

CLASS OF
2025
M



2021-2022



freshman SEMINARS



Office of
Undergraduate Education
UNIVERSITY OF MINNESOTA
Driven to Discover™



Dear Class of 2025:

WELCOME TO THE UNIVERSITY OF MINNESOTA!

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

This booklet will introduce you to an exciting array of small courses designed just for you, the Class of 2025. Studies from around the country have repeatedly shown that students do well in college and enjoy the experience more when they get to know faculty members and other students. Freshman Seminars are designed to help you do just that. They are limited to 15 to 20 first year students, so you will have a real opportunity to get to know other students in your class and to interact with a faculty member who will guide you and help you make the adjustment to college.

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

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

A handwritten signature in black ink, appearing to read "Leslie Schiff". The signature is fluid and cursive, with a large, stylized initial 'L'.

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

Freshman Seminars

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

What to expect in a Freshman Seminar:

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

As you prepare for Orientation, you are encouraged to look through Freshman Seminars for ones that may interest you. If you have questions about any of the Freshman Seminars, contact your academic advisor.

How to search online for Freshman Seminars

1. Log onto MyU (myu.umn.edu) and click on the **Academics** tab.
2. Select **Class Search** on the bottom of the screen.
3. Once you have entered Class Search, verify that Twin Cities/Rochester is selected in the **Institution** field. Then choose either Fall 2021 or Spring 2022 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 out both Fall 2021 and Spring 2022 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 waitlist 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 2022 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 2022 Freshman Seminars Abroad:

AHS 1901: Health in the Tropics: Humans, Animals, and Ecosystems, **page 11**
Karin Hamilton, Veterinary Population Medicine
Study Abroad in Panama

BIOL 1904: Tradition and Innovation in Iceland, **page 15**
John Ward, Plant Biology
Study Abroad in Iceland

CSCL 1915: Prague: Living through History & Revisiting the Past, **page 21**
Alice Lovejoy, Cultural Studies and Comparative Literature
Study Abroad in Prague

DES 1406W: Design in London and Edinburgh, **page 21**
James Boyd Brent, Graphic Design
Study Abroad in England and Scotland

ENGL 1911W: Eat, Write, Learn: Creative Writing in Spain, **page 25**
Julie Schumacher, English
Study Abroad in Spain



This symbol indicates a Freshman Seminar Abroad



2021-22 Seminars Alphabetical by Designator

| | | | |
|------|-------|---|----|
| ACCT | 1911 | The Language of Business | 10 |
| AEM | 1301 | Ballooning: Design, Build, and Fly..... | 10 |
| AEM | 1303 | Aircraft: Design, Build, and Fly | 10 |
| AFRO | 1911 | Blackness and Reality Television..... | 11 |
| AHS | 1901 | Health in the Tropics: Humans, Animals, and Ecosystems | 11 |
| AMES | 1913 | End Times: Narrating Extinction & Apocalypse | 11 |
| AMES | 1914 | Bollywood Blockbusters and Beyond | 12 |
| AMST | 1915 | In Pursuit of Equality: Racial and Gender Justice in American Workplaces..... | 12 |
| ANSC | 1901 | The Journey of Food in Your Body - Digestive Physiology..... | 12 |
| ANTH | 1911W | Changing Human Adaptations | 13 |
| ANTH | 1915 | Futuristics: Bio-cultural Futures of our Species..... | 13 |
| ANTH | 1917 | Racism, Anti-Racism, and the American Dream | 13 |
| APEC | 1905 | The Ordinary Business of Life: Issues in Business, Government, and Macroeconomics | 14 |
| ARTH | 1914 | Scratched and Smashed: History of Destroying Images and Iconoclasm | 14 |
| ARTS | 1913 | Place Matters: Seeing the Mississippi..... | 14 |
| ARTS | 1914 | Say Something, Make Something: Art and Language | 14 |
| BIOL | 1904 | Innovation and Imagination in Iceland | 15 |
| BIOL | 1912 | Photographing the University Community..... | 15 |
| BIOL | 1915 | Genomics in Your Current and Future Life | 15 |
| BIOL | 1917 | Experimental Evolution | 15 |
| BIOL | 1918 | Evolutionary Perspectives on Agriculture and Human Health | 16 |
| BIOL | 1921 | The Nexus Between Art and Biology | 16 |
| BIOL | 1925 | Biological Wonder to Scientific Discovery | 17 |
| BIOL | 1926 | Entanglement of Genomic and Environmental Influences on Traits of Organisms | 17 |
| BIOL | 1927 | The Greatest Benefit to Humankind: the Nobel Prize and Where Good Ideas Come From..... | 17 |
| BIOL | 1928 | Inventing Nature: The Art and Science of Natural History | 17 |
| BIOL | 1942 | Science and Politics of Genetics and Reproduction..... | 18 |
| CHEN | 1901 | Chemical Engineering & Society | 18 |
| CHIC | 1914 | Latina/o/x Comic Books and Young Adult Literature..... | 19 |
| CI | 1908W | Children and Other Talking Animals: Animal Tales in (Mostly) Children’s Literature..... | 19 |
| CLA | 1914 | Humor and Laughter in Interaction | 19 |
| CLA | 1915 | Language, Food, and Identity..... | 20 |
| CNES | 1913 | Homer’s Odyssey and Politics | 20 |
| COMM | 1916 | Reproductive Justices..... | 20 |
| COMM | 1919 | Communication & Migration | 20 |
| CSCS | 1915 | Prague: Living through History & Revisiting the Past..... | 21 |
| CSCS | 1916 | The Animal | 21 |
| CSCS | 1917 | Documenting the Present: History and Everyday Life in Literature, Film, and Photography | 21 |
| DES | 1406W | Blending Design & Culture in the United Kingdom | 21 |
| DES | 1407 | Fashion and Feminism: Dressing for Change | 22 |
| DES | 1408 | Dare to Repair! - Keep Designed Objects in Use and Out of the Landfill..... | 22 |
| EDHD | 1904 | Globalizing your Undergraduate Curriculum | 23 |
| ENGL | 1914 | The Immigrant and the Refugee | 24 |
| ENGL | 1921 | World Wars I, II, and III: A Cultural and Literary History (24-25) | 24 |
| ENGL | 1911W | Eat, Write, Learn: Creative Writing in Spain | 25 |
| ENT | 1903 | Toxins, Venoms & Drugs from Bugs | 25 |
| ENT | 1906 | Magnificent, Miniature Minds: From Dancing Honeybees to Cyborgs | 26 |
| ENT | 1908 | Designer Insects: Glowing Eyes to Self-Destructing Flie | 26 |
| ENT | 1909 | Got Bees? Declines and Conservation of Honey Bees and Native Bees..... | 27 |
| ESCI | 1902 | Geology of Minnesota | 27 |
| ESCI | 1908 | Sea Change: Geological Perspective..... | 28 |
| ESCI | 1909 | Manoomin (Wild Rice) and Its Environment..... | 28 |
| GCC | 1903 | Sustainable Development with Environmental Justice | 42 |
| GCC | 1905 | Art + Health Justice: Building Community Resilience | 42 |
| GCC | 1906 | Rare Diseases: What it Takes to Be a Medical Orphan..... | 42 |
| GCC | 1907 | Environmental Grand Challenges: What Impact Will You Have? | 43 |

2021-22 Seminars Alphabetical by Designator, continued

| | | | |
|------|-------|--|--------|
| GCC | 1908 | Ways of Knowing Science..... | 43 |
| GCC | 1909 | Introduction to Ecosystem Health: Challenges at the Intersection of Human, Animal, and Environmental | 43- 44 |
| GCC | 1911 | 11 Billion People: How Long Can the Planet Sustain Humanity? | 44 |
| GEOG | 1913 | Living with Innovation | 28 |
| GEOG | 1916 | Social Justice and the Twin Cities | 29 |
| GER | 1912 | Oktoberfest: Fact and Fiction..... | 29 |
| GLOS | 1917 | The Politics of Non-violence | 29 |
| GWSS | 1916 | Life and Debt: Gender, Race and Debt | 30 |
| HIST | 1911 | A History of the Drug Wars..... | 30 |
| HIST | 1917 | Racism, Anti-Racism, and the American Dream | 30 |
| HIST | 1924 | Life, Liberty, and the Pursuit of Happiness: The 18th-Century Beginnings of Our Modernity..... | 31 |
| HIST | 1925 | Non-compliant Women: Protesters, Poets, and Prisoners..... | 31 |
| JOUR | 1912 | Winning People Over: The Art and Science of Persuasion | 32 |
| LING | 1913 | Words at Work | 32 |
| MUS | 1912 | Guitar Heroes | 32 |
| MUS | 1914W | Music in Nazi Germany & the Holocaust..... | 32 |
| MUS | 1915 | The Color of Music | 33 |
| MUS | 1916 | All About Music: Its Meaning, Reality, Communication, and Embodiment | 33 |
| PHIL | 1911W | Amadeus: In Search of Mozart..... | 33 |
| PHIL | 1912 | Sports, Reason, and Society..... | 33 |
| PHIL | 1914 | Space and Time: from Aristotle to Einstein | 34 |
| PHIL | 1918 | Comics as Art..... | 34 |
| POL | 1911 | Dictatorship and Violence in Central Asia and Afghanistan..... | 34 |
| PORT | 1911 | Black Brazil: The Long Road to Racial Justice..... | 35 |
| PHYS | 1901 | Global Warming Solutions | 35 |
| PHYS | 1905 | Aurora: From Myths to Modern Science..... | 35 |
| PHYS | 1906 | What is Space Weather (and Why Should You Care)?..... | 35 |
| PHYS | 1910W | What is Time? | 36 |
| PHYS | 1911W | How Likely is Extraterrestrial Life?..... | 36 |
| PSY | 1912 | Brain Science, Drugs and Society | 36 |
| PSY | 1916 | Race in Everyday Space..... | 36 |
| PSY | 1923 | The Freshman 15: Stress and Health Management for College Students | 37 |
| PSY | 1925 | Neuroimaging in Psychology: Why Do Psychologists Use Magnets & Electrodes to Look at People's Brains | 37 |
| SLHS | 1914 | Communication Disorders and Neurodiversity | 37 |
| SPAN | 1912 | Plague, Pestilence, and Pandemic in Modern Iberian and Latin American Literature | 38 |
| TH | 1911W | Attending (to) Theater | 38 |
| TH | 1912 | Art Laboratory: A Place to Play | 39 |
| TH | 1914 | Cyborgs and Hackers: The Ethics of Digital Life..... | 39 |
| VPM | 1901 | Aquatic Toxicology, Water Safety, and the Society..... | 39 |
| VPM | 1902 | Garbage, Government, and the Globe | 40 |
| VPM | 1903 | Poison, Poisoning and Society | 40 |
| VPM | 1908 | Deep Ocean Mining: Novel Economic Opportunity or Ecological Catastrophe of Common Heritage | 41 |
| WRIT | 1915W | Arguing with Authority: The Past, Present, and Future of Higher Education | 41 |
| WRIT | 1935W | Writing Medicine..... | 42 |

Seminars by Interest Area

Arts, Design, and Music

| | | | |
|------|-------|--|----|
| ARTH | 1914 | Scratched and Smashed: History of Destroying Images and Iconoclasm | 14 |
| ARTS | 1913 | Place Matters: Seeing the Mississippi..... | 14 |
| ARTS | 1914 | See Something, Make Something: Art and Language..... | 14 |
| BIOL | 1912 | Photographing the University Community | 15 |
| BIOL | 1921 | The Nexus Between Art and Biology | 16 |
| DES | 1406W | Blending Design & Culture in the United Kingdom | 21 |
| DES | 1408 | Dare to Repair! - Keep Designed Objects In Use and Out of the Landfill | 22 |
| MUS | 1912 | Guitar Heroes..... | 32 |
| MUS | 1914W | Music in Nazi Germany & the Holocaust..... | 32 |
| MUS | 1915 | The Color of Music | 33 |
| MUS | 1916 | All About Music: Its Meaning, Reality, Communication, and Embodiment..... | 33 |
| PHIL | 1911W | Amadeus: In Search of Mozart..... | 33 |
| TH | 1911W | Attending (to) Theater..... | 38 |
| TH | 1912 | Art Laboratory: A Place to Play..... | 39 |
| TH | 1914 | Cyborgs and Hackers: The Ethics of Digital Life..... | 39 |

