DES 1406W

Discover the connection between design and culture. This Freshman Seminar Abroad will explore design from historic and contemporary perspectives and will focus on the importance of ethical and socially responsible design practices. Over spring break, we will travel as a class to Naples and to Rome, Italy, where we will examine how design has articulated and shaped cultures there over time. We will visit ancient and modern sites, exploring design innovation, visual communication, architecture, graphic design, inscriptions, interior design, and more.

James Boyd Brent has been an associate professor in the Graphic Design Program since 2004. He teaches drawing and surface design for design students. He is a practicing printmaker who has received multiple awards for his work, including the McFarland Outstanding Teaching Award in the College of Design. In addition to graphic design and surface design, he has taught freshman seminars for more than 10 years.

Stories, Bodies, Border-Crossings
Rachmi Diyah Larasati
Theatre Arts and Dance
DNCE 1911

This seminar will explore dance and performance as imagined, practiced, and transformed by people who cross borders in multiple sites of struggle. The course engages the concepts of “mobility” and “political economy of culture” in relation to the idea of “the margins” as applied to and/or claimed by minority groups, activists, and others in the United States, Europe, Middle East, Africa, and Asia. In exploring these intersections, the course will engage migration and displacement/dis-location as sociopolitical, economic, and spatial phenomena, particularly in relation to struggles defined around land and water, labor and livelihood, asylum/refugees, and terrorism/security. We will examine the nature of so-called ethnic (immigrant) practices and diaspora, as well as the binary of rural/urban in the context of the narrative and transmission, internal and external cultural exchange, political resistance, and “multiculturalism.” The course will also address the ways that ideas of global North and global South are claimed, defined, and contested in this process.

Rachmi Diyah Larasati is an associate professor of cultural theory and historiography in Dance. She is also a faculty advisor and affiliate of the Interdisciplinary Center for the Study of Global Change, and an affiliate faculty in departments of Gender, Women, and Sexuality Studies, and Asian Languages and Literatures. Trained in Indonesian dance, her book, The Dance that Makes You Vanish: Cultural Reconstruction in Post-Genocide Indonesia theorized global corporeal commodification through genocide. Her new book project, Dancing in the Forest: Modern Machine and Audio Politics of Land Narrative, asks questions about the aesthetic encounter between indigenous voices and capitalist noise within neoliberal space.

Galileo on Trial in Italy
Laura Coffin Koch
College of Education and Human Development
EDHD 1909W

Galileo risked his career, his freedom, and even his life for science. In this Freshman Seminar Abroad, we will learn about Galileo, the conflicts he faced, and how his discoveries forever changed the world. Over spring break, we will travel to Italy. We’ll visit Pisa, home of Galileo, and climb the Leaning Tower of Pisa. We’ll explore the city of Florence and see one of Galileo’s first telescopes. In Rome, we will visit such places as the Vatican and the Church of Santa Maria sopra Minerva, which provided the backdrop to the end of Galileo’s brilliant career. While on campus, we will learn about 17th century Italy and re-enact the Trial of Galileo through debate and discussion.

Laura Coffin Koch is a Morse Alumni Distinguished Teaching Professor of Mathematics at the University of Minnesota and director of International Initiatives and Relations for the College of Education and Human Development. For each of the past 13 years, Professor Koch has taken groups of students to Florence, Italy, and Istanbul, Turkey as part of the University Global Seminar and Freshman Seminar Abroad programs. Professor Koch served as a U.S. Peace Corps Volunteer in the Philippines for three years where she developed a passion for teaching and traveling.
American Americans in the First Person
Josephine Lee
English
ENGL 1911

Americans of Asian descent comprise one of the fastest-growing racial groups in the U.S. today. While large numbers of Asian Americans have been in the U.S. 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
Ellen Messer-Davidow
English
ENGL 1912

Injustice in America has a long history, stretching from European exploration to the present moment. A few historical examples are the seizure of Native-American and Chicano lands; slavery, lynching, and Jim Crow; women’s disenfranchisement and financial marginalization; wartime internment of Japanese and German Americans; and criminalization of gays, lesbians, and immigrants. This course focuses on socioeconomic injustices in recent years that will allow us to think about the gulf between Constitutional ideals and lived experience.

Ellen Messer-Davidow has always been interested in the power of discourse. How do facts and formulas, texts and ideologies, actors and organizations operate in and on society? Here in America we have the largest wage and wealth gaps in the developed world. Our government formula places many destitute and struggling families above the official poverty line. Our K-12 education system slid from 1st place to about 18th place worldwide. We spend more per capita on health care than any other nation but fall behind in access, quality, and efficiency. Our government, presumably by and for the people, has been hijacked by money interests. How did discourses contribute to these situations? And why, in the face of all the evidence, do we cling to the idea of American exceptionalism?

I Don’t Want to Grow Up: Coming of Age in Fiction
Julie Schumacher
English
ENGL 1913W

In this literature and discussion seminar, we will read novels and short stories that portray the often uneasy shift from the teen years to adulthood in a wide range of books, from Jane Austen to the American western to graphic/comic novels to dystopian fiction. Students will debate, analyze, and occasionally *dramatize* the coming-of-age experiences about which we will read. What does adulthood consist of? In what ways have the definitions of youth and maturity changed over time, depending on historical and cultural context? This is a writing intensive course: Students will produce imaginative, coherent, thought-provoking and grammatically correct essays. Revision will be an integral part of the class.

Julie Schumacher is a novelist who has written multiple works for young adults and adults; her most recent book is Dear Committee Members, an academic satire written in the form of letters of recommendation. Her short stories and essays have appeared in The Atlantic, The New York Times, and other publications. She has been a faculty member in the Creative Writing Program and the Department of English for 17 years.

Zika Virus and Transgenic Mosquitoes
Ann Fallon
Entomology
ENT 1901

Learn about Zika virus, an emerging, mosquito-borne disease in the Western hemisphere, through assigned readings, websites, lecture, and discussion.

Ann Fallon is a Distinguished McKnight University Professor whose research interests include mosquito reproduction, hormonal effects on cell cycle progression, structure and regulation of mosquito ribosomal protein genes, host microbe interactions, and development of in vitro systems for manipulating Wolbachia.
Beginners’ Chess and 21st Century Skills

William Bart
Educational Psychology
EPSY 1905

In this seminar, we will examine the basic components of chess, computer-based chess, how chess players think (including visual-spatial thinking and critical thinking), the psychology of critical thinking and other 21-century reasoning skills, and research on chess cognition.

William Bart has published research on the psychology of chess. He has received the Distinguished Teaching Award from the College of Education and Human Development. He is also a fellow of the American Educational Research Association and a fellow of the Association for Psychological Science.