Biological and Environmental Sciences

| | | | |
|------|------|--|----|
| ANSC | 1901 | Journey of Food in Your Body: Digestive Physiology | 12 |
| ANTH | 1915 | Futuristics: Bio-cultural Futures of our Species..... | 13 |
| BIOL | 1915 | Genomics in Your Current and Future Life | 15 |
| BIOL | 1917 | Experimental Evolution..... | 15 |
| BIOL | 1918 | Evolutionary Perspectives on Agriculture and Human Health | 16 |
| BIOL | 1925 | Biological Wonder to Scientific Discovery..... | 17 |
| BIOL | 1926 | Entanglement of Genomic and Environmental Influences on Traits of Organisms | 17 |
| BIOL | 1927 | The Greatest Benefit to Humankind: the Nobel Prize and Where Good Ideas Come From..... | 17 |
| BIOL | 1928 | Inventing Nature: The Art and Science of Natural History | 17 |
| BIOL | 1942 | Science and Politics of Genetics and Reproduction..... | 18 |
| ENT | 1903 | Toxins, Venoms & Drugs from Bugs | 25 |
| ENT | 1906 | Magnificent, Miniature Minds: From Dancing Honeybees to Cyborgs | 26 |
| ENT | 1908 | Designer Insects: Glowing Eyes to Self-Destructing Flies | 26 |
| ENT | 1909 | Got Bees? Declines and Conservation of Honey bees and Native bees | 27 |
| ESCI | 1902 | Geology of Minnesota..... | 27 |
| ESCI | 1908 | Sea Change: Geological Perspective..... | 28 |
| ESCI | 1909 | Manoomin (Wild Rice) and Its Environment..... | 28 |
| PSY | 1912 | Brain Science, Drugs, and Society | 36 |
| PSY | 1923 | The Freshman 15: Stress and Health Management for College Students | 37 |
| PSY | 1925 | Neuroimaging in Psychology: Why Do Psychologists Use Magnets & Electrodes to Look at People's Brains | 37 |
| VPM | 1901 | Aquatic Toxicology, Water Safety, and the Society | 39 |
| VPM | 1902 | Garbage, Government, and the Globe..... | 40 |
| VPM | 1903 | Poison, Poisoning, and Society | 40 |
| VPM | 1908 | Deep Ocean Mining: Novel Economic Opportunity or Ecological Catastrophe of Common Heritage..... | 41 |



Seminars by Interest Area, continued

Culture and People

| | | | |
|------|-------|---|----|
| AFRO | 1911 | Blackness and Reality Television..... | 11 |
| ANTH | 1917 | Racism, Anti-Racism, and the American Dream | 13 |
| BIOL | 1904 | Innovation and Imagination in Ireland..... | 15 |
| COMM | 1919 | Communication & Migration..... | 20 |
| EDHD | 1904 | Globalizing your Undergraduate Curriculum | 23 |
| ENGL | 1914 | The Immigrant and the Refugee | 24 |
| ENGL | 1911W | Eat, Write, Learn: Creative Writing in Spain..... | 25 |
| GER | 1912 | Oktoberfest: Fact and Fiction..... | 29 |
| HIST | 1911 | A History of the Drug Wars | 30 |
| HIST | 1917 | Racism, Anti-Racism, and the American Dream | 30 |
| WRIT | 1915W | Arguing with Authority: The Past, Present, and Future of Higher Education | 41 |

Humanities and Social Sciences

| | | | |
|------|------|--|----|
| AMST | 1915 | In Pursuit of Equality: Racial and Gender Justice in American Workplaces | 12 |
| CLA | 1914 | Humor and Laughter in Interaction..... | 19 |
| CLA | 1915 | Language, Food, and Identity..... | 20 |
| COMM | 1916 | Reproductive Justice | 20 |
| CSCL | 1916 | The Animal | 21 |
| DES | 1407 | Fashion and Feminism: Dressing for Change..... | 22 |
| GEOG | 1916 | Social Justice and the Twin Cities..... | 29 |
| HIST | 1924 | Life, Liberty, and the Pursuit of Happiness: The 18th-Century Beginnings of Our Modernity..... | 31 |
| HIST | 1925 | Non-compliant Women: Protesters, Poets, and Prisoners..... | 31 |
| JOUR | 1912 | Winning People Over: The Art and Science of Persuasion..... | 32 |
| LING | 1913 | Words at Work..... | 32 |
| PHIL | 1912 | Sports, Reason, and Society | 33 |
| PSY | 1916 | Race in Everyday Space..... | 36 |
| SLHS | 1914 | Communication Disorders and Neurodiversity | 37 |
| SPAN | 1912 | Plague, Pestilence, and Pandemic in Modern Iberian and Latin American Literature..... | 38 |

Literature and Film

| | | | |
|------|-------|--|----|
| AMES | 1913 | End Times: Narrating Extinction & Apocalypse | 11 |
| AMES | 1914 | Bollywood Blockbusters and Beyond | 12 |
| CHIC | 1914 | Latina/o/x Comic Books and Young Adult Literature | 19 |
| CI | 1908W | Children and Other Talking Animals: Animal Tales in (Mostly) Children's Literature | 19 |
| CNES | 1913 | Homer's Odyssey and Politics..... | 20 |
| CSCL | 1917 | Documenting the Present: History and Everyday Life in Literature, Film, and Photography..... | 21 |
| ENGL | 1921 | World Wars I, II, and III: A Cultural and Literary History..... | 24 |
| PHIL | 1918 | Comics as Art..... | 34 |

Politics and Government

| | | | |
|------|------|--|----|
| APEC | 1905 | The Ordinary Business of Life: Issues in Business, Government, and Macroeconomics..... | 14 |
| GLOS | 1917 | The Politics of Non-violence..... | 29 |
| POL | 1911 | Dictatorship and Violence in Central Asia and Afghanistan..... | 34 |

Seminars by Interest Area, continued

Science and Technology

| | | | |
|------|-------|---|----|
| AEM | 1301 | Ballooning: Design, Build, and Fly..... | 10 |
| AEM | 1303 | Aircraft: Design, Build, and Fly..... | 10 |
| CHEN | 1901 | Chemical Engineering & Society..... | 13 |
| GEOG | 1913 | Living with Innovation..... | 13 |
| PHIL | 1914 | Space and Time: from Aristotle to Einstein..... | 20 |
| PHYS | 1901 | Global Warming Solutions..... | 34 |
| PHYS | 1905 | Aurora: From Myths to Modern Science..... | 34 |
| PHYS | 1906 | What is Space Weather (and Why Should You Care)?..... | 35 |
| PHYS | 1910W | What is Time?..... | 35 |
| PHYS | 1911W | How Likely is Extraterrestrial Life?..... | 35 |
| WRIT | 1935W | Writing Medicine..... | 35 |

Grand Challenge Curriculum

| | | | |
|-----|------|---|--------|
| GCC | 1903 | Sustainable Development with Environmental Justice..... | 42 |
| GCC | 1905 | Art + Health Justice: Building Community Resilience..... | 42 |
| GCC | 1906 | Rare Diseases: What it Takes to Be a Medical Orphan..... | 42 |
| GCC | 1907 | Environmental Grand Challenges: What Impact Will You Have?..... | 43 |
| GCC | 1908 | Ways of Knowing Science..... | 43 |
| GCC | 1909 | Introduction to Ecosystem Health: Challenges at the Intersection of Human, Animal, and Environmental..... | 43- 44 |
| GCC | 1911 | 11 Billion People: How Long Can the Planet Sustain Humanity?..... | 44 |

How to Read the Freshman Seminar Booklet

Changing Human Adaptations ← Seminar Title

ANTH 1911W ← Course Designator
3 Credits

Liberal Education Requirement(s) → Writing Intensive
Spring 2022 ← Term Offered

Instructor & Department → Martha Tappen
Anthropology

Seminar Description →

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

Instructor Biography →

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

2021-2022 FRESHMAN SEMINARS

The Language of Business

ACCT 1911
3 Credits
Fall 2021, Spring 2022

Kendell Poch
Accounting Department

Have you ever wondered why Tesla's stock price tripled in a 3-month time period? Why did Toys R Us go bankrupt? Why does Apple hold on to \$200 billion of cash? Why is Snapchat still not profitable yet? All of these questions can be answered by looking at a company's financial statements!

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

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

Kendell Poch teaches MBA and undergraduate accounting courses at the Carlson School of Management. She has experience as an accounting and consulting professional, having previously served in various roles within the management consulting industry and most recently in her role as a CPA at KPMG. She received both her MBA and MBT from the Carlson School. She also serves as the undergraduate coordinator for the accounting department, and was a recent recipient of the Carlson School outstanding teaching award. She is an avid Gophers fan and enjoys spending time with her family at the football games.

Ballooning: Design, Build, and Fly

AEM 1301
2 Credits
Fall 2021

James Flaten
Aerospace Engineering and Mechanics

Outer space, sometimes called the Final Frontier, has always been difficult to reach due to the tremendous expense of rocket launches and the limited number of launch opportunities. In this hands-on course, we will hone spacecraft-building skills, including microcontroller programming, soldering, and CAD, then design and build miniature spacecraft and use (relatively) inexpensive helium-filled weather balloons to carry them into the stratosphere (AKA "near-space"), which has many of the same physical properties (and view!) as outer space. The balloon launch and recovery will be a required day-long class activity on a weekend date in late October or else early-to-mid November. (This activity is weather dependent, so the exact flight date will need to be flexible.) The remainder of the semester will involve data analysis from the balloon mission as well as discussions and activities associated with full-fledged (i.e. outer space) spaceflight, including the scientific accomplishments and engineering challenges of past, current, and future missions.

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

Aircraft: Design, Build, and Fly

AEM 1303
2 Credits
Spring 2022

Chris Regan
Aerospace Engineering and Mechanics

Now ubiquitous, powered aircraft flight is little more than a century old. In this hands-on seminar, we will explore the fundamentals of flight through the design, flight test, and analysis of small, UAV (uninhabited aerial vehicle) aircraft. Initially, we will cover the history and fundamentals of flight through lectures and discussion, answering questions such as, "how do aircraft fly?" and "why do aircraft look so similar?" Then, working in small teams, students will design, build, and flight test an electric remote-control aircraft. Students will analyze the flight tests to see if the aircraft performed as expected, write reports, and present on the results. Additional elements of the seminar may include lectures, discussions, and activities associated with aircraft, including the engineering challenges of past, current, and future aircraft.

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

Blackness and Reality Television

AFRO 1911
Race, Power, and Justice in the United States
3 Credits
Fall 2021

Terrion Williamson
African American and African Studies

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 predominantly 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 US 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 is an assistant professor of African American and African Studies with appointments in Gender, Women & Sexuality Studies and American Studies. Her research and teaching specializations include black feminist theory, twentieth and twenty-first century African American literature, black cultural studies, media studies, and racialized gender violence.

Health in the Tropics: Humans, Animals, & Ecosystems



AHS 1901
3 Credits
Global Perspectives
Spring 2022

Tricia Todd
Pre-Health Student Resource Center/Academic Health Sciences

In this seminar, learn about the challenges and opportunities of human, animal, and ecosystem health (One Health) in Panama while comparing them to that of the US. Through discussions and learning about the Intercultural Development Inventory and cultural development, study US culture while preparing to openly experience Panama's culture. Then over spring break, apply what you've learned on campus while exploring human, animal, and ecosystem health in Panama's tropical rainforest and reef ecosystems.

Tricia Todd is the Director of the Pre-Health Student Resource Center at the University of Minnesota and an adjunct instructor in the School of Public Health. She has led many programs abroad through the University, authored the *Global Ambassadors for Patient Safety* and serves on the Center for Global Health and Social Responsibility Leadership Team.

End Times: Narrating Extinction & Apocalypse

AMES 1913
3 Credits
Fall 2021

Jason McGrath
Asian and Middle Eastern Studies

Stories of the end of the world are nothing new; in classical times they ranged from the various versions of the judgment day in monotheistic religions to the periodic dissolution and regeneration of the universe conceived in Hinduism. While these narratives are still with us, many new visions of the end times have emerged in the context of the specific dangers and anxieties of modernity: nuclear war, famine from overpopulation, pandemics, take-over by robots or artificial intelligence, or just generalized existential despair caused by the loss of meaning and community grounded in tradition. In the 21st century, such fears and narratives have increasingly focused on various scenarios of how climate chaos already is speeding the world's sixth mass extinction of living species - meaning there are countless mini-apocalypses happening all around us from the perspective of the Earth's biosphere as a whole - while also threatening the possible extinction of our own species.

This course will explore narratives of extinction and apocalypse from a global, comparative perspective. Each week we will watch a film, often a challenging,

experimental one - including films from both East and West - and we will accompany them with diverse types of readings from dystopic sci-fi stories to nonfiction bestsellers to academic studies of how the threat of extinction plays out in other primate species besides humans. We will ask how such narratives articulate specific fears and anxieties and discuss whether and how they make a cultural intervention that could actually change human behavior to make extinction less (or more) likely. What exactly does it mean to envision the extinction of our species or the collapse of human society, and why do people seek out such narratives and presumably derive some useful ideas from them?

Jason McGrath is a professor of modern Chinese literature and cultural studies and also a member of the faculty in Moving Image and Media Studies. Outside of academia, he has participated in local activist groups that successfully pushed for Minneapolis to declare a climate emergency. In his free time he enjoys listening to strange music, learning tai chi, and birdwatching in his backyard and in Minnesota's state parks.



Bollywood Blockbusters and Beyond

AMES 1914
3 Credits
Fall 2021

Suvadip Sinha
Asian and Middle Eastern Studies

Why do people sing and dance around in Bollywood films? How is Bollywood masala different from Hollywood cinema? What are the distinct features of Indian cinema? This course provides a historical and critical understanding of these questions. By looking at various cinematic cultures in Bollywood and other Indian film industries, we will study how cinema as an art form and a medium of entertainment has evolved during the last one hundred years. We will also specifically study the characteristics of Bollywood genres like social melodrama, musicals, horror and action. Our discussions will be supplemented with screenings of a number of Bollywood blockbusters and a few lesser-known films.