Polar Environments: Rocks, Ice, and Human Impact

Christian Teyssier
Earth Sciences
ESCI 1901

With a focus on the Earth’s polar regions, this freshman seminar addresses general principles of Earth science, climate change on various temporal scales, and the relation among human activities, climate, and the environment. These principles are illustrated by selected readings of the Earth science and climatology literature, which will allow students to connect knowledge with real-world practice. Assignments develop research skills, writing proficiency, oral expression, logical reasoning, and critical analysis. Emphasis is placed on current debates, particularly regarding global climate change, such that students develop critical and ethical thinking skills related to these challenges. Reading assignments are chosen to show that solutions to environmental issues are part of a larger societal evolution, where individuals in society are viewed as historical agents, one that involves a combination of technological advances, science policy, and shared individual and community responsibility. Work for this course involves synthesis of datasets, writing of essays based on journal and magazine articles, and group presentations. The science and policy part of the course is balanced by writers’ and artists’ expression of the beauty and awesomeness of polar landscapes.

Christian Teyssier was educated in France, obtained a doctorate in Australia, and has been at the University of Minnesota since 1985. His teaching and research interests include structural geology and tectonics, and the understanding of rock deformation from the grain to the global scale. He has conducted fieldwork in many places, including Antarctica and the Arctic region.

Geology of Minnesota

Harvey Thorrleifson
Earth Sciences
ESCI 1902

Understanding interactions between the Minnesota environment, natural resources, ecosystems, and human activity requires a grasp of the structure and history of our landscape, from the Mississippi River basin to the Red River Valley and the Lake Superior basin. Underlying and shaping this landscape are ancient rocks in the north and in the deep subsurface, younger limestone and sandstone in the south, and the deposits of the Ice Age that our soils have formed in. These deposits host our principal drinking water sources, so we must understand them in order to protect and wisely use our water. Reading assignments will be papers, brochures, and web content. The first full-day field trip will examine the water resources of our rivers and lakes, and a second full-day field trip will examine how geology controls our well water supply.

Harvey Thorrleifson 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. Thorrleifson has conducted research on gold, diamonds, climate change, and water supply across much of Canada.
**Antioxidants: How They Protect Your Food and Body**

A. Saari Csallany  
*Food Science and Nutrition*  
FSCN 1905

This seminar will review how changes take place in food and biological systems in the absence and presence of antioxidants. We will concentrate on what antioxidants are, how they act, and how they protect food from deterioration and the body from deteriorative changes.

A. Saari Csallany has a long history in the research related to the function of antioxidants, in food and in biological systems. Her research focuses include food chemistry; free radical induced oxidative degradation of fatty acids, edible oils, and other lipids; isolation and identification of degradation products with special reference to toxic compounds; and protective effects of antioxidants in lipid peroxidation and degradation.

**Coral Reef Management in Belize**

Jim Perry  
*Fisheries, Wildlife, and Conservation Biology*  
FW 1901

In this seminar, we will examine the management of reef environments through experiential education and field work and learn about the importance of reefs, the influences that endanger reef ecosystems, and community action plans that are working to manage reef health. Over spring break, we will travel as a class to the Mesoamerican Reef in Belize to snorkel and experience the reef and conservation planning first-hand. An ability to swim is required.

Jim Perry is a self-described elderly professor in FWCB — he has been here almost 35 years — and is a H.T. Morse Distinguished Professor of Water Quality and Environmental Management. His current research focuses on climate change and the ways it interfaces with the concept and application of heritage at both the local and global levels.

**Digital Earth**

Somayeh Dodge  
*Geography, Environment, and Society*  
GEOG 1911

In today’s digital and data-intensive era, geospatial technologies have become an integral part of everyday life. Searching for business locations and driving directions using web and mobile maps, or using location based services offered with smart phones (e.g., Uber) has become routine. Geospatial technologies enable us to capture, store, process, and display a vast amount of geographic information about the Earth and the environment. The term Digital Earth is a visionary concept that was coined by former United States Vice President Al Gore, for creating a digital, multi-resolution, three-dimensional representation of the Earth, storing and managing access to geospatial data and everything that is known about the planet. This course primarily aims to familiarize students with the basic concepts of geospatial technologies and datasets used to create a Digital Earth. Students will develop skills needed to locate, gather, manipulate, process, visualize, and use geospatial data.

Somayeh Dodge is an assistant professor in the Department of Geography, Environmental, and Society. She teaches advanced Geographic Information Sciences (GIS) and geographic visualization courses. Her research mainly involves analysis, modeling, and visualization of dynamic phenomena (e.g., human mobility and animal migration), and exploring their patterns in relation to the environment and geographic contexts.
Living with Innovation

Peter Calow
*Geography, Environment, and Society* 
GEOG 1913

This seminar will examine the proposition that living with innovation depends on developing policies that properly manage risks in an informed way, by trying to anticipate and assess them rather than just to avoid them. It will cover innovations that are responding to major world challenges such as genetically modified food, nano technologies and information technology. All bring important advantages but also perceived risks from “frankenfoods,” “gray goo,” cyberterrorism, and the like. Using science to inform these perceptions of risk and manage the likely impacts from the technologies will be the recurring theme of this seminar. Students will read, discuss, and debate cutting-edge material from the scientific literature and popular press, and will have ample opportunity to develop presentation skills in these contexts.

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

Film, Art, and Politics in Urban Berlin

Rick McCormick
*German, Scandinavian, and Dutch* 
GER 1911W

Explore Berlin and its history while studying German film in this Freshman Seminar Abroad. Spend spring break in Berlin, the vibrant cultural, political, and film capital of Germany. Learn about the German film industry, a serious rival to Hollywood in the Roaring 1920s, and how it fell under state control, first under the Nazis and then in Communist East Germany. Later Germany was re-unified, the Soviet Union collapsed, and there was more prosperity – and problems. While in Berlin, explore the Olympic Stadium, the Film Museum of Berlin, the Holocaust Memorial, remnants of the Berlin Wall, Sans Souci Castle, and the famous Ufa and Defa film studios. At home and abroad, you will discuss how German film has been intertwined with German history and politics, and how that role has evolved over time.

Rick McCormick is a professor in the department of German, Scandinavian, and Dutch, where his teaching and research have focused on German film, culture, and politics. He has been an enthusiastic fan of Berlin since the 1980s, when he had a Fulbright to do dissertation research in West Berlin. Over the years he has continued to do research in Berlin and he has led two Global Seminars and one Freshman Seminar Abroad there.

Human Rights Strategy

Hassan Abdel Salam
*Global Studies* 
GLOS 1911

In 1948, the Universal Declaration of Human Rights called on the world’s nations to respect the “inherent dignity” and “the equal inalienable rights” of all people. But while the declaration helped globalize human rights, the world continues to experience genocide, torture, slavery, discrimination, economic destitution, and the wide-scale displacement of people. Is it possible to reduce – or to bring an end – to these gross violations of human rights? The course seeks to imagine new strategies to address current-day human rights challenges. In the process of conceptualizing unique strategies, students examine the complex social forces that impede human rights. Students will write a strategy paper on a contemporary human rights challenge, develop a unique non-governmental organization (NGO), and participate in a simulation of the United Nations Security Council.

When Hassan Abdel Salam grew up in multilingual and multicultural Montreal, Canada, he constantly asked himself questions about how society ought to be governed, what it means live in a just society, and how minorities should be treated. Hassan’s approach is to ask big questions. In this course, he asks, “Is it possible to end (or reduce) torture, genocide, slavery, and poverty?” Join him on this journey.

Black Looks: Race, Gender, and Representation

Zenzele Isoke
*Gender, Women and Sexuality Studies* 
GWSS 1911

This seminar explores the writing of bell hooks, one of the foremost feminist thinkers alive today. We begin with her earliest writings that expose the inherent racism of white middle-class feminism and its institutionalization in predominantly white university settings. We go on to examine her autobiographic writings that illuminate the intersections between place, identity, and black subjectivity. We will also study and debate her incisive critiques of portrayed blackness in American popular culture including film, television, and literature.

Zenzele Isoke studies black women’s politics and activism in urban spaces. She teaches courses in feminist theory and methods, women and race in the United States, gender and popular culture, and black feminist geographies. Her first book, *Urban Black Women and the Politics of Resistance*, was released by Palgrave-MacMillian Press in 2012. Using intersectionality as a central analytic tool and the stories that contemporary Black women activists tell about politics as her primary evidence, her book examines the practical and discursive roles that black women activists play in hip-hop politics, black queer politics, and other contemporary social movements in the U.S.
A History of the Drug Wars

Patrick McNamara
History
HIST 1911

When and how did some drugs become a social problem? Why is cocaine illegal in the United States? Who is winning the war on drugs? These questions and others are at the heart of this seminar. We will examine the longer history of controlled substances throughout the Western Hemisphere, focusing in particular on the scope of the so-called war on drugs of the past 30 years. We will read books, articles, and websites dealing with illegal drugs, and we will watch documentary and full-length films dealing with drug use, drug markets, and the violence surrounding drugs. Our study of the past is intended to help us understand the present context and to allow us to imagine a different future regarding these complicated issues.

Patrick McNamara has been interested in drugs for a long time. While that interest has been primarily academic, he remains fascinated by the longer, hemispheric history of drug use by indigenous populations for ceremonies, the export and consumption of illegal drugs, and the effects of the drug war on populations throughout the Americas. As a historian of Mexico, he has watched a peaceful country fall into the abyss of unrestrained violence and destruction for the sake of a consumer drug market in the United States. No drug use will be allowed in this seminar – except caffeine.

Masculinities in the Americas

Malinda Lindquist
History
HIST 1912W

What has it meant to be a man in the Americas? What did it mean to be a “man” before the term “masculine” was popularized? Do “manhood” and “masculinity” still matter today? Exploring changing meanings of manhood and the complicated constructions of masculinity from the colonial era to the present, this course argues that understanding “men,” “manhood,” and “masculinity” is central to understanding United States history. At this nation’s founding, family manhood was central to maintaining social order in the colonies and citizenship rights were the sole possession of those who could claim to be free, white, and male. Up through the 20th century, manhood has frequently been associated with specific sets of political, economic, social, and familial rights and responsibilities. At the same time, the denial of rights to large portions of the nation can be traced to their purported lack of manhood. Students in this class will debate and explore how questions of manhood and masculinity shaped and continue to shape the nation.

Malinda Lindquist is an associate professor of History. She is eager and excited to work with students to explore the historical questions and contemporary implications of manhood and masculinity. She regularly teaches courses in United States, gender, African American, presidential, and intellectual history. She is currently at work on several projects, a new history of the civil rights and black power movements; an intellectual history of the achievement gap; and a history of desegregation and resegregation in the Midwest. She has worked extensively on the social science history of black manhood and masculinity in the late-19 and 20-centuries.

Goin’ to the U: A Critical History

J.B. Shank
History
HIST 1913

You are the 146th group of freshmen to matriculate at the University of Minnesota. How has the University changed since the first class of freshmen arrived in 1871, and how has the pursuit of a college education evolved? This seminar will examine the history of the University of Minnesota as a case study of the changing nature of college education in America. Topics to be studied include the changing structure of college education as a mode of learning, its organization, expectations, and intended outcomes; the nature of college life as a subset of American life as a whole, including issues of gender, race, class, and the question of inclusion; student life as a subset of American life overall, including institutions such as fraternities and sororities, college athletics, and the relation between the collegiate campus and the wider world (i.e., student protest, activism, and politics). Students will pursue original research in University archives to create their own understanding of the history of the University.

J.B. Shank is a Distinguished University Teaching Professor in the Department of History who specializes in the multidisciplinary study of modern thought. His interest in the history of the University comes from his scholarly research on the history of the disciplines, especially the relations between the arts and sciences, and his study of the way knowledge is organized and evaluated across time and between cultures. He teaches several multidisciplinary classes at the university of Minnesota including a course in comparative cosmology that was supported by the National Endowment for the Humanities and a joint History and Art History course on the relation between art and science in the early modern period.
The Ten Plants That Changed Minnesota
Mary Meyer
Horticultural Science
HORT 1901

This seminar will focus on the impact of the ten plants that have made the most difference in Minnesota. These plants changed the history of the state and had a major impact on the economy, culture, health, food, arts, and the environment. The weekly class will include student-led environmental discussions, guest lectures, and independent and small group research that will result in written communications and website information especially related to the 10 Plants and their environmental impact in Minnesota.

Mary Meyer is responsible for the development and coordination of statewide multi-media educational programs in environmental and consumer horticulture, including sustainable home landscapes. Her main office is at the Minnesota Landscape Arboretum, where one of the largest ornamental grass collections is on display for the public.

The American Lawn
Eric Watkins
Horticultural Science
HORT 1942

This course will examine the American lawn in terms of its history, impact on society and the environment, and future. We will examine the environmental and economic impact of lawns. We will also discuss several technologies related to the lawn and how they affect society. Some of the topics we will cover include low-input lawns, pesticide fate, nutrient run-off, genetically modified lawn grasses, and mowing technology. Students will explore these topics through field trips, readings, class discussions, and interactions with people working in areas related to the American lawn. Writing and in-class presentations will give students opportunities to improve critical communication skills. Students will be exposed to important technologies, learn about the science behind the technologies, and discuss how these technologies can impact society.

Eric Watkins is a professor in Horticultural Science. His research focuses on the development of new low-input turfgrasses (lawn grasses that need less water, fewer pesticides, and less fertilizer). Eric has been recognized for excellence in undergraduate advising and his lawn is not as good as you think it should be.

The Symbolic Meanings of Money and Property
Ken Doyle
Journalism and Mass Communication
JOUR 1911

Do you ever wonder why some people run away from money, while most people chase after it? Or why some people who could afford better buy their clothes at Savers while others (who maybe can’t afford it) prefer to shop at Gucci or Armani? Or why husbands and wives, and parents and children, so seldom agree on what to do with money? Understanding the symbolic messages money sends to people is the key to learning how to answer these questions. Whether your interest is business, liberal arts, or a particular profession, this seminar ought to be interesting and useful for you.

There’s truth to the rumor that Kenneth Doyle is a maverick. A former monk, retired financial planner and investment adviser, and a licensed financial psychologist, he comes at money with a platform for examining changes in the world’s cultural, economic, social, and political processes over the past 120 years. In addition, we will explore the impact of hosting the Olympic Games on that host city and the country’s economy, as well as changes in sport that have occurred during this time-span.