Suvadip Sinha is an assistant professor in Asian and Middle Eastern Studies with specialties including South Asian cinema, literature, and culture; human rights and transnationalism; and philosophy of the non-human. His research includes "Things in Indian

Cinema," exploring the relationship between inanimate things on the Indian screen and our understanding of post-colonial modernity; and "Spectral Intimacy," a study of the evolution of ghosts, spectral, and the uncanny in South Asian cultural texts.

In Pursuit of Equality: Racial and Gender Justice in American Workplaces

AMST 1915
3 Credits
Fall 2021

Jennifer Pierce
American Studies

Title VII of the 1964 Civil Rights Act outlawed race and sex discrimination in American workplaces. Yet, employers in this time period were alternately uncertain, reluctant or downright resistant to implementing these new antidiscrimination laws. Put another way, the change in law did not automatically result in more people of color and white women being hired or put an end to discrimination. Between 1964 and 1981, the impetus for change came from social movements such as the civil rights movement and the women's liberation movement as they worked with or inspired unions, caucuses, and associations to push for the enforcement of federal law thereby opening up American workplaces to people of color and white women. To understand how activists transformed American workplaces, this course begins by focusing on the social movements of the 1960s and 1970s and their political ideals and strategies. The remainder of the course will focus on how unions, caucuses, and associations in a variety of workplaces drew from these social movements in their pursuit of racial and/or gender equality. Not only will the course explore how these different campaigns fared, but it will also consider the questions they raise for racial and gender workplace justice in the contemporary moment.

Jennifer L. Pierce is a Professor of American Studies who has published several books focusing on gender, class, and racial inequality in American workplaces. She is currently writing a book about how the first clerical union at UC Berkeley brought together a group of civil rights activists, women's liberationists, and New Left activists who challenged and transformed a racist and sexist pay structure at their institution. She is the recipient of the University's distinguished teaching award in graduate, professional and post baccalaureate education. She also has a tri-color corgi named Barney who enjoys treats and walks along the Mississippi River.

The Journey of Food in Your Body - Digestive Physiology

ANSC 1901
3 Credits
Fall 2021

Milena Saqui-Salces
Animal Science

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

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



Changing Human Adaptations

ANTH 1911W
Environment
3 Credits
Spring 2022

Martha Tappen
Anthropology

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

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

Futuristics: Bio-cultural Futures of our Species

ANTH 1915
3 credits
Fall 2021

Kieran McNulty
Anthropology

The Futuristics seminar is organized around a single unifying question: what is the bio-cultural future of humanity? We will seek answers to that question by focusing on major technological, biological, and social domains, and speculating about how these areas will change in the next 20-50 years, and how those changes will impact our species. Major themes will include future biological evolution, genetic engineering, artificial intelligence and computer-human interfaces, climate change, the global and digital economy, education, and space. Students will explore the generative tension between creative and rigorous prediction, and learn basic methods researchers use to model the future. The seminar culminates in discussion and writing of speculative fiction that imagines possible futures of our species based on current evidence and forecasts.

Kieran McNulty is a paleoanthropologist specializing in the evolution of apes and humans. He uses 3D modeling of fossils to understand processes of evolutionary change. Professor McNulty also directs fieldwork in Kenya, excavating fossil sites that are 17-20 million years old. When he is not rooting around in the dirt, Professor McNulty enjoys science fiction and speculating about the future. Drawing on his experience teaching high school science, he has configured this seminar to help students imagine possible futures for our species through rigorous but creative speculation about technological, biological, and social advances.

Racism, Anti-Racism, and the American Dream

ANTH 1917
3 Credits
Fall 2021

Karen Ho
Anthropology

Is racism integral, or antithetical, to the American dream? To what degree has its promise of freedom and prosperity rested on the exclusion of Indigenous, Black and other People of Color from those opportunities? Have white Americans achieved its promise of freedom and prosperity at the expense of others? Or, has the dream been perverted by the exclusion of Black, Indigenous and People of Color to what Martin Luther King described as “a lonely island of poverty in the midst of a vast ocean of material prosperity”? Moreover, to what extent have Americans resisted their exclusion or the exclusion of others from the promise of the Dream? Given that in the contemporary moment, inequality in the US has surpassed that of the Great Depression, what do these fractures and contestations in the American Dream mean for a larger society experiencing rampant precarity writ large?

This pair of seminars (ANTH 1917 and HIST 1917) explores these questions in dialogue, occasionally meeting together and with a larger group of seminars connected to the College of Liberal Arts’s “Living and Learning in the Land of 10,000 Perspectives” Civic Readiness Initiative. We believe that this cross-fertilization is critical because the fault-lines of inequality have precisely cohered to these structural formations and categories of analysis, i.e. race and racism. Moreover, an interdisciplinary approach (through anthropology and history) is crucial for examining the contested nature, historical contexts, and contemporary investments of the American Dream.

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, elitism, and racism that are key forces in shaping and producing socio-economic inequality. She spent over three years “in the field” in lower Manhattan, New York City, conducting ethnographic research on Wall Street investment banks and their role in generating financial crises.

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

APEC 1905
3 credits
Fall 2021

Gary M. Cooper
Applied Economics

The world of economics is sometimes referred to as the study of the ordinary business of life. In this course we will discover, reflect on, and teach ourselves about a selected group of topics in the fields of business management and economics. While the first quarter of our meetings will be on business and economic history to provide context (the "Economic Revolution," the Federal Reserve System, and the role of government in the economy), the second quarter of class will analyze macro issues related to the domestic and world economies (economic growth, income inequality, the New Economy, and globalization). The third and fourth quarters of our time together will be micro-related. As part of this class, we will investigate the fields of leadership and business ethics through a series of readings and films. In addition, throughout the term some of our class discussions will be dedicated to helping you make your transition to and navigation of the University a smooth one.

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

Scratched and Smashed: History of Destroying Images and Iconoclasm

ARTH 1914
3 credits
Fall 2021

Sinem Casale
Art History

Have you ever seen a defaced statue? Ever heard of an image of a holy figure attacked or destroyed? Sculptures smashed and monuments taken down have filled our news feed and generated much heated public debate recently. What prompts such anger and violence? What makes some objects appear offensive and inappropriate? What kind of a threat do they pose? Objects, images and buildings have been attacked, mutilated and destroyed throughout history, for their specific visual contents or their very existence have been seen as going against religious bans, or upsetting common cultural values and political sensitivities.

Originally from Istanbul, Turkey, Sinem Casale is an art historian teaching at the Department of Art History. A specialist in Islamic art, she offers courses on visual cultures of Islam from the seventh century to the present. She is fascinated by early modern Islamic court cultures, and her research focuses on art and diplomacy, engaging especially with cross-cultural encounters, diplomatic gift exchange, and food culture.

Place Matters: Seeing the Mississippi

ARTS 1913
3 Credits
Fall 2021

Diane Willow
Art

As the Mississippi River flows through campus it shapes the site of a seventy-two-mile urban national park in the heart of Dakota homeland. With the river as our catalyst for artistic inquiry, research, and collaborative practices, students will participate in interdisciplinary, creative explorations that connect culture, ecology, design, history, and imagination. We will synthesize perspectives gained from our experiences on a river boat, launching aerial cameras, taking sound walks, recording underwater views, participating in digital storytelling, and engaging in conversations with guest artists, architects, culture keepers, composers, scientists, and historians. You will meet students with a wide range of interests and backgrounds as you work on individual and collaborative projects. Together, we will focus on learning about the Mississippi, and ourselves, by cultivating a personal relationship with the river and experimenting with art to convey this.

Diane Willow is a multi-modal artist and creative catalyst. By any medium necessary best describes her artistic process. Her media have included bioluminescent plankton, participatory video, tactile sound, and ephemeral architecture. She is the catalyst for ArTeS, an initiative at UMN that centers the arts in art + technology + science collaborations. At the moment she is very excited about her upcoming Arctic Circle Residency on a research vessel sailing 10° from the North Pole. She believes that a trans-disciplinary approach to learning how to learn is our most creative and sustainable, personal and collective, resource.

Say Something, Make Something: Art and Language

ARTS 1914
3 Credits
Fall 2021

Emmett Ramstad
Art

Say Something Make Something: Art and Language focuses on the ways contemporary artists use, re-use, and re-interpret language in their artworks. By utilizing the written word, artists expand their practice from traditional art materials to engage with the interdisciplinary field of language. Utilizing their interests and abilities in a variety of subjects and media, students in this course create works that are personal, engage audiences and comment on the world around us. Classes include discussions of readings, writing warm-ups, demonstrations of technical skills, visiting artists, field trips and more. Students will undertake a number of small writing assignments, complete three main art projects, attend art-related field trips and participate in group discussion. Students learn and utilize a variety of art techniques in this course, including writing, photography, bookmaking and printmaking.

Emmett Ramstad is a sculptor who teaches performance, professional practices, ethics, printmaking and more. Emmett's goal as a teacher is to nurture creativity and critical thinking in his students, he believes all students enter the classroom creative, intelligent, and curious and his role as a teacher is to provide them with the right learning environment, curriculum and encouragement to help them build upon their inherent intelligence and to challenge them to think critically, interdisciplinarily and intersectionally. In his sculptures, Emmett re-uses ordinary objects such as: worn toothbrushes, socks with holes, bathtubs and tissues, encouraging the viewer to have a new relationship to products frequently ignored in art contexts.



Innovation and Imagination in Iceland



BIOL 1904
Global Perspectives
3 Credits
Spring 2022

John Ward
Plant and Microbial Biology

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

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

Photographing the University Community

BIOL 1912
2 Credits
Fall 2021

Alex Lange and Robert Roon
Biochemistry, Molecular Biology, and Biophysics

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

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

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

Genomics in Your Current and Future Life

BIOL 1915
1 credit
Fall 2021, Spring 2022

Perry Hackett
Genetics, Cell Biology, and Development

Our understanding of DNA and genomes has infiltrated every aspect of society including medicine (diagnosis and susceptibilities to disease as well as developing new gene-based therapies, including gene therapy), CSI, ethics, GMOs for sustainable agriculture, and even designing our kids genomes. Class lectures and all reading material will be available online.

Students will share their thoughts on a variety of controversial issues both online. In class, we will use the on-line blogs and lecture material as a starting points to discuss further various aspects of different applications of modern precision genetic technologies. The fundamental goal of the class is to encourage students to develop their processes of thinking about, and discussing in a small group, current complex and controversial issues. No final papers and no final exam.

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

Experimental Evolution

BIOL 1917
2 credits
Fall 2021

Mike Travisano,
Ecology, Evolution and Behavior

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

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



Evolutionary Perspectives on Agriculture and Human Health

BIOL 1918
1 credit
Fall 2021

R. Ford Denison
Ecology, Evolution, and Behavior

Crops, humans, pests, and pathogens have evolved and continue to evolve, largely by natural selection (nonrandom differences in reproduction and survival among random genetic variants).

Weeds and insect pests readily evolve resistance to our control methods, from crop rotation to chemical pesticides. Human pathogens evolve resistance to antibiotics. Can we slow such harmful evolution? Also, can the evolutionary history of crops help guide plant breeding? Can our own evolutionary history suggest ways to improve health-care in humans? In alternate weeks, students will discuss an assigned article or video and then find a related scientific journal article and explain one figure from the article. Grades will depend in part on courteous and insightful questions and comments among students. This course will be offered remotely via Zoom at a scheduled time. Personal

interaction in this course is required through audio and video using Zoom. Short presentations by students will use "Share Screen".

Ford Denison is an agricultural ecologist with a long-standing interest in evolution. He is the author of a book titled "Darwinian Agriculture" and a journal article "Past evolutionary tradeoffs represent opportunities for crop genetic improvement and increased human lifespan". Work in his lab is focused on the symbiotic interaction between legumes and the root-nodule bacteria that fix nitrogen.

The Nexus Between Art and Biology

BIOL 1921
2 credits
Fall 2021

Robert Roon
Biochemistry, Molecular Biology, and Biophysics

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

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



Biological Wonder to Scientific Discovery

BIOL 1925
1 credit
Fall 2021

Cheryl Scott
Biology Teaching and Learning

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

When exploring the beauty and wonder of the natural world, scientists must unleash their creative side. For example, if you are a scientist and have a history of experiments that have been conducted, the lessons from those past experiments may help you to succeed in the new experiment. This is especially true if you keep an open mind when you get an unexpected result.

The primary literature, small group activities and class discussion will be used in this course to explore how biological wonders have turned into scientific discoveries. Molecular biology will be emphasized, but all biological science topics are open for discussion.

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

Entanglement of Genomic and Environmental Influences on Traits of Organisms

BIOL 1926
1 credit
Fall 2021

Ruth Shaw
Ecology, Evolution and Behavior

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

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

The Greatest Benefit to Humankind: the Nobel Prize and Where Good Ideas Come From

BIOL 1927
1 credit
Fall 2021

Nikki Letawsky Shultz
CBS Student Services

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

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

Inventing Nature: The Art and Science of Natural History

BIOL 1928
2 credits
Spring 2022

Charlie Willis
Biology Teaching and Learning

Natural history is often presented as a series of dry facts about the world. But how were these facts arrived at, what kind of data are they based on, and who decided they were important? In this seminar, we will learn about the invention of modern natural history. We will collect specimens, practice scientific illustration, and visit real collections. We will explore the exploitative history of Western naturalists and how modern natural history can be expanded to include alternative knowledge systems. Finally, we will learn how natural history collections provide crucial data on how we have impacted the world, especially via climate change.

Charlie Willis is a professor in the Biology Teaching and Learning Department. He teaches several biology courses at the University, and is keen to share his passion for history, nature and science with his students. His research uses herbarium specimens and historical observations of phenological events like flowering, such as those made by Henry David Thoreau, to study the past and future impacts of climate change.



Science and Politics of Genetics and Reproduction

BIOL 1942
3 credits
Fall 2021

Murray Jensen
Biology Teaching and Learning

In this seminar, students will read, discuss, debate, and generally engage with a myriad of issues surrounding the science of genetics and the application of revolutionary technologies to human reproduction.

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

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



Chemical Engineering & Society

CHEN 1901
1 Credits
Spring 2022

Samira Azarin
Chris Ellison
Paul Dauenhauer
Kevin Dorfman
Chemical Engineering and Materials Science

The goal of this freshman seminar is to provide students with a background on what chemical engineers do and how their skills are being employed to address some of the most pressing technological issues in society today.

Samira Azarin received her B.S. in Chemical Engineering from the Massachusetts Institute of Technology and her Ph.D. in Chemical Engineering from the University of Wisconsin-Madison. She is currently an Associate Professor of Chemical Engineering and Materials Science. Her research program utilizes biomaterials and tissue engineering strategies to restore function of diseased tissues and halt the spread of cancer.

Chris Ellison received his B.S. in Chemical Engineering from Iowa State University and his Ph.D. in Chemical Engineering from Northwestern University. Prior to coming to Minnesota, he worked at Rohm and Hass and was a faculty member at UT-Austin. He is currently a Professor of Chemical Engineering and Materials Science where his research focuses on polymers and polymer mixtures.

Paul Dauenhauer received his B.S. in Chemical Engineering from the University of Wisconsin and Ph.D. in Chemical Engineering from the University of Minnesota. He has worked as a process and reaction engineer for Cargill and the Dow Chemical Company. He is currently an Associate Professor of Chemical Engineering and Materials Science where his research is focused on catalysis and reaction engineering of sustainable fuels and materials.

Kevin Dorfman received his B.S. in Chemical Engineering from Penn State and Ph.D. in Chemical Engineering from MIT. He is currently Professor of Chemical Engineering and Materials Science and Director of Undergraduate Studies in Chemical Engineering. His research focuses on applications of chemical engineering principles to problems in biology and polymers, primarily using theory and computation.

Latina/o/x Comic Books and Young Adult Literature

CHIC 1914
3 Credits
Fall 2021

Jessica Lyman Lopez
Chicana and Latino Studies

In 2011, Marvel Comics created Miles Morales, a Black and Puerto Rican character to replace Peter Parker as Spider-Man. Additional Latina/o/x characters emerged in mainstream and underground venues indicating an important shift in the comic book landscape. This course focuses on comic books and young adult (YA) literature to investigate race, class, gender, sexuality, and nationhood. Despite Latina/o/x population growth, Latina/o/xs remain highly underrepresented in publishing. This course draws from scholarship such as Frederick Luis Aldama and Christopher González's *Graphic Borders* (2016) to discursively analyze comic book and YA texts. We will unpack the political implications comics and YA have on our culture. For example, comic book character La Borinqueña's get out the vote campaign in Georgia for the 2020 senate elections. We will read a variety of texts including Elizabeth Acevedo's *Poet X*, Gabby Rivera's *Juliet Takes a Breath*, and Marvel Comics Miss America series featuring America Chavez.

Jessica Lopez Lyman, Ph.D. is an interdisciplinary performance artist and Chicana feminist scholar whose work centers Black, Indigenous and People of Color's radical imaginations to build alternative spaces to heal and cultivate new worlds. Jessica received her Ph.D. in Chicana and Chicano Studies from the University of California, Santa Barbara. She researches Midwestern

Chicana/ox and Latina/o/x experiences, social movements, and arts engagement. Her manuscript, *Midwest Mujeres: Chicana/Latina Art and Performance*, explores cultural organizing in Minnesota. She is a co-host of *Latina Theory Podcast* and creator of *La Luchadora*, a mobile screen-printing cart. Lopez Lyman is an Assistant Professor in the Department of Chicano and Latino Studies at the University of Minnesota, Twin Cities.

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

CI 1908W
3 credits
Fall 2021
Civil Life and Ethics

Marek Oziewicz
Curriculum and Instruction

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

Marek Oziewicz is a placental mammal who happens to be the Henry Professor of Children's and Young Adult Literature in the Department of Curriculum & Instruction. As a child, he wanted to be a wizard, but then he discovered books. He was never the same afterwards. Dr. Oziewicz studies stories as a technology for recalibrating minds, developing environmental awareness and justice literacy.

Humor and Laughter in Interaction

CLA 1914
3 credits
Fall 2021

Polly Szatrowski
Institute of Linguistics

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

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

Language, Food, and Identity

CLA 1915
3 Credits
Spring 2022

Polly Szatrowski
Institute of Linguistics

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

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

Homer's Odyssey and Politics

CNES 1913
3 Credits
Fall 2021

S. Douglas Olson
Classical and Near Eastern Studies

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

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

Reproductive Justices

COMM 1916
3 Credits
Spring 2022

Emily Winderman
Communication Studies

According to SisterSong, the term Reproductive Justice refers to "the human right to maintain personal bodily autonomy, have children, not have children, and parent the children we have in safe and sustainable communities." While many immediately think of abortion when they consider struggles for reproductive rights, pregnancy termination is only one small part of the story. In this seminar, we will examine the history of social movements designed to provide women and men with reproductive autonomy, paying close attention to how those movements often failed to center the needs of those most marginalized. This seminar will address the various elements that impact family creation including medical racism, economic (in)security, comprehensive sexual education, and environmental protections. Students will learn how to critique and invent better reproductive rhetoric that more accurately accounts for the contextual complexities surrounding our reproductive moment.

Emily Winderman is an Assistant Professor in the Department of Communication Studies. Her work addresses issues of women's reproductive health throughout history, including the Birth Control and Reproductive Justice movements. She is also a yoga teacher who loves crafting and lives in Minneapolis with her two very small (and very cute) dogs.

Communication & Migration

COMM 1919
3 Credits
Fall 2021

Zornitsa Keremidchieva
Communication Studies

Humans have long been on the move. The motives, circumstances, and practices of migration, however, have changed over time. This course will introduce students to various ways in which communication can facilitate or hinder migration. It will examine how stories by migrants and about migrants interlock to shape the historical and current frameworks that make immigration an enduring social and political issue.

Dr. Zornitsa Keremidchieva is an Assistant Professor in the Department of Communication Studies. Her research explores historical and contemporary practices of intercultural communication during periods of social and political transition. An immigrant herself, she appreciates the complex journeys through which people find their place in the world and she enjoys working with students who are curious and excited about exploring how communication stitches together the moving pieces and stories that make our shared existence.

Prague: Living Through History & Revisiting the Past



CSCL 1915
3 Credits
Spring 2022

Alice Lovejoy
*Cultural Studies &
Comparative Literature*

Often, we think of history as something that happened far away and in the past. But over the past year and a half, we have been living through history in the present tense, at the confluence of a deadly pandemic that has reshaped the world, seismic calls for racial justice, and a contentious U.S. presidential election. Minnesota, where George Floyd was murdered, has been at the heart of these events. In this seminar, we will explore how writers, filmmakers, and photographers have made sense of other historical events as they were occurring—among them, slavery in the United States and abroad, the Russian Revolution, World War II, the Holocaust, and the revolutions of 1968. We will ask how the “big” stories of history intertwine with the intimate details of everyday life; how writers and artists understand their present moments as “historical”; and how, over time, accounts of the present transform into canonical versions of historical events. And we will use these texts as the basis for our own efforts to document the present as we live and experience it. Structured as a comparison between American history and culture and East European history and culture, this seminar will include intensive study over spring break in Prague, the Czech Republic.

Alice Lovejoy has worked as a film critic, filmmaker, and curator in the United States and the Czech Republic. She is Associate Professor in the Department of Cultural Studies and Comparative Literature at the University of Minnesota, where she studies and teaches the histories of film, media, and literature.

The Animal

CSCL 1916
3 Credits
Fall 2021

Tony C. Brown
*Cultural Studies &
Comparative Literature*

Animals are all around us who call ourselves human. We invite them into our homes, we kill them, we eat them, we go to great lengths to see them in the wild -- or we just go to the zoo, and watch, shoulder to shoulder, animals living less than wild lives. We also think a lot about animals, about what an animal is and in what ways humans are and are not animals. In this course we take up the question of the animal to examine how it has been conceived historically and how it is conceived today, and how those conceptions inform our treatment of animals. We will then ask what our ethical obligations are vis-à-vis the animals around us, and, finally, consider what the future will hold for the numerous species whose environments are disappearing. Students will finish the course with a keen eye for the ways that animals and ideas about them affect our world.

Professor Tony C. Brown grew up in New Zealand, where he always had animals in his life, and not just human ones. He carries that background into his teaching, offering courses on the animal in literature and philosophy, often with an emphasis on the South Pacific. Living and thinking with animals makes, he believes, for a rich and rewarding life, intellectually and otherwise, and he seeks to share -- perhaps even impart -- some of those riches and rewards in the classroom. He is an avid watcher of cricket, plays guitar in a punk rock band and he and his wife share their home with two beautiful cats, Daisy and her daughter Flower.

Documenting the Present: History and Everyday Life in Literature, Film, and Photography

CSCL 1917
3 Credits
Spring 2022

Alice Lovejoy
*Cultural Studies &
Comparative Literature*

Often, we think of history as something that happened far away and in the past. But over the past year and a half, we have been living through history in the present tense, at the confluence of a deadly pandemic, seismic calls for racial justice, and a contentious U.S. presidential election. Minnesota, where George Floyd was murdered, has been at the heart of these events. In this seminar, we will explore how writers, filmmakers, and photographers have made sense of other historical events as they were occurring. We will ask how the “big” stories of history intertwine with the intimate details of everyday life; how writers and artists understand their present moments as “historical”; and how, over time, accounts of the present transform into canonical versions of historical events.

Alice Lovejoy has worked as a film critic, filmmaker, and curator in the United States and the Czech Republic. She is Associate Professor in the Department of Cultural Studies and Comparative Literature at the University of Minnesota, where she studies and teaches the histories of film, media, and literature.

Blending Design & Culture in the United Kingdom



DES 1406W
Global Perspectives
3 Credits
Spring 2022

James Boyd Brent
*College of Design, Graphic
Design Program*

The aim of this course is to emphasize design (graphic design, interior design, architecture, apparel design, urban design, etc.) as an important aspect of culture, by exploring how expressions of design can be a lens through which one can learn about culture and society. As a Freshman Seminar Abroad, part of the course (Spring Break 2022) will consist of site visits in the capital cities of London and in Edinburgh, investigating contemporary and historic design expressions there. The other part of the course consists of ten class meetings on campus throughout the semester where we will investigate design culture in Minnesota, learn about design culture in the UK, and develop tools for becoming culturally aware learners.

James Boyd Brent grew up in the United Kingdom and studied printmaking at Ruskin University Cambridge and BA at Central St Martins London. He came to the United States as a Fulbright Scholar in the early 1990s and got his MFA in printmaking from the University of Minnesota. He currently lives and works in Minneapolis/St Paul, and is Associate Professor in Graphic Design in the College of Design at the University of Minnesota.



Fashion and Feminism: Dressing for Change

DES 1407
3 credits
Fall 2021

Jean McElvain
Goldstein Museum of Design

The class explores the sometimes problematic relationship between fashion and feminism. Literature from First Wave Feminism revealed visceral tensions between fashion and the perceived value of women in society. Fashionable dress was considered constrictive, submissive, and indicative of women's diminished role in both private and public realms. Second Wave Feminism, which took place approximately between 1963 and 1975, did not often address fashion directly. However, there were dramatic changes in beauty ideals during that time. Second Wave Feminism integrated into mainstream culture, with high profile authors such as Simone de Beauvoir, Frances Beal, Betty Friedan, and Gloria Steinem. This class focuses on formative feminist texts of Second Wave Feminism, and later writings on gender identity through appearance management, exploring how this movement shaped mainstream fashion in the middle to late 20th century. Clothing objects from the Goldstein Museum of Design's permanent collection will be used to study social mores and norms associated with women's changing roles in society. Contemporary movements will also be addressed, exploring the complex relationship between femininity and feminism.

Jean McElvain is the Interim Director and Associate Curator at the Goldstein Museum of Design, where she focuses on exhibitions, collections stewardship, and educational outreach. She has a Master of Architecture and a PhD. in Apparel Studies, both from the University of Minnesota.



Dare to Repair! - Keep Designed Objects in Use and Out of the Landfill

DES 1408
3 credits
Fall 2021

Lindsey Strange and Molly Sanford
College of Design

"Repair is a radical act" says Rose Marcario, former CEO of Patagonia. "The simple act of extending the life of our things through proper care and repair reduces the need to buy more over time thereby avoiding the CO2 emissions, waste output and water usage required to build it." In this seminar, students will learn methods to repair common household items and how repair and reuse can challenge a culture of consumerism and reduce the environmental impacts of objects created by College of Design disciplines; apparel, products, furniture, buildings, etc.