An Olympic Impact on the World
Donald Dengel
Kinesiology
KIN 1904

In the late 19 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 host 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 past 120 years. In addition, we will explore the impact of hosting the Olympic Games on that host city and the country’s economy, as well as changes in sport that have occurred during this time-span.

Donald Dengel is a professor in the School of Kinesiology at the University of Minnesota. He has led students from the University of Minnesota on Learning Abroad Courses to London to study the various Olympic sites and learn about the three London Olympic Games. He was also an exercise physiologist for various U.S. Olympic Teams with research laboratories at the U.S. Olympic Training Center in Colorado Springs, Colorado.
Linguistics and Biology

Jeanette Gundel
Linguistics
LING 1911W

Before the Chomskyan revolution in linguistics in the early 1960s, the connection between linguistics and biology was largely restricted to the study of the anatomical properties of the human vocal tract involved in the articulation of speech sounds. In recent decades, however, the relation between linguistics and biology has begun to focus on the biological basis of human language, including connections between evolution of language and that of the human brain, and possible existence of “language genes.” In this seminar, we will examine the connection and relationship between linguistics and biology over time, with specific focus on how this reflects development of the field of linguistics as well as more generally the nature of interdisciplinarity.

Jeanette Gundel has been teaching linguistics at the University of Minnesota for over 30 years. She has always been interested in how language interacts with other cognitive systems in its biological basis. She has published over 60 articles and currently serves as director of the Institute of Linguistics and associate director of the Center for Cognitive Sciences.

Invented Languages

Jean-Philippe Marcotte
Linguistics
LING 1912

As far back as we can tell, there have been thousands of natural languages spoken by humans the world 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 and by simulationists in the 1900s. We will take a look at online communities of language inventors to understand what makes them tick and 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, and made sure to pick a college with a philology course. But introduction to linguistics was a prerequisite, and J.P. has been on that sidetrack ever since. He has been teaching at the University of Minnesota for 10 years.

When it Hits the Fan: Business, Crisis Communication, and Social Media in a Risky World

Holly Littlefield
Strategic Management and Entrepreneurship
MGMT 1910W

Effective crisis communication is increasingly important in a world of expanding technological dependence, sociopolitical instability, and daunting environmental challenges. Crises can be broadcast around the world in minutes via social media, creating negative headlines for months. In addition, complex, world-wide problems like climate change, religious fundamentalism, cyber security, health care, population growth, urbanization, and terrorism require effective communications to lessen the consequences of a crisis on an organization’s activities, reputation, and stakeholders. We will examine a variety of current international and national case studies to examine what went wrong and consider how businesses can better prepare for, prevent, and respond to global crises.

Holly Littlefield has taught business and international communications at the University of Minnesota for 17 years. She has also worked as an editor, columnist, textbook writer, and communications consultant for business and organizations such as Tata Consulting Services, Target Corporation, Cima Labs, Carlson Companies, and Guidant/Boston Scientific. She has received Carlson’s Honors Undergraduate Teacher of the Year Award.
Violence Against Women In Opera

David Walsh
Music
MUS 1911

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.

David Walsh was born and educated in Toronto, Canada. Although his initial degree was in Political Science and Economics, he soon gravitated towards theatre and music, landing finally in the realm of opera. It became his passion and his profession and has taken him to many countries. The capacity of opera, this all-encompassing performance art form, to evoke the most powerful human emotions in audiences and performers is what has always fascinated him and drawn him to make opera the focus of his life.

Guitar Heroes

Maja Radovanlija
Music
MUS 1912

This seminar will 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 has been playing guitar since she was 9 and is still learning new pieces. Her first complex word was GI-TA-RA (guitar in Serbian). Trained as a classical guitarist, she was always curious about the great variety of other styles and genres. She was a member of the Balkan ensemble, currently is a member of Minneapolis Guitar Quartet, ImprovIsAndDo trio and enjoys performing the music of Bach and Rodrigo in solo recitals. In her free time she plays table tennis, explores yoga and meditation, picks wild mushrooms, writes haiku poems, travels the world, and cooks Serbian dishes.

In the Midst of Desolation: Music and Poetry of World War I

Matthew Mehaffey
Music
MUS 1913

The Great War, The War to End All Wars, The War that Changed Everything: no matter the title, World War I was a global calamity the likes of which the world had never seen. The geo-political results of the war are still being reconciled today. In the midst of the war’s desolation, musicians and poets (often soldiers themselves) created a remarkably large body of art, music, popular song, and poetry devoted to wartime themes (e.g., boosting morale, mourning losses, propaganda, and generating homefront support). These abiding works of art allow readers and listeners a glimpse into the atrocities of war and the human need to create beauty in the midst of horror. Students will develop a historical understanding of World War I and will examine an international array of music and texts that bring focus to the human side of war. Participants do not need to be trained musicians to enjoy and succeed in this course.

Matthew Mehaffey is associate professor of Music at the University of Minnesota, where he conducts the University Singers and Men’s Chorus, teaches graduate and undergraduate courses in conducting and music literature, and is the 2015 recipient of the Arthur Red Motley Exemplary Teaching Award. Outside of the University, Dr. Mehaffey serves as Music Director of two respected civic choruses, The Oratorio Society of Minnesota and The Mendelssohn Choir of Pittsburgh – the “Chorus of Choice” of the Pittsburgh Symphony Orchestra. Each week he leads over 200 passionate amateur and professional singers in Pittsburgh and St. Paul in the development of concert programs that celebrate the standard choral/orchestral repertoire and push the boundaries of a traditional choral concert.
Music in Nazi Germany

Karen Painter
Music
MUS 1914W

Apart from an explicit message in the lyrics, title, or dedication, can music itself be political? Often, the political message comes from the interpreter, not just the composer or performer. Are composers responsible for the effect of the music, regardless of their intentions? How have those in power sought to legitimize their rule through the arts? Can the arts maintain their independence? What is the responsibility of the listener in a highly political environment? This seminar will examine the role of art and art censorship by focusing on one of history's most brutal regimes, which was also among the greatest patrons of music. What compromises and benefits followed when a musician, conductor, or composer collaborated? Did exploiting music actually help the Nazis to build support? How should citizens of democratic societies commemorate and judge the choices that artists made in harsher times?

Karen Painter studied music and philosophy at Yale, and obtained her PhD in musicology from Columbia. Before coming to the University of Minnesota in 2007, she taught at Dartmouth and Harvard, and served as senior staff at the National Endowment for the Arts. She received a Berlin Prize in 2000 and was a Maître de conférences invitee at the School of Advanced Studies in Social Sciences (EHESS) in Paris in 2010. She and her husband have three school-aged children.

The Color of Music

Gabriela Currie
Music
MUS 1915

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 on 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 Gabriela Currie's passions. In her journeys of discovery, she seeks to experience them first-hand or mediated through modern technology. In particular, as a scholar and as a human being, she wants to understand how these different modes of expression intersect and permeate our lives with meaning. She believes this makes life as fascinating as it makes it exciting, and she invites her students to share in that thrill of discovery.

Reflections of Justice, Images of the Law in Literature, Film, and Popular Culture

Gary Peter
Organizational Leadership, Policy, and Development
OLPD 1908W

This freshman seminar will explore the treatment of legal themes in films, literary texts, and popular culture. We will look at the law through stories, cinema, television, and other mediums to consider the following questions: Do these portrayals of "the law" enhance or inhibit our understanding of how the law works in our everyday lives, thus impacting our participation as citizens? Do literature, film, and other media accurately reflect both our legal system and how lawyers are trained and the work that they do, or do they rely upon outdated, stereotypical, or sensationalized portrayals? We will also consider whether literature, film, and popular culture can actually be useful in helping us better comprehend the complexities and ethics of the law in all of its often frustrating ambiguity.

Students will have the opportunity to develop their skills in research, analysis, oral communication, and creativity through writing formal papers, participating in and leading class discussions, making presentations, writing stories and poems, and completing a group project.

Gary Peter has been teaching at the University of Minnesota since 2002. He has taught courses in writing, law, and literature as well as the First-Year Inquiry course for incoming CEHD first year students. He holds an M.F.A. degree in Creative Writing from Sarah Lawrence College as well as a law degree from William Mitchell College of Law.

Amadeus: In Search of Mozart

Michael Kac
Philosophy
PHIL 1911W

Wolfgang Amadeus Mozart is one of the greatest composers in the Western classical canon. He is also the one who seems to have the strongest hold on the modern imagination. This seminar will explore Mozart's life and music through both listening and viewing. Why should anyone today care about music by someone who lived more than 200 years ago? Part of the answer is that this music, like the plays of Shakespeare and the paintings of Rembrandt, is of such greatness and power that every age since has found something in it to value. Mozart is also an intriguing figure for other reasons. What we know about his personality seems wildly at odds with the sublime character of his music. The music itself presents us with a mystery: much of it is so lighthearted that one wonders how it manages to be so profound at the same time. No prior knowledge about music is required, just an open mind.

Michael Kac, professor of philosophy and linguistics, is a musician and composer with extensive experience in both the classical and popular fields. From 1967-69 he played electric harpsichord with the rock band Mandrake Memorial, with whom he recorded two albums. More recently, he spent a number of years as part of a duo with guitarist Linda Cohen performing music in an eclectic blend of styles. He also performs regularly on the Twin Cities folk-music circuit.

Freshman Seminars 2017-2018
Space and Time: From Aristotle to Einstein

Jos Uffink
Philosophy
PHIL 1914

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?

Jose 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.

Global Warming Solutions

Eric Ganz
Physics
PHYS 1901

In this seminar, we consider various possible solutions to the current and future global warming problem. This is a topic of intense global importance. Topics 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.

Eric Ganz is an associate professor in the Department of Physics. His area of expertise is condensed matter physics.

Sports, Reason, and Society

Bennett McNulty
Philosophy
PHIL 1912

Sports constitute both a pervasive institution in our society as well as a source of interesting philosophical issues. In this course we investigate various topics within and related to sports using philosophical and logical methods. Among the topics that we consider are the following: the insights that statistics and inductive logic bring to sports analysis; controversies surrounding performance enhancement, cheating, and the nature of rules; the ethics of sports consumption; and issues related to sex and gender that arise in competition.

Bennett McNulty is an assistant professor in the Department of Philosophy. He received his doctorate at the University of California, Irvine in 2014 and subsequently taught in Austria and Arkansas. Bennett primarily researches the history and philosophy of science and the thought of Immanuel Kant. In his classes he aims to create active, student-centered, and inclusive learning environments.

Food Ethics

Farreed Awan
Philosophy
PHIL 1913

Food is a political and cultural phenomenon. We all eat. But does what we eat matter, ethically? Are there some things that it is wrong to eat? Vegetarians and vegans avoid meat and animal products, but is this just a preference? Are animals treated ethically in the global food system? Is there such a thing as ethical meat? Are cultures and workers exploited in these systems? These are some of the questions that we will address using philosophical methods and analysis.

Ethical dilemmas and philosophical puzzles are part of our everyday lives, if we stop to consider it. Is it wrong to eat endangered tuna? What if it is likely to go extinct whether you eat it or not? This is a puzzling question to try to answer. We will use conceptual analysis and ethical reasoning to understand the ethical challenges facing us as consumers and as citizens.

Farreed Awan is a philosopher who focuses on bioethics, environmental ethics, and political philosophy. His research interests cover exploitation in medical and commercial research, cross-cultural notions of consent, and the ethics of climate change. He is committed to an open exchange of ideas and a dynamic interactive teaching environment.

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Nanotechnology

Eric Ganz
Physics
PHYS 1902

Nanotechnology is increasingly important in our modern world. Topics will include nanoscale imaging by electron, tunneling, and atomic force microscopy. We study the unique properties of nanomaterials including carbon nanotubes and graphene. We explore microelectromechanical systems and nanoelectromechanical systems, nanoscale computer simulation, nanoelectronics, nanosensors, and nanorobotics. We also discuss applications in medicine, drugs, and energy.

Eric Ganz is an associate professor in the Department of Physics. His area of expertise is condensed matter physics.

Quantum Mechanics for Everyone

Allen Goldman
Physics
PHYS 1903

One of the greatest intellectual accomplishments of the 20th century was the development of quantum mechanics, a field of physics which describes the counter-intuitive behavior of molecules, atoms, light, and subatomic particles. Can you pass through a solid wall without disturbing yourself or the wall? An electron can and does repeatedly in many common semiconductor devices. Without an understanding of quantum mechanics, neither the transistor nor the laser could have been invented. A significant fraction of the entire economy is based on technological developments that derive directly from quantum mechanics. This class will examine, with a bare minimum of mathematics, the conceptual foundations of the strange world of the quantum as well as its connection with devices and systems that we take for granted in our everyday lives.

Allen Goldman served as the head of the School of Physics and Astronomy from 1996-2009. His research is in the area of experimental condensed matter physics. The specific work on superconductivity involves the application of quantum mechanics to macroscopic systems.

Conquest of Cold

Allen Goldman
Physics
PHYS 1904

The mastery of cold has yielded innumerable technological advances, from the development of refrigeration and air-conditioning to phenomenal leaps in methods of scientific thought and experimentation that led us to understand thermodynamics, the subject that developed hand-in-hand with the major technologies that involve cold. The latter include refrigeration, frozen food preparation, air conditioning, and the handling of liquefied gases (currently more than a $10 billion industry). Modern scientific developments that will be discussed include superconductors and new states of matter, such as the Quantum Hall liquids and Bose-Einstein condensates, all of which have resulted in Nobel Prizes in physics for their discoverers. Upon completion of this seminar you will have some understanding of the laws of thermodynamics, you will know what entropy is, and you will appreciate the reality that Minnesota winters are not all that cold on an absolute scale.

Allen Goldman served as the head of the School of Physics and Astronomy from 1996-2009. His research is in the area of experimental condensed matter physics. The specific work on superconductivity involves the application of quantum mechanics to macroscopic systems.