This course will focus on two main questions.

1. How do we as individuals take responsibility for the care and repair of our things to decrease our individual footprints?
2. How do we, as future design professionals design for use and ownership to decrease consumption on a larger scale?

The class will be a combination of hands-on repair practice, reading & discussion, field trips, and a series of small assignments to learn about repair across scales and disciplines. The class will create a repair focused zine together at the end of the semester and distribute it on campus to share their learning.

Lindsey Strange is an apparel design professor and a lifelong repairer and upcycler. She has held apparel industry roles ranging from costume design and construction to creating superhero pizza delivery suits to technical design for sweaters and maternity. She has a BS in Apparel Design, an MBA in Sustainability and Circular Economy, and her teaching and research focus on developing design and business solutions to create a circular, thriving, and just economy.

Molly Sanford is the Fabrication Programs Director, dedicated to teaching design students how to use everything from welders to sewing needles to 3D printers. She honed her fabrication chops in the museum exhibit world, making mounts for artifacts, sculpting reproductions of fossils, and welding large structural elements. She has a BA in Studio Art and Theater and an MPS in Arts and Cultural Leadership, where she focused her research on social connection in repair culture.



Globalizing your Undergraduate Curriculum

EDHD 1904
Global Perspectives
3 credits
Fall 2021, Spring 2022

Irene Duranczyk
*College of Education and
Human Development*

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

As an Associate Professor in the College of Education and Human Development, Professor Duranczyk has been collaborating with global partners in China, Russia and various universities in Northeastern China for the past 5 years. She has participated in Collaborating Online International Learning (COIL) seminars at UMN and is a certified Intercultural Development Inventory (IDI) administrator. Professor Duranczyk balances depth and breath of engaging undergraduates from three countries as they explore a common global concern.



The Immigrant and the Refugee

ENGL 1914
Race, Power, and Justice in
the United States
3 Credits
Fall 2021

Qadri Ismail
English

This course will examine several case studies in the literature of immigration in the United States: the Declaration of Independence, our founding text, which stages the country as a “nation of immigrants”; Ocean Vuong’s *On Earth We’re Briefly Gorgeous*, a queer Asian-American novel by a second generation immigrant; and the story of Ilhan Omar, Minneapolis’s congressional representative, who is a Muslim woman, Somali-American, and both immigrant and refugee. Omar’s story also serves as transition to the problem of the refugee, which we will address in two instances: the Jew in mid-twentieth century Europe, as staged in Hannah Arendt’s “We Refugees,” and today’s Palestinian, in Edward Said’s *After the Last Sky*. As we read, we will consider how the figures of the immigrant and the refugee can signal both dispossession (the loss of home, nation, and community) and disruption (the troubling of these same notions of home, nation, and community that we so often take for granted).

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

World Wars I, II, and III: A Cultural and Literary History

ENGL 1921
3 Credits
Fall 2021

John Watkins
English

This course addresses the problem of war in human society with particular reference to the actual and anticipated wars of the past century. Why do wars happen? Do they derive from something inherent in human nature, the actions and ideologies of particular nations, or the competitive nature of the international political system? What logics govern the proliferation of ever deadlier weaponry? Can wars be managed? Will the world ever really know peace? How did major writers, artists, composers, political thinkers, and opinion shapers address these questions over the violent course of the twentieth century? In terms of methodology, this course falls somewhere on the disciplinary boundaries between history, international relations theory, and literary studies. Our readings will include Kenneth Waltz’s seminal work of IR theory, *Man, the State, and War*; the World War I poets Rupert Brooke, Siegfried Sassoon, Wilfred Owen, and Margaret Postgate Cole; Robert Graves’s unforgettable war memoir, *Goodbye to All That*; Patrick Hamilton’s *Slaves of Solitude*; Evelyn Waugh’s *Put Out More Flags*; Elizabeth Bowen’s *The Demon Lover and Other Stories*; Svetlana Alexievitch’s *The Unwomanly Face of War*; John Hersey’s *Hiroshima*; and Walter J. Miller’s *A Canticle for Liebowitz*. We will also study paintings by Pablo Picasso, Paul Nash, Thomas Hennell, and Frank Auerbach; screen Sergei Eisenstein’s *Alexander Nevsky*, Fred Zinnemann’s *From Here to Eternity*, and Mick Jackson’s *Threads*; and listen to music by Dmitri Shostakovich, Benjamin Britten, and Arvo Pärt. Grades will be based on a combination of exams, papers, and class discussion.

Eat, Write, Learn: Creative Writing in Spain



ENGL 1911W
Writing Intensive
3 Credits
Fall 2021

Julie Schumacher
English

John Watkins is Distinguished McKnight University Professor of English with affiliate appointments in History and Religious Studies. His research is on cultural history of diplomacy. At the University of Minnesota, he has taught a popular course on apocalypticism since the year 2000. The world still hasn't ended. Professor Watkins is the recipient of numerous teaching prizes, including the Arthur "Red" Motley Exemplary Teaching Award, the University of Minnesota Morse-Alumni Association Award for Outstanding Contributions, and the Ruth Christie Prize for Excellence of Teaching in English.

This undergraduate creative writing class, which satisfies the Writing-Intensive requirement, focuses on the experience and the literary evocation of travel, with students based in Toledo, a medieval city in the center of Spain. Students will explore tangled streets, shops, cathedrals, fortresses, synagogues and museums, taking notes for poems, stories, and essays as they go. Toledo is a beautifully preserved city on a hill and has been declared, in its entirety, a national monument. For centuries a historic, scholarly and artistic center, Toledo was long famed for its religious tolerance, with Christian, Jewish, and Muslim populations coexisting within its walls.

We will have guided tours of Spanish monuments and museums, and students will reflect on the experience of travel via many different types and styles of writing assignments: the daily post-card, the food review, the creative travel guide, the work of ekphrasis, the annotated map, the daily journal, etc. Why do we travel and what do we gain from visiting cultures and environments that may be unfamiliar? Writing and revising will be emphasized as creative ways of reflecting on the phenomenon of departure and return.

Julie Schumacher is a novelist and short-story writer and the author of ten books. She has been a professor of English and Creative Writing at the University of Minnesota since 1996 and has won multiple teaching awards. She is also the first female recipient of the Thurber Prize for American Humor.

Toxins, Venoms & Drugs from Bugs

ENT 1903
1 Credit
Fall 2021

Ann Fallon
Entomology

Insects and other invertebrates represent a rich and relatively unexplored source of bioactive agents that can be developed using modern molecular technologies for potential therapeutic applications. Insect products have been used in medical applications since prehistoric times. Honey and spider silk have antibiotic properties that facilitate wound healing. Maggot therapy is increasingly used for treatment of intractable wounds; cordycepin comes from a fungus that infects a caterpillar. Margatoxin, produced by a scorpion has been patented for its potential to block occlusion of bypass grafts in heart surgery. This course will explore the biological effects and molecular biology of arthropod toxins and venoms with a focus on recent and emerging applications to human therapies.

Ann Fallon is a Professor in the Department of Entomology, which focuses on the biology of insects. Her research addresses molecular aspects of mosquito reproduction and disease transmission with emphasis on Wolbachia, a bacterium that has emerging applications in mosquito control. In this age of antibiotic resistance, Fallon is fascinated with traditional insect-based therapies and molecular applications of arthropod-derived pharmaceuticals in contemporary medicine.



Magnificent, Miniature Minds: From Dancing Honeybees to Cyborgs

ENT 1906
3 credits
Fall 2021

Karen Mesce
Entomology

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

In this course, we will discuss the fascinating behaviors of animals with miniature brains and how their numerally-limited nervous systems enable them to do what they do. We will also explore how a deeper understanding of small-brain networks can inform us about how our own brains work, and how such knowledge can be used to engineer adaptive robots, cyborgs and smart machines. This course is designed to be integrative; including disciplines intersecting with animal behavior, entomology, evolution, ecology, neuroscience, psychology and bioengineering. A major goal of this course is to widen one's view of the importance of invertebrate animals in the field of neuroscience and gain

an appreciation of the translational impact that this knowledge can have and will continue to have on our society and daily lives. Students will also be introduced to basic concepts in neurobiology and learn how small neural networks operate.

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

Designer Insects: Glowing Eyes to Self-Destructing Flie

ENT 1908
1 Credit
Fall 2021

Amelia Lindsey
Entomology

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

Amelia Lindsey is a new Assistant Professor in the Department of Entomology. She grew up sandwiched between two very different parts of California: the Silicon Valley with iPhones and Genentech, and the Central Valley with nearly \$50 billion of agriculture. This led to a passion for education and helping students bridge divides between topics and communities including science, farming, and art. Research in her lab uses genetics to understand symbiotic bacteria in insects, used to manage pest insect populations. Despite her interest in agriculture, she does not garden, due to her two coonhounds who enthusiastically dig up all plants.



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

ENT 1909
Environment
3 Credits
Fall 2021

Dan Cariveau
Entomology

Humans are largely aware that bees are declining globally, due in large part to human land use, agricultural practices, and the changing climate. The loss of insect pollinators, including native and honeybees, presents a grand challenge that will have cascading effects throughout ecological systems and human food crop systems. Preservation of pollination services is not only an environmental issue, it is also an important challenge facing our society and world. How we, as a society, choose to address this problem will reflect on how we value the environment and the services it provides. This course is designed to reflect on the shared sense of responsibility for building a community that will address this issue.

Intended audience: Undergraduates who may or may not be majoring within the sciences. Students interested in how humans interact with the environment, and how the choices we make as a society impact environmental processes. No prerequisite courses required.

Dr. Cariveau, an assistant professor in the Department of Entomology, is passionate about bees and their conservation. His research program at the University of Minnesota integrates studies on understanding the natural history of bees, their diversity and abundance and ecological interactions with the environment for development and implementation of effective conservation programs. Dr. Cariveau's program also integrates training the next generation of pollination scientists. His lab is always "buzzing" with undergraduate and graduate students eager to learn about bees, and what they can do to help keep bee populations healthy and growing.

Geology of Minnesota

ESCI 1902
Environment
3 Credits
Fall 2021

Harvey Thorleifson
Earth & Environmental Sciences

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

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

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



Sea Change: Geological Perspective

ESCI 1908
2 Credits
Spring 2022

Vera Pospelova
Department of Earth & Environmental Sciences

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

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

Manoomin (Wild Rice) and Its Environment

ESCI 1909
3 Credits
Fall 2021

Crystal Ng
Earth & Environmental Sciences

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

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

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

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

Living with Innovation

GEOG 1913
3 Credits
Fall 2021

Peter Calow
Center for Science, Technology, and Environmental Policy

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

Peter Calow has spent a long career in researching risks around the world. He has acted as adviser to governments in Europe and currently works at the interface of science and government policy in the US.

Social Justice and the Twin Cities

GEOG 1916
3 Credits
Fall 2021

Madelaine Cahuas
Geography

This seminar will explore the interconnected histories, geographies and politics of the Twin Cities: Minneapolis and St. Paul, Minnesota. Drawing on urban geography, urban studies, feminist and critical race theory literatures, we will examine how settler colonialism, anti-Black racism and other intersecting forces of oppression shape how urban spaces are formed and experienced in the Twin Cities. We will also closely examine how different urban actors, from local grassroots collectives, non-profit organizations and city governments, have sought to address social and racial inequities and work towards social change. Furthermore, we will deeply engage with the longstanding histories and presents of Black, Indigenous and Latinx social justice activism in the Twin Cities. Students will have the opportunity to learn from local community organizers and activists and go on several field trips to learn about social justice and social change in the Twin Cities.

Madelaine Cahuas is an urban and feminist geographer broadly interested in questions of race, gender, citizenship, inequity and social movements. Her research explores the challenges and opportunities urban Latinx communities face when politically mobilizing through non-profit, community-based organizations and grassroots collectives to advance social justice. She is originally from Toronto, Canada and is the proud daughter of immigrant parents.

Oktoberfest: Fact and Fiction

GER 1912
3 Credits
Fall 2021

Jamele Watkins
German Nordic Slavic & Dutch

This freshmen seminar examines the Bavarian Volksfest Oktoberfest from its origins to present day. Beyond the images of the American imagination, Oktoberfest is a complicated festival. Students will explore different facets each week including: gender and rape culture, race and "Italian weekend," money, and the impact the festival has on the city itself.

Dr. Watkins works on race and gender in contemporary German society. Specifically, she works on Blackness from the colonial period to the present. She uses YouTube, literature, and film in her research, so students can expect the same in her classes. In her spare time, Dr. Watkins teaches bootcamp and yoga classes.