Aurora: From Myths to Modern Science

Cynthia Cattell
Physics
PHYS 1905

The aurora, or northern lights, have long fascinated humans. We now know that aurora occur on many other planets, including Jupiter, Neptune, and Uranus. We will examine the myths from both 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.

Cynthia Cattell is a professor in the School of Physics and Astronomy. She first saw the aurora on a climbing expedition in Alaska, as a college freshman. Little did she know at that time that the study of the physics of the aurora would become the topic of her doctoral dissertation, and the research of some of her students.
What is Time?
Woods Halley
*Physics*
PHYS 1910W

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. 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.

J. Woods Halley teaches physics courses at all levels and directs research programs in low temperature and chemical physics. He is a fellow of the American Physical Society and the Minnesota Supercomputing Institute, as well as a member of the University of Minnesota graduate faculties of Physics and Materials Science.

How Likely is Extraterrestrial Life?

Woods Halley
*Physics*
PHYS 1911

This seminar will study the various scientific issues that arise in considering the question of whether extraterrestrial intelligence is likely to exist in our galaxy and whether humans are likely to detect it. We will read a series of articles by distinguished experts on various aspects of the question, leading to an analysis of various factors in the Drake Equation, which provides a model for estimating the number of existing civilizations in the galaxy. Estimates of the these factors involve huge uncertainties, but something definite can be said about most of them and the discussion ranges over a great many disciplines including physics, astronomy, biology, chemistry, archaeology, and sociology. There will be a brief discussion of the quality of the evidence that extraterrestrials have been observed as claimed by the UFO community. This will bring about a discussion of what constitutes scientific evidence.

J. Woods Halley teaches physics courses at all levels and directs research programs in low temperature and chemical physics. He is a fellow of the American Physical Society and the Minnesota Supercomputing Institute, as well as a member of the University of Minnesota graduate faculties of Physics and Materials Science.
**Antibiotics: Promise, Profits, and Pitfalls**

Linda Kinkel  
*Plant Pathology*  
J.P. Dundore-Arias  
*Plant Pathology*  
PLPA 1901

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 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.

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.

J.P. 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.

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

Nevin Young  
*Plant Pathology*  
PLPA 1902

This Freshman Seminar will examine genomic insights into plants, animals and microbes. Students 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 plus in-class practicums, activities, and debates.

Nevin Young is a genomicist and professor of plant pathology. His lab studies legumes plants (such as 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.

**Communism, Islamism, and Democracy in Central Asia**

Kathleen Collins  
*Political Science*  
POL 1911

This course will examine the 20 to 21-century political trajectories of the countries of Central Asia (Uzbekistan, Tajikistan, Kazakhstan, Kyrgyzstan, Turkmenistan, Afghanistan, Pakistan, and Azerbaijan). We will read works that discuss the pre-modern tribal and clan-based structures of these societies, as well as the urban, Islamic settlements that were long centers of Islamic scholarship and of the Silk Road. We will examine the massive repression of the communist era, and the consequences for Islam, clan, and tribe. Then we will turn to the rise of post-Soviet forms of political Islam, in the context of a growth in corruption and new dictatorships. We will consider attempts at democratization and the causes of their failure. In the latter half of the course, we will contrast Soviet Central Asia with its southern neighbors, Afghanistan and Pakistan. Our focus will be on the growth of the Taliban in the wake of the Soviet-Afghan war, and again more recently. Finally, we will consider U.S. policy in the region.

Kathleen Collins is associate professor in the Department of Political Science. She is the author of *Clan Politics and Regime Transition in Central Asia* (New York: Cambridge University Press, February 2006), 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, Political Research Quarterly, and other journals. She is currently writing a new book, tentatively titled *The Rise of Islamist Movements: Islam and State in Central Asia and the Caucasus*. Collins has received grants from the Carnegie Corporation, Kellogg Institute, United States Institute of Peace, International Research and Exchanges Board, and National Council for Eurasian and East European Research, among others. She previously did consulting for United States Agency for International Development, International Crisis Group, The United Nations Development Programme and other organizations.
Cyberwar and International Security: Fact vs. Fiction
Jenn Halen
Political Science
POL 1912

Cyberwar is constantly referred to in movies, television, and literature, but what does it really entail? How similar is cyberwar, or more ambiguous “cyber weapons,” to traditional conceptions of war and international security? Can our theories about conventional warfare, nuclear war, espionage, and other types of confrontations help us to understand this new environment? In this course, we will watch and read the best and the worst depictions of cyber attacks. First, we will analyze whether or not these portrayals represent realistic situations, given current and developing technology. Next, we will analyze how traditional international security scholarship may help to inform our understanding of the changing global, technological landscape.

Jenn Halen's research broadly focuses on the ways that new and emerging technologies influence, and are influenced by, the political sphere. Her dissertation examines the ideological underpinnings of advanced machine learning algorithms used within public and governing spaces, such as predictive policing software. Jenn is also an avid reader and watcher of science fiction and is excited to share some of her favorites during this freshman seminar.

Human Rights, Inhumane Wrongs: Rights Violations and Armed Conflict
Holly Dunn
Political Science
POL 1913

The Declaration of Human Rights, UN Protocols and Conventions, and the Geneva Conventions were created to protect and respect human dignity in times of war and beyond. Has this been the case in practice? This seminar is designed to introduce students to international mechanisms for the protection of human rights and how they have been both respected and ignored in contexts of armed conflict. We will explore cases from across the globe, from the Democratic Republic of Congo to the former Yugoslavia. Of special concern is how the human rights of women and children have been violated during periods of violent conflict. Students will also explore how mass human rights violations perpetrated during these periods can be addressed and redressed through a variety of transitional justice mechanisms including international criminal tribunals, reparations, and traditional healing and cleansing practices. We will draw on a variety of sources, including films, documentaries, and other media. We will also benefit from guest speakers and a local human rights oriented fieldtrip.

Holly Dunn was born and raised in Canada, and has extensive experience living and studying in the Democratic Republic of Congo (DRC). Holly’s approach to research on justice and the law is to spend time with the local population and prioritize their knowledge and experiences, some of which she will share with the class. Her research contributes to understanding when and why people turn to the courts versus other justice mechanisms. She has published on the topic of gender-based violence and transitional justice in the eastern DRC.

Psychological Perspectives on Women and Work
Kristen Kling
Psychology
PSY 1911

Are you male or female? Your answer to this simple question will influence your experiences in the workplace. In this seminar we will examine the empirical studies that document important gender differences in work. We will begin by learning about gender differences, with a focus on personality traits and cognitive abilities. Next, we will focus on specific issues such as the wage gap, prejudice and discrimination in the workplace, gender differences in leadership, the impact of motherhood on women’s careers, and the influence of child care on psychological development. This seminar will provide students with an important perspective on their upcoming experiences as members of the workforce.

For Kristen Kling, nothing is more interesting than gender. She is interested in how men and women differ from each other and how men and women are treated differently by others based on their gender. As a senior in college she took a course titled, Multidisciplinary Perspectives on Women, which inspired her to pursue graduate studies that included a focus on gender. Psychology offered her the perfect intellectual home, allowing her to immerse herself in the empirical work that examines the many ways that gender influences our own life experiences.

What is the Human Mind?
Chad Marsolek
Psychology
PSY 1914

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?

Chad 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.
Rich Lee
Psychology
PSY 1916

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.

Rich Lee's research examines the ways in which race, ethnicity, culture, and migration affect the psychological and social lives of ethnic/racial minority individuals and families. He is most fascinated by how parents talk (or don't talk) to their children about racial and ethnic issues, how individuals develop racial and ethnic identities, and how people experience and confront racism and discrimination in everyday life. His current work involves helping Hmong American parents become better parents. When not at work, Rich spends time with his wife and two young children and, when time permits, rides his bike, sings karaoke, and cooks meals without recipes.

Lisa Auster-Gussman
Psychology
PSY 1917

What is community? What is connectedness? Conversely, what is isolation? What is loneliness? Why do they matter? How are they changing in the digital age? People find community and connectedness in all kinds of different groups and through all kinds of different mediums. Yet, some remain isolated and others feel alone despite seemingly being connected. Crucially, whether people find community and connectedness and with whom they find it has profound impacts on their lives. It impacts their work, leisure time, happiness, health, and even their identity. We will explore the effects of connection and the consequences of isolation as we examine topics such as finding connection on a college campus, the role of music and art in connection, the effect of national crises, and whether technologies like Facebook and Tinder have changed how we connect with one another with the aim of understanding the current state of community and connection.

As a social psychologist, Lisa Auster-Gussman has always been fascinated by the impact of social environments and social interactions on people's thoughts, feelings, and behaviors. Insights from this research have led her to an interest in the changing face of community and connectedness. Her research and publications have primarily focused on topics at the intersection of social psychology and health psychology, specifically, how people's beliefs lead them to either carry out or fail to carry out desired behaviors. She is also a 200hr Registered Yoga Teacher.

Jeff Broadbent
Sociology
SOC 1911

Over the past 150 years, the burning of fossil fuels to power industrial expansion has brought many benefits, but has also caused a terrible problem: global climate change (GCC). If humanity continues to emit large amounts of greenhouse gasses like carbon dioxide into the atmosphere, it will get hit with intensifying disasters. From a sociological viewpoint, why has this situation come about and what can we do to solve it? Can we create a sustainable world with prosperity for all? This is the most important long-range question for our age. The course presents and discusses the most important social (including political, economic, and cultural) problems involved in solving this huge problem.

Work consists of reading, discussing topics and writing related paragraphs, two class presentations, a few quizzes, and two exams.

Jeff Broadbent is an environmental sociologist and author of a book entitled Environmental Politics in Japan: Networks of Power and Protest. He has conducted research on the politics of global climate change around the world, including founding the international COMPON (Comparing Climate Change Policy Networks) project to explain why some 25 countries have been successful or not in reducing their emissions of the greenhouse gasses that cause climate change. Success depends upon the degree to which the public and political parties accept the science of climate change as true, and give priority to the long-term welfare of the society.

Michael Baizerman
Social Work
SW 1907

This Freshman Seminar uses the transition from high school to the university to focus on the world of high school and your experiences there, as seen from the perspectives of the university and of your Fall university experience – using your memories, using your reflection and using theories of youth development and of high school – as site, as social organization, as world. In doing this we will use perspectives, theories, research, and understandings from several academic disciplines and professions, and use popular media, films, and videos and novels.

One goal is to provide a safe space for analyzing and reflecting of your high school and your high school experience – on the moments, memories, and meanings that made up going to high school and being a high school student. A second is to introduce you to critical analysis and theorizing of self in everyday life, especially being a young person/youth.

Michael Baizerman has been at the U of M since 1972, with research in qualitative field studies of young people and youth workers, most recently as action-research in Belfast, Northern Ireland, along with other various international locations, and in the U.S. (civic engagement and citizenship). He teaches on young people's everyday lives, youth subcultures, and his take on youth policy. He continues to consult with community-based programs across the globe.
Art Laboratory: A Place to Play
Michael Sommers
Theatre Arts and Dance
TH 1912

How do you define collaboration? This seminar presents the characteristics and the challenges of collaboration through representative approaches from the visual arts, music, literature, media, and theater. The seminar content is designed upon three pillars: the collaborative space, flow, and gesture. Through concrete problematic situations, in-class discussion, readings, and proposed themes students will work collaboratively to create a series of events/works to be presented in class. The art of collaboration is a laboratory, a place to play, inspire, question, and fail. It is a platform to unlock personal images, and to cross boundaries to further understand the role of creativity and innovation while discovering expression across disciplines.

Michael Sommers is an associate professor in the Department of Theatre and Dance. As a theatre artist he has worked as a designer, director, composer, and performer and is a co-founder of Open Eye Figure Theatre based in Minneapolis. He has created over 40 works for the Open Eye stage, and his work has been performed nationally and internationally. He is the recipient of numerous grants and awards including the Bush Vision Award, a Ford Fellowship, and the Doris Duke Impact Award.

The Great Actresses and Divas of Theatre, Films, Opera, and Musicals
Elizabeth Nash
Theatre Arts and Dance
TH 1913

This seminar highlights actresses and divas from Byzantium’s Empress Theodora in the 6th century to America’s Barbra Streisand in the 21st. The activities of their male contemporaries are well documented, but the female performers have been sadly neglected. The names of Sarah Bernhardt, Maria Callas, Meryl Streep, and Julie Andrews are generally recognized, but what about Isabella Andreini, Lillian Gish, Marian Anderson, and Josephine Baker? All have made unique contributions to theatre, film, opera, and the musical as leading female performers of their time. They were and are the role models who inspire future generations.

Elizabeth Nash received her B.F.A. from Columbia University and was awarded a two year Fulbright Grant to study opera in Germany. For the next 10 years, she was a leading soprano in German opera houses. After returning to the United States, she earned an M.A. at Columbia University, followed by a PhD at Indiana University. She is an associate professor of voice production in the Theatre Arts Department. In addition, she is the author of Geraldine Farrar Opera’s Charismatic Innovator, The Luminous Ones: A History of the Great Actresses, Pieces of Rainbow, the Memoirs of Sylvia Olden Lee and Autobiographical Reminiscences of African-American Classical Singers.

Latinx Moves: The Politics of Salsa, Race, and Migration
Cindy García
Theatre Arts and Dance
TH 1914

Jennifer Aniston’s character performs salsa in Along Came Polly and hopeful contestants dance it on So You Think You Can Dance, so how can salsa be a political act? This course considers the politics of salsa dancing. We will look closely at race and migration as we read, write, and dance salsa. Class time is evenly devoted to studio and seminar settings because reading about the politics of salsa can inform our dance practice, and dancing salsa can inform how we understand what we read. In the studio students will engage in movement activities that critically examine salsa through dance making and dance technique (such as partnering, rhythm, displacement, turns, awareness of other bodies, and improvisation). We will relate practices of salsa in the studio to the critical discussion of readings and movies in the seminar room. We will develop skills that will help us to closely analyze dancing bodies and the social meanings of salsa practices. Come prepared to read, write, dance, and discuss course topics. No dance experience is necessary.