The Politics of Non-violence

GLOS 1917
3 Credits
Fall 2021

Ajay Skaria
*Department of History/
Institute for Global Studies*

What sets non-violence apart from other forms of political resistance is its peculiarly democratic nature. To begin with, its practitioners adhere to the principle of respecting the humanity and equality of those whom they fight against. Moreover, as Gandhi notes, it is democratic in the sense that while it requires immense self-discipline, it is nevertheless a universally available weapon. This course provides a historical exploration of some of the concepts and practices of non-violence. The questions we shall be exploring are: Why is it only in the twentieth century that non-violence as a political ideology can be articulated? What is the violence that non-violence eschews? Why is the language of self-transformation and self-sacrifice so important to non-violent movements? What specific practices of non-violence does non-violence involve? Why do some of the most powerful practitioners of non-violence, such as Gandhi or MLK, describe their practices in religious terms? When can non-violent politics reinforce existing injustices, or unwittingly collude in more subtle forms of violence? When do non-violent movements succeed, and what would count as "success" for non-violent politics? What role can and does it play in the contemporary world, which has been transformed by social media, deeper state penetration, and more intense social divisions, and where

mobilizations such as BLM, the Arab Spring, or the Umbrella movement still draw on the concepts and practices of non-violence? We shall be reading both some of the most famous practitioners and thinkers of non-violence, and some of their trenchant critics -- Thoreau, Gandhi, MLK, Arendt, Fanon, Thurman, Mandela, amongst others.

Ajay Skaria grew up in the Indian city of Vadodara. During his undergraduate years, he doubled as a journalist for the newspaper Indian Express, covering Hindu-Muslim riots, and reporting also on the socio-political changes occurring amongst the adivasis, the 'tribal' or 'indigenous' people of India. Till very late, he did not plan to be a professional historian: he enrolled for a Ph.D in History at Cambridge in order to get a break to do research for some historical journalism on the adivasis. His initial interests were in environmental history and the indigenous communities; more recently, they have been in the histories of ideas such as non-violence, equality, friendship, courage, and secularism.



Life and Debt: Gender, Race and Debt

GWSS 1916
3 Credits
Fall 2021

Miranda Joseph
*Gender, Women, and
Sexuality Studies*

This course borrows its title from the film "Life and Debt" by Stephanie Black, based on the essay "A Small Place" by Jamaica Kincaid. The film examines the deployment of credit and debt to establish and maintain hierarchies of power and wealth among nations. The course will explore the ways allocations of credit and debt are used to create, transform or maintain gender roles and hierarchies, racial hierarchies, and other power relations, as well as economic relationships, at various scales, from global to the most local and interpersonal. This course thus provides students with the opportunity to situate one of the most difficult features of contemporary life "debt" in a larger context.

Miranda Joseph is Professor of Gender, Women, and Sexuality Studies. Joseph is the author of two books: *Debt to Society: Accounting for Life under Capitalism* (2014) and *Against the Romance of Community* (2002). Her recent scholarship contributes to critical university studies and feminist studies of finance. Joseph teaches feminist, Marxist, poststructuralist, and queer theory, cultural studies methods, and LGBT Studies.

A History of the Drug Wars

HIST 1911
3 Credits
Fall 2021

Patrick McNamara
History

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.

Racism, Anti-Racism, and the American Dream

HIST 1917
3 Credits
Fall 2021

Will Jones
History

Is racism integral, or antithetical, to the American dream? To what degree has its promise of freedom and prosperity rested on the exclusion of Indigenous, Black and other People of Color from those opportunities? Have white Americans achieved its promise of freedom and prosperity at the expense of others? Or, has the dream been perverted by the exclusion of Black, Indigenous and People of Color to what Martin Luther King described as "a lonely island of poverty in the midst of a vast ocean of material prosperity?" Moreover, to what extent have Americans resisted their exclusion or the exclusion of others from the promise of the Dream? Given that in the contemporary moment, inequality in the US has surpassed that of the Great Depression, what do these fractures and contestations in the American Dream mean for a larger society experiencing rampant precarity writ large?

This pair of seminars (ANTH 1917 and HIST 1917) explores these questions in dialogue, occasionally meeting together and with a larger group of seminars connected to the College of Liberal Arts's "Living and Learning in the Land of 10,000 Perspectives" Civic Readiness Initiative. We believe that this cross-fertilization is critical because the fault-lines of inequality have precisely cohered to these structural formations and categories of analysis, i.e. race and racism. Moreover, an interdisciplinary approach (through anthropology and history) is crucial for examining the contested nature, historical contexts, and contemporary investments of the American Dream.

William Jones is a history professor who studies the relationships between race and class in the United States. He has written books about African American workers in the Jim Crow South and about the March on Washington in 1963 and is currently President of the Labor and Working Class History Association. His articles have appeared in the *New York Times*, the *Washington Post*, and *The Nation*. A native of Buffalo, New York, he grew up in Pennsylvania, went to college in Illinois, taught middle school in Louisiana, completed a Ph.D. in North Carolina, taught college in New Jersey and Wisconsin, and has also lived in Guatemala, New York City, and Peru.

Life, Liberty, and the Pursuit of Happiness: The 18th-Century Beginnings of Our Modernity

HIST 1924
3 Credits
Fall 2021

JB Shank
History

In 1776, when Thomas Jefferson announced the goal of the new United States of America to be securing for all people the rights of “Life, Liberty, and the Pursuit of Happiness,” he was implicitly echoing the ideals of the new and modernizing culture that historians have come to call “the Enlightenment.” The eighteenth-century Enlightenment gave birth to a new sense of the human being and his and her place in the new naturalized understanding of society and government that was also articulated at this time. Jefferson’s stress upon happiness as a human right also pointed to the new importance placed upon material pleasure and the permission to go after it (read: liberty even as it leads to libertinism and licentiousness). A time of profound philosophizing and scientific breakthroughs, the Enlightenment was just as often found in its wit, humor and snarky take downs of traditional authorities and the pompous pretensions of the establishment. Jefferson illustrates well the serious side of Enlightenment, but just as emblematic was the freethinking Ben Franklin and the John Oliver style news-a-comedy circulated by the self-styled French philosophers Denis Diderot and Voltaire. This course will survey the highlights of Enlightenment conceived as that historical moment when our own free and pleasure-driven modernity was born, along with the science and philosophy that grounds it. Readings will focus on original Enlightenment texts, including philosophy and science, but also novels, bawdy dialogues, satirical poems and essays, paintings and engravings, plays, the autobiography of an emancipated slave, and an opera.

Class sessions will be devoted to discussing the texts in light of their contemporary and historical resonances, and student work will focus on writing reflective and interpretive essays and commentaries asking and answering the questions “what is Enlightenment?” and “how do we make ours really good!”

In addition to being the University of Minnesota’s most devoted Minnesota Lynx fan (Lyndsay Whalen doesn’t count), J.B. Shank is an intellectual historian and winner of the Morse Alumni Distinguished Undergraduate Teaching Award who is also an expert on the science, philosophy, and art of the European Enlightenment, which is the topic of this course. He is also an affiliate faculty member in the Departments of French, Cultural Studies, and Art History, where he teaches a course on the intersection of art and science in premodern Europe called “The Age of Curiosity.” Other courses he offers include seminars on Galileo and Leonardo da Vinci, and a course on comparative cosmology that compares Western scientific cosmology with that of the Sanskrit Hindi tradition and the indigenous Americans of the great plains.

Non-compliant Women: Protesters, Poets, and Prisoners

HIST 1925
3 Credits
Spring 2022

Katherine Pierpont
History

This course is a globally diverse study of “non-compliant” women through history starting in the 5th century BCE with the mathematician Hypatia through to modern works by Beyoncé and Warsan Shire and comic books by G. Willow Wilson and Kelly Sue DeConnick. Through primary sources and scholarly works, students will examine different women and groups of women from around the globe, who defied the norms or resisted the rules of the societies in which they lived. In the world of #metoo and with our first female vice president, it is particularly important to study how women have challenged the status quo and how history can inform our future efforts. The course will provide an introduction to feminist theory, and throughout the semester we will grapple with the relationship of feminist studies to issues of race, ethnicity, and trans-identity. Through the history of compliance and non-compliance, students will learn to interrogate the idea of history as progress, and how ideas about gender have been historically constructed.

Katherine Pierpont is a graduate student studying medieval sex work in the history department. She has taught Civilization and the Environment to 1500, Medieval Cities, and Medieval Tales and their Modern Echoes. She is a lover of all things vintage and an avid crafter. She lives in Minneapolis with her partner under the benevolent overlordship of her cat, Frannie.



Winning People Over: The Art and Science of Persuasion

JOUR 1912
3 Credits
Fall 2021, Spring 2022

Ken Doyle
Journalism

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

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

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

Words at Work

LING 1913
3 Credits
Fall 2021

Michael Kac
Philosophy

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

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



Guitar Heroes

MUS 1912
3 Credits
Fall 2021

Maja Radovanlija
School of Music

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

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

Germany & the Holocaust

MUS 1914W
Civic Life and Ethics
3 Credits
Spring 2022

Karen Painter
School of Music

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/or judge the choices that artists made in harsher times?

Karen Painter's research focuses on music and politics, especially in Germany and Austria. Her current book project is on music and poetry of mourning in Germany during the World Wars and Holocaust. Painter received her BA in music and philosophy from Yale and PhD in music from Columbia. Previous faculty appointments include Dartmouth and Harvard. She has served as Director of the Office of Research and Analysis for the National Endowment for the Arts. Painter lives east of the campus on five acres with three teens, her husband (a law professor and political commentator), and a menagerie of pets

The Color of Music

MUS 1915
3 Credits
Fall 2021

Gabriela Currie
School of Music

How are sounds depicted? How are colors sounded? How do the worlds of music and fine arts intersect and construct meaning that is both specific to each and shared by both? How does each help us experience the world around us in different yet complementary ways? In this seminar you are invited to join a semester-long journey which seeks some answers to these questions through immersion in the sounds, shapes, and colors of Western European art across many centuries. We will be looking at art and listening to music, while learning how to express what we perceive to be interesting, beautiful, and meaningful about their relationship and our reaction to them.

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

All About Music: Its Meaning, Reality, Communication, and Embodiment

MUS 1916
Technology and Society
3 Credits
Fall 2021

Guerino Mazzola
School of Music

The great philosopher of life Friedrich Nietzsche rightly claims that “without music, life would be a mistake.” This does not mean that life is automatically perfect with music. This seminar deals with exactly this problem: What is music doing to us? Why do we listen to it? And how? What is its meaning in our lives, why does it matter, which realities does it touch, how can it be communicated? In what way is it distributed between intellect and emotions? And why do we go to concerts, since electronic media and the internet provide such easy access? The answers will be approached via intensive listening to all kinds of music from different cultures and epochs as well as through critical, very open discussions with the students. The instructor is highly sensitive to non-authoritarian music cultures, so he may provide a thoroughly dynamic and flexible access to music.

Guerino Mazzola qualified as a professor in mathematics (1980) and in computational science (2003) at the University of Zurich. He was visiting professor at the Ecole Normale Supérieure in Paris in 2005. Since 2007 he is a professor at the School of Music, University of Minnesota. He developed a Mathematical Music Theory and software *presto* and *Rubato*. Since 2007 he is the president of the Society for Mathematics and Computation in Music. He has published 30 books and 145 papers, 27 jazz CDs, and a classical sonata.

Amadeus: In Search of Mozart

PHIL 1911W
3 Credits
Fall 2021

Michael Kac
Philosophy

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

Sports, Reason, and Society

PHIL 1912
3 Credits
Fall 2021

Bennet McNulty
Philosophy

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.

Bennet 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.

Space and Time: from Aristotle to Einstein

PHIL 1914
3 Credits
Spring 2022

Jos Uffink
Philosophy

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

Jos Uffink was trained as a theoretical physicist at the University of Amsterdam, where he did his undergraduate work, and at the University of Utrecht, where he completed his PhD on the quantum mechanical Uncertainty Principle. His research interests have always focused on foundational and philosophical issues in modern physics. Uffink's main publications are on the topics of the uncertainty principle and entanglement in quantum mechanics and on the foundations of statistical mechanics.

Comics as Art

PHIL 1918
3 Credits
Fall 2021

Roy Cook
Philosophy

In this seminar, we will explore the idea that comics are as legitimate an art form as painting or poetry. We will ask: How do comics differ from other artistic media? How does reading a comic differ from reading poetry or novels? How have comics influenced, and been influenced by, culture and politics? And what, exactly, makes a comic a comic (and not something else)?

Roy Cook has a special interest in philosophical thought about the popular arts (including film, television, comics and cartoons, LEGO sculpture, collectible toys, and tattoos). He has been an avid reader of comic books since he was a child, when Spiderman was his favorite character, although he now prefers darker, more troubled superheroes (such as the Batman) and independent comics.

Dictatorship and Violence in Central Asia and Afghanistan

POL 1911
3 Credits
Fall 2021

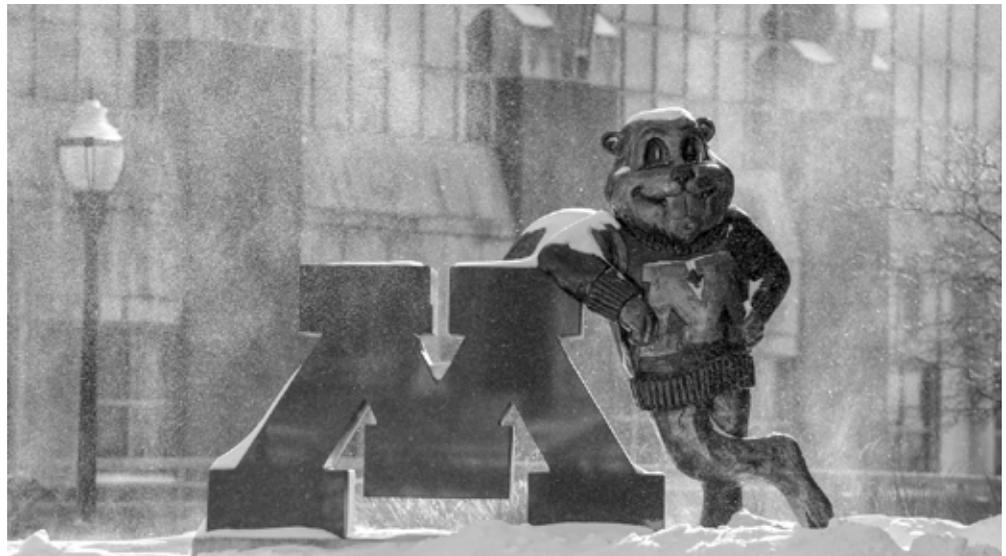
Kathleen A. Collins
Political Science

This course is an introduction to Central Asia, a region of the world that has layers of history, culture, and politics, that extend back to the time of Alexander the Great's conquest, Islamicization by the Arabs, Tamerlane's empire, and the Great Game of the 19th century. Our focus will mainly be on the twentieth century to the present, a period of invasion and control by the Soviet Union, then independence and a 30 year struggle to establish independent states and new forms of political power.

Otherwise known as the "stans" (the land of) - this region includes the land of the Kyrgyz, Kazakhs, Uzbeks, Turkmen, Tajiks, and Afghans. We will also discuss Azerbaijan, a Turkic post-Soviet republic in the Caucasus that is a neighbor to the Central Asian region. We will focus on the role of ethnic, religious, and national identities in Soviet and post-Soviet politics. We will explore their history, and especially the legacy of communism for the present day. We will particularly address the problems of the post-Soviet era, including political

transition to new regimes, the struggle by some for democracy, human rights issues, the challenges of economic reform, environmental catastrophes, ethnic conflict, civil war, and the growth of radical Islamist movements. We will consider US policy in the region, and how it has positively or negatively affected political developments.

Kathleen A. Collins is the author of *Clan Politics and Regime Transition in Central Asia* (New York: Cambridge University Press), which won the Central Eurasia Studies Society Book Award for Social Sciences. She is currently writing two new books, tentatively titled: *The Rise of Islamist Movements: Islam and State in Central Asia and the Caucasus* (under contract, Cambridge University Press), and *Muslim Politics: Islam, Politics, and Public Opinion in Post-Soviet Kyrgyzstan and Azerbaijan*. She has done consulting for ICG, the UNDP, NBR, USAID, Freedom House, and other organizations.



Black Brazil: The Long Road to Racial Justice

PORT 1911
3 Credits
Spring 2022

Ana Paula Ferreira
Spanish & Portuguese Studies

Brazil has long been seen as a place where racial mixtures are celebrated and where racism has been non-existent or assumed a “softer” expression than in the US. Due to this myth, known as “racial democracy,” it has been difficult for Brazilian Blacks to identify themselves as such and mobilize for representation and equality of rights. This course is an introduction to the cultural history of that struggle since the 1930s to the present. We will follow the emergence of Black voices denouncing the official racial ideology that aimed to “whiten,” exclude and ultimately do away with the reminders (and remainders) of the 5 million African slaves who landed in Brazil between the 16th and 19th centuries. We will study a variety of materials from literature and the arts, including films, pop music, rap and graffiti; and will also read short texts from journalism, history and the social sciences. The course will end with the discussion of how the introduction of affirmative action in Brazilian public universities has encouraged a Black/White form of racial identification that many consider foreign to the dominant ethos (i.e. “we are all mixed”).

Ana Paula Ferreira grew up in the immigrant community of Newark, NJ, where she attended integrated public schools and a mostly African American and Hispanic junior college. It was there that she began to understand why her parents made her read their old Portuguese books, mostly novels depicting working-class characters, among them women and people of color, struggling against prejudices and exploitation. In college and graduate school, she went on to read similar stories written in a few other languages and eventually wrote a PhD dissertation that considered the political dimension of literary language. Her research and teaching have continually been inspired by the analytical power of literature to illuminate and hence resist social and racial injustices.

Global Warming Solutions

PHYS 1901
2 Credits
Fall 2021

Eric Ganz
School of Physics & Astronomy

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

Professor Ganz is a solid-state physicist with interests in computational studies of materials. Currently, he is studying novel two-dimensional materials and single atom catalysts. He has a long standing interest in melting.

Aurora: From Myths to Modern Science

PHYS 1905
2 Credits
Spring 2022

Cynthia Cattell
School of Physics and Astronomy

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. We have not yet developed a complete understanding of the physical process that create the aurora. Many very prominent scientists through the ages have struggled to explain what they observed. 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 weather and the space weather cooperates, we will try to observe the aurora and related phenomena including sunspots.

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

Professor Cattell first saw the aurora on her first climbing expedition to Alaska the summer after her freshman year in college. Some of the best aurora she has observed were in northern Minnesota when the sun was extremely active.

What is Space Weather (and Why Should You Care)?

PHYS 1906
2 Credits
Spring 2022

Cynthia Cattell
School of Physics and Astronomy

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

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

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What is Time?

PHYS 1910W
2 Credits
Spring 2022

J. Woods Halley
*School of Physics and
Astronomy*

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

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

How Likely is Extraterrestrial Life?

PHYS 1911W
2 Credits
Fall 2021

J. Woods Halley
*School of Physics and
Astronomy*

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

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

Brain Science, Drugs and Society

PSY 1912
3 Credits
Fall 2021

Monica Luciana
Psychology

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

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

Race in Everyday Space

PSY 1916
3 Credits
Fall 2021

Qurat-ul-ain
Gulamhussein
Psychology

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

Qurat-ul-ain Gulamhussein is a 4th year PhD candidate in the Counseling Psychology program at the University of Minnesota. She is interested in identity development, socialization, resilience, and mental well-being of racial-ethnic and religious minorities, particularly Muslim communities. She deeply enjoys teaching and mentoring undergraduate students. She looks forward to continuing to work with students in this course on topics related to the psychology and research of race, ethnicity, and culture.



The Freshman 15: Stress and Health Management for College Students

PSY 1923
3 Credits
Spring 2022

Caprice Niccoli-Waller
Psychology

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

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

Neuroimaging in Psychology: Why Do Psychologists Use Magnets & Electrodes to Look at People's Brains

PSY 1925
3 Credits
Spring 2022

Cheryl Olman
Psychology

This seminar explores how people use electricity and magnets to study brains. It seems almost magical that we can use magnets, radio antennae, and electrodes to figure out what people are thinking. But there's no magic about it, and we will spend part of our time together learning about the basic physics and neuroscience that make functional magnetic resonance imaging (fMRI), magnetoencephalography (MEG), and electroencephalography (EEG) possible. We will spend the rest of the time talking about why people want to do this and whether or not they should. The central problem is that, once we've collected our data, we have to interpret it. In order to interpret our data, we have to make some assumptions about how things work. The goal of this seminar is to teach students to detect and question those assumptions. Students will use weekly writing assignments to sharpen their thinking on each topic. The midterm exam will be a debate on the topic "Can we read people's minds?", and the final project will be to explain a popular neuroimaging paper to a stranger.

Cheryl Olman is a daughter and a sister; a partner and a mentor. She loves to build things and to make things grow; she loves figuring out how things work and then telling people about what she's learned. She monetizes that last interest by working as an Associate Professor in the Department of Psychology. She earned a BS in physics in 1995, worked at 3M for a few years, and then earned a PhD in neuroscience in 2003. Her research using functional MRI to study human vision satisfies her curiosity about how things work, and her research using computers to build simulations of neural networks satisfies her need to build things.

Communication Disorders and Neurodiversity

SLHS 1914
3 Credits
Fall 2021

Jayanthi Sasisekaran
Speech Language Hearing Sciences

This seminar is about how communication disorders are perceived and studied in the 21st century and the lived experiences of individuals with communication disorders. Topic for each week will focus on a communication disorder and trace the evolving status of communication disorders within the field of Disability Studies. Concepts including medical vs. social models, access and barriers, neurodiversity, and intersectionality, will be discussed. Each flipped class will involve reading assigned articles on each week's topic and viewing a video lecture before attending each lecture. A discussion format for lectures in class will focus on specific excerpts from the readings. Students will maintain active presence on Canvas by contributing to discussion posts.

This course aims to introduce 21st century concepts in Disability Studies and communication disorders. The course topics include-

- Representation of communication disorders in the field of Disability Studies, data trends, and barriers to representation.
- Frameworks to represent communication disorders and how these have evolved to present day thinking (medical vs. social models and individual differences).

· Communication Disorders within the International Classification of Functioning, Disability, and Health (ICFDH) framework.

· Barriers to access for specific communication disorders (Autism, Aphasia, Dyslexia, Hearing impairment, Stuttering).

· Disability policies that enable equitable distribution of resources at the local and global levels.

· Stakeholders and policy mechanisms at the state, central, and international levels.

Dr. Jayanthi Sasisekaran is an Associate Professor in the Department of Speech, Language, Hearing Sciences. She teaches undergraduate and graduate courses in communication differences and disorders, Research methods, Fluency Disorders, and Motor Speech Disorders. Dr. Sasisekaran's research work is about stuttering, a speech fluency disorder. When not at work, Jay likes spending time reading expert and non-expert opinions on sundry topics, bird watching, and gardening.



Plague, Pestilence, and Pandemic in Modern Iberian and Latin American Literature

SPAN 1912
3 Credits
Fall 2021

William Viestenz
Spanish & Portuguese Studies

Over the course of the 20th and 21st centuries, contagious illness, both fictional and real, has served as a literary vehicle for authors in Spain, Portugal, and Latin America to engage with the ways the human body intersects with political power, technology, the environment, and webs of social contact and exclusion. For the Catalan author Blai Bonet, a tuberculosis ward becomes a place to explore the origins of community; for Gabriel García Márquez, the melancholy of inaccessible love drains the body of vitality like cholera; for the Portuguese writer José Saramago, an outbreak of an invented disease causing blindness allows for an exploration of human nature and the 20th-century's worst excesses of violence, to name three examples studied in the course.

This Freshman Seminar will explore the literary treatment of infectious disease across a broad spectrum of geographical and temporal signposts. Given the topicality of the course to the present moment, I plan to incorporate the RATE tool to give students an occasional opportunity to reflect on the utility of

the humanities and literary criticism for analytically reflecting on their own pandemic experiences.

Prof. Viestenz specializes in modern Iberian literature and culture, with an emphasis on the intersection of Catalan Studies, Religious Studies, and Political Theory. He is currently working on the concept of immunology as a paradigm for understanding politics and culture during the Francisco Franco dictatorship in Spain. He is the author of *By the Grace of God: Franco's Spain and the Sacred Roots of Political Imagination* (U. Toronto Press, 2014) and has coedited *The New Ruralism: An Epistemology of Transformed Space* (Iberoamericana/Vervuert 2013), *Ethics of Life: Contemporary Iberian Debates* (Vanderbilt University Press 2016), and *A Polemical Companion to Ethics of Life: Contemporary Iberian Debates* (Hispanic Issues Online).



Attending (to) Theater

TH 1911W
3 Credits
Fall 2021

Sonja Kuflinec
Theatre Arts & Dance

How do we attend and attend to theater in the Twin Cities? This seminar introduces non-theater (and potential) majors to the richness of small and mid-sized theater in the Twin Cities such as Penumbra, Open Eye, and Ten Thousand Things, attending 8-10 performances together. Workshops and discussions with theater professionals will help us to develop critical and creative language to think, write about, and potentially create live performance. We'll think together about how theater might forge a different kind of "commonwealth."

What are the limits of performance as a mode of conflict transformation and social change? Over 25 years Professor Kuflinec has been exploring this question through research, teaching and practice.



Art Laboratory: A Place to Play

TH 1912
3 Credits
Fall 2021

Michael Sommers
Theatre Arts & Dance

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 both 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.

Cyborgs and Hackers: The Ethics of Digital Life

TH 1914
3 Credits
Fall 2021

Sonali Pahwa
Theatre Arts & Dance

Beings with artificial intelligence have raised ethical questions ever since they were fictional characters, such as the robot in the silent film *Metropolis* (1927). As contemporary technology expands the use of artificial intelligence, principles of ethical responsibility are up for constant debate. We explore ethics in the age of technology by examining how humanity is imagined in the art, science, and everyday life of artificial intelligence. Theater plays and films about cyborgs invest them with feelings, and question their exploitation by humans. Meanwhile, contemporary drones and robots are programmed with data drawn from humans, and evoke different fears of machines taking over the planet. We compare cyborg and hacking cultures to see how human and artificial intelligence engage with each other, and how their battles shape our concepts of intention and responsibility.

Sonali Pahwa is an ethnographer of digital and stage performance, who does research among the bloggers, vloggers, and Instagrammers of the Arab world. Her first book was on avant-garde theater in Egypt.

Aquatic Toxicology, Water Safety, and the Society

VPM 1901
2 Credits
Fall 2021

Ashok Singh
*Veterinary Population
Medicine*

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 and groundwater. Poisons distribute between water and sediments, depending on the properties of the toxin, soil characteristics and water chemistry. Therefore, poisons present in water may contaminate both the aquatic and the soil dwellers, and plants, thus contaminating the food chain for humans as well as animals. The overall aim of this course is to discuss (i) effects of water pollution on aquatic and terrestrial organisms including humans, (ii) water quality issues and (iii) water safety. After completing this course, participants will be able to:

-Understand physicochemical and solubility properties of water.

-Compare and contrast toxins' behavior in water, soil, air and organisms.

-Understand the concept of clean and polluted water.

-Understand modes of action of toxic chemicals, types of effects from the molecular to the ecosystem level, and detoxification processes.

-Understand food-chain contamination and ensuing toxicity.

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



Garbage, Government, and the Globe

VPM 1902
2 Credits
Fall 2021

Ashok Singh
*Veterinary Population
Medicine Department*

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

Recently, economic globalization has further increased the magnitude of environmental pollution and ensuing deterioration of public health. If the current trend is not reversed, planet Earth may eventually become uninhabitable. Therefore, the students registering in this course will:

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



Poison, Poisoning and Society

VPM 1903
2 Credits
Spring 2022

Ashok Singh
*Veterinary Population
Medicine Department*

In the United States, approximately 50,000 people die each year as a result of unintentional poisoning, and another 800,000 are treated in emergency departments. The human-caused pollution of the environment (such as oil spill, poisonous gas leak, water pollution, global warming gas release, etc.) seriously impacts the health of millions of people and animals around the world. Despite such serious health consequences, people do not fully understand poisons or poisoning. In this course, students will learn some important aspects regarding poisons including, but not limited to the following. -What are poisons and what is poisoning? -Where do poisons come from? -What are the adverse effects of different types of poisons? -How to prevent poisoning? -What are the impacts of poisoning to the society? Chemicals encountered in everyday life will be used as examples to evaluate the hazards and risk of exposure and put them into perspective. Students will learn the basic principles of toxicology, tools for assessing the toxicology of chemicals, effects of chemicals on the body, and why some people are more sensitive to chemicals than others.

Dr. Ashok Singh is a Toxicologist and Associate Professor in the Department of Veterinary Population Medicine, College of Veterinary Medicine, at the University of Minnesota. His research focuses on toxicology and environmental health. He analyzes the presence of estrogens and antibiotics in the environment, often subproducts of animal farming. These have the potential to enter the environment and contaminate the food and water supply, leading to human disease.

Deep Ocean Mining: Novel Economic Opportunity or Ecological Catastrophe of Common Heritage

VPM 1908
3 Credits
Spring 2022

Ashok Singh
*Veterinary Population
Medicine Department*

The ocean floor possesses precious and industrially prized resources (metals, minerals and sulfide deposits) in plain view on the deep ocean floor. Global mining operations are exploring strategies to strip this treasure, asserting falsely that mining in the deep oceans is more sustainable and less harmful than doing so on land. Contrarily, recent studies have shown that the ocean-floor mining (OFM) may have pronounced and debilitating impacts that will be felt not just on the ocean floor but also throughout the deep- and mid-water columns. Since the deep ocean minerals are in high demand, commercial mining operators are looking to the ocean-floors as the 'next frontier' for mining activities already approved by the United Nations' 1982 charter UNCLOS III and the United States' Deep Seabed Hard Minerals Resources Act of 1980, P.L. 96-283. However, both resolutions focused mostly on the commercial aspect of OFM, ignoring the environmental and ecological issues.

The first permit to mine the ocean-floor was issued in 2011 by the Papua New Guinea government, an endeavor

falling miserably. This raised serious questions regarding the stability and unsustainability of OFM hardware at extreme pressure, irreversible damage of the ocean-floor and its vibrant ecosystem, and lack of economic gain. Therefore, a clear understanding of the safety and sustainability OFM is needed. We hypothesize the OFM for resources is unsustainable and threatens the local and global climate, environment and ecosystems. Students registered for this course will: (i) discuss the properties, resource (metal, mineral and sulfide, etc.) depositions, and mining of deep ocean-floors, (ii) assess the effects of OFM on ocean-floor's structural integrity, environment and ecosystems, (iii) explain the economic viability, risks and uncertainties of deep OFM, and (iv) discuss the national and international regulation of the OFM activities.

Dr. Ashok Singh is a Toxicologist and Associate Professor in the Department of Veterinary Population Medicine, College of Veterinary Medicine, at the University of Minnesota. His research focuses on toxicology and environmental health. He analyzes the presence of estrogens and antibiotics in the environment, often subproducts of animal farming. These have the potential to enter the environment and contaminate the food and water supply, leading to human disease.

Arguing with Authority: The Past, Present, and Future of Higher Education

WRIT 1915W
3 Credits
Fall 2021

Patrick Bruch
Writing Studies

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

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

Writing Medicine

WRIT 1935W

3 Credits
Fall 2021

Molly Kessler
Writing Studies

Medicine, as a field, is most often considered an expert, scientific enterprise. However, as the COVID-19 pandemic has acutely demonstrated, communication plays an integral role in how the public and experts alike understand and engage with medicine, medical research and recommendations, pharmaceuticals, diseases, and more. This seminar explores the relationship between language and medicine through a range of books, essays, podcasts, videos, infographics, and other forms of writing and communication. By examining popular and technical writing, we will study the diverse factors that impact medicine and how we communicate about it, including politics, clinical trials, racism, emotions, empathy, biomedical technology, social media, popular culture, and ethics. In addition to studying the relationships between medicine and language, we will also practice writing for a variety of audiences and on a range of topics.

Molly Kessler is an Assistant Professor in The Department of Writing Studies. From a young age, she has both loved writing and been fascinated by the medical field. She initially thought these two passions were incompatible, but then discovered the field of technical communication (the study and practice of communicating about technical topics), which allowed her to combine her enthusiasm for writing with her curiosity about medicine. Several years and a Ph.D. later, she teaches technical communication courses and researches the relationship between writing and medicine, which includes studying communication about chronic illness and disability stigma, the effectiveness of prescription drug labels for patients, the role of reflective writing in medical education, and the usability of medical technologies.



Sustainable Development with Environmental Justice

GCC 1903
3 Credits
Fall 2021

Ashok Singh
Veterinary Population Medicine

This freshman seminar will provide a clear knowledge of the grand challenge - sustainable development with environmental justice via the nexus approach. The specific objectives are (1) Discuss sustainable development with environmental justice and an interacting network. (2) Explain interrelationship among resource (especially water, food and energy - WFE) utilization, sustainable development, and environmental justice and equity. (3) Compare the currently used 'solitary' approach and the recently developed nexus approach - theoretical considerations, detection of (un)sustainability, natural and human-based pressures, governance practices and management issues. (4) Discuss application of the nexus approaches to achieve sustainable development with environmental justice. We hypothesize that a nexus approach promotes sustainable development with environmental justice via managing the interlinked resources, enhancing WFE security, increasing efficiency, reducing trade-offs, building synergies and improving governance across sectors.

Dr. Singh, an associate professor of toxicology in the Department of Veterinary Population Medicine, College of Veterinary Medicine, received his M.S./Ph.D. in Biochemistry from Banaras University (India) and Ph.D. in Toxicology from Simon Fraser University (Canada). His research interests are Neuro- and Analytical-Toxicology. He teaches freshman seminars, undergraduate and graduate courses in Environmental Toxicology, Nano-toxicology, Garbage and the Environment and Global effects of Human Activity. Art + Health Justice: Building Community Resilience

Art + Health Justice: Building Community Resilience

GCC 1905
3 Credits
Fall 2021

Diane Willow
Art

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

Multi-modal artist and creative catalyst Diane Willow is an Associate Professor in the Department of Art who also teaches in and works with architecture, biology, electrical and computer engineering. By any medium necessary best describes her process. Her work invites people to participate as choreographers of their experience of art, with internationally and nationally commissioned public art works that have engaged people with media as diverse as bioluminescent plankton, tangible sound, and participatory video friezes. She seeks out contexts that require collaboration with people, places, and processes.

Rare Diseases: What it Takes to Be a Medical Orphan

GCC 1906
3 Credits
Fall 2021

Reena Kartha
Experimental and Clinical Pharmacology

What if you are born with a condition, which very few people know about and for which there are no cures? Or what if there is a cure, but it is very expensive and you have to take it throughout your life? How can you encourage the pharmaceutical industry to invest in such cures and have policy makers consider such conditions when they draft new regulations? Rare diseases are not rare. There are 7000 diseases, but in aggregate, these diseases affect 30 million (i.e. 1 in 10) Americans of all ages and additional millions of people globally. Most of these conditions are serious and life-altering and children account for more than 50% of those affected. However, only 5% of all rare diseases have FDA-approved treatments. Thus, there is a large unmet need in this area and one way to address this is to raise awareness about these conditions.

This course will comprise of weekly seminars and related readings on topics related to the understanding of rare diseases and the economics, regulatory and public policy aspects of development of drugs (orphan products) to treat these conditions in the US and across the globe. In this highly interactive course, students will learn from and network with researchers, healthcare professionals and business leaders and gain sufficient background to appreciate the scope of this multidisciplinary field. Students will work in teams with a patient advocacy organization to learn firsthand the challenges related to the diagnosis and treatment of a specific rare disease, barriers to research and development and deliver possible solutions to a specific challenge that they have identified.

Reena Kartha is an Assistant Professor in the Department of Experimental and Clinical Pharmacology and Associate Director of Translational Pharmacology in the Center for Orphan Drug Research (CODR), University of Minnesota College of Pharmacy. She has a Masters in Biotechnology and a Ph.D. in Cellular and Molecular biology. Her research focuses on understanding the pathophysiological role of oxidative stress and inflammation in rare inherited metabolic disorders as well as the pharmacology of agents that target these molecular pathways. Ways of Knowing Science

Environmental Grand Challenges: What Impact Will You Have?

GCC 1907
3 Credits
Spring 2022

Megan Voorhees
Institute on the Environment

What does it mean to live a life that aligns with your values in a time of rapid global environmental transformations driven by climate change, mass extinction of plant and animal species, and the increasing pollution of our oceans, atmosphere, and soils? How can we live sustainably, as individuals and societies, and what disciplines and approaches will we need to achieve this? Where does one start—at this University, in Minnesota, or around the world? We will explore these questions in these ways:

-with an overview of sustainability science, both what it says about about human and natural systems and how it comes to make these claims

-by exploring the United Nations' Sustainable Development Goals

-by exploring what we know about effective leadership within complex grand challenges, both social and environmental, and how this is enabled through a systems thinking approach

-by examining the conflicts that exist within and between differing visions of sustainability through Minnesota-based case studies in climate change and ensuring safe drinking water

Throughout the course, we will meet with campus and community leaders who are working to address our environmental grand challenges and focus on solutions that are working, and ways that each of us can have a positive impact.

Megan Voorhees directs the Acara, Ecolab Experiential Education Scholarship and Graduate programs at the Institute on the Environment, and teaches courses in the University's Grand Challenge curriculum, the Leadership Minor and for the Humphrey School of Public Affairs. Megan's career has primarily focused on leading interdisciplinary campus-community higher education partnerships that provide engaged scholarship and leadership opportunities for students and faculty seeking to address complex social and environmental issues. She also has led youth development and youth employment programs in the non-profit sector.

Ways of Knowing Science

GCC 1908
3 Credits
Fall 2021

Craig Hassel
Food and Nutrition

Every human society codifies its own unique approach, understanding and experience of the world around it into systems of knowledge. However, until very recently, scientific researchers at large Western universities have paid little attention to this knowledge, in part because much is dismissed as "unscientific" -- implying inferiority to Western science. In this seminar, we will take a more culturally sensitive "inside look" at diverse ways of knowing. Experience is often the best teacher. By direct experience and involvement with another culture, we come to better recognize their cultural worldview and its way of seeing and making sense of the world. In this way, learners will encounter different ways of knowing. Each week, experiential learning is supplemented through reading assignments that include published inquiry by indigenous and academic authors.

Craig A. Hassel, Ph.D. is Associate Professor & Extension Specialist, Food and Nutrition and Graduate Faculty, Center for Spirituality & Healing at the University of Minnesota. He is also a Fellow and Elder with the Cultural Wellness Center and Elder with Healing Roots Community. His work is grounded in long-term relationships with cultural communities experiencing the most severe diet-related health inequities.

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

GCC 1909
3 Credits
Fall 2021

Dominic Travis & Barrett Colombo
Veterinary Medicine & Institute on the Environment

Many of the world's most "wicked" and urgent grand challenges occur at the interface of humans, animals and the environment. For instance, in a given region of the world, how do we manage the effects of climate change, disease emergence, food and water security, gender, and conflict and poverty, to ensure the health of humans and animals? For many grand challenges like this, we observe a common theme: human health depends upon the environment, and the environment depends on the health and sustainability of human communities.

These large-scale grand challenges can often become overwhelming, and a solution that considers only one aspect of health often seems daunting and difficult to implement in policy. How can we usefully understand the interactions between these challenges to contribute to solutions? How can one's own discipline and career path relate to these complex grand challenges? How do we build teams and partnerships across disciplines to engage