Cindy García is an associate professor, dance theorist, performance ethnographer, and playwright in the Department of Theatre Arts and Dance at the University of Minnesota. Her article Don’t Leave Me, Celia!: Salsa Homosociality and Pan-Latina Corporealities’ won the Gertrude Lippincott Award for the best article in Dance Studies in 2008. Her book Salsa Crossings: Dancing Latinidad in Los Angeles (Duke University Press 2013) addresses the politics of social performances of Mexican-ness, latinidad, and migration in Los Angeles salsa clubs. Her research interests include the cultural politics of migration, racialization, the practice of everyday life, feminist ethnography, Latin/o American Performance Studies, and the gendered performances of latinidad in urban libidinal economies.
Aquatic Toxicology, Water Safety, and the Society

Ashok Singh
Veterinary Population Medicine
VPM 1901

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 surface as well as the ground water. 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 (1) effects of water pollution on aquatic and terrestrial organism including humans, (2) water quality issues and (3) water safety.

Ashok Singh is an associate professor of toxicology in the Veterinary Population Medicine Department at the College of Veterinary Medicine. His research interests include mechanistic and analytical toxicology, nanoparticle toxicology and risk assessment. He teaches undergraduate, graduate, and professional courses in different aspects of toxicology.

Garbage, Government, and the Globe

Ashok Singh
Veterinary Population Medicine
VPM 1902

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, 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.

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Elizabeth Nash received her B.F.A. from Columbia University and was awarded a two year Fulbright Grant to study opera in Germany. For the next 10 years, she was a leading soprano in German opera houses. After returning to the United States, she earned an M.A. at Columbia University, followed by a PhD at Indiana University. She is an associate professor of voice production in the Theatre Arts Department. In addition, she is the author of Geraldine Farrar Opera’s Charismatic Innovator, The Luminous Ones: A History of the Great Actresses, Pieces of Rainbow, the Memoirs of Sylvia Olden Lee and Autobiographical Reminiscences of African-American Classical Singers.
Poison, Poisoning, and Society

Ashok Singh
Veterinary Population Medicine
VPM 1903

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:

- What are poisons and what is poisoning?
- Where do poisons come from?
- What are the adverse effects of different types of poisons?
- How can poisoning be prevented?
- 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 toxicity of chemicals, effects of chemicals on the body, and why some people are more sensitive to chemicals than others.

Ashok Singh is an associate professor of toxicology in the Veterinary Population Medicine Department at the College of Veterinary Medicine. His research interests include mechanistic and analytical toxicology, nanoparticle toxicology and risk assessment. He teaches undergraduate, graduate, and professional courses in different aspects of toxicology.

Science (Politics), Technology (Greed), and the Society (Polarized)

Ashok Singh
Veterinary Population Medicine
VPM 1904

Have you seen the movie “Dawn of the Planet of the Apes”? A world where primates, not Homo sapiens, are at the top of the food chain. It takes place 10 years after a lab’s race to develop a cure for the Alzheimer disease resulted in genetically altered apes with heightened intelligence and a plague for the planet’s humans. The “Simian Flu,” as it was called, reduced humanity to a meager million. Science or fiction? Well! Twenty-five million people died in just under five years between 1347 and 1352 due to plague. An estimated 400 million of Europe’s population died of plague between 1000 and 1352. For perspective, in 1300 AD Earth’s total population was 300 to 500 million and Europe’s total population was 87 million. Today, our planet’s and Europe’s populations have fostered to 8 billion and 450 million, respectively. What if the plague returns in this interconnected planet with more than 8 billion people where heightened conflict and denial of scientific theories persists? Science, technology, and society may hold the fate of humanity.

The overall aim of this course is to examine the science-technology-society axis through the ages: a complex interplay among science, society, culture, religion, and politics. The aim of this course is to use the historical information to understand how science and technology affect social relations, and conversely how the culture of a society shapes the science and technologies it produces. Some of the questions this course will address are:

- Do different technologies produce or result from different economic systems such as feudalism, capitalism, and communism?
- Can specific technologies promote democratic or authoritarian politics?
- Do they suggest or enforce different patterns of race, class, or gender relations?

Ashok Singh is an associate professor of toxicology in the Veterinary Population Medicine Department at the College of Veterinary Medicine. His research interests include mechanistic and analytical toxicology, nanoparticle toxicology and risk assessment. He teaches undergraduate, graduate, and professional courses in different aspects of toxicology.
Chemical Contamination of Drinking Water: Scope, Exposure, and Toxicity
Ashok Singh
Veterinary Population Medicine
VPM 1907

The devastating lead contamination of the tap water in Flint, Michigan, a majority African-American city with a poverty rate above 40%, has drawn the nation’s attention towards drinking water safety. Recently, the Natural Resources Defense Council (NRDC), an international nonprofit environmental organization, reported that in 2015, over 18 million people were served by 5,363 community water systems that violated the Lead and Copper Rule set by the USEPA. Some of the violations cited were (1) failures to properly test the water for lead or conditions that could result in lead contamination, (2) failures to report contamination to state officials or the public, and (3) failures to treat the water appropriately to reduce corrosion. Additionally, 1,110 community water systems serving 3.9 million people showed lead levels in excess of 15 parts per billion (ppb) in at least 10 percent of the homes tested, the action level established for lead under the Lead and Copper Rule. Guardian launched an investigation in the wake of the toxic water crisis in Flint and found that at least 33 cities across 17 states have used water testing “cheats” that potentially conceal dangerous levels of lead. As people, especially children, drink contaminated water, lead begins to build up in the body, often over a period of months or years. Even small amounts of lead can cause serious health problems. Children under the age of 6 are especially vulnerable to lead poisoning, which can severely affect mental and physical development. Therefore, lead contamination that was once considered an issue resolved has reappeared or been rediscovered. The overall goal of this course is to discuss the lead contamination issues in the American water supply and its health consequences. After completing this course, students will be able to:

1. Explain physicochemical properties of lead in relation to other heavy metals.
2. Describe the sources of lead in drinking water.
3. Understand health consequences and possible treatment strategies of lead exposure in children and adults.
4. Understand the existing governmental and non-governmental regulation to detect and reduce lead contamination of drinking water.

Ashok Singh is an associate professor of toxicology in the Veterinary Population Medicine Department at the College of Veterinary Medicine. His research interests include mechanistic and analytical toxicology, nanoparticle toxicology and risk assessment. He teaches undergraduate, graduate, and professional courses in different aspects of toxicology.

Arguing With Authority: The Past, Present, and Future of Higher Education
Patrick Bruch
Writing Studies
WRIT 1915W

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.

In this seminar, we will study 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. He particularly enjoys working with first-year students.

Magazines and New Media
Thomas Reynolds
Writing Studies
WRIT 1925W

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.

Tom 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. 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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<td>Climate Change</td>
<td>SOC1911</td>
<td>3</td>
<td>No</td>
<td>No</td>
<td>MW 9:45-11:00</td>
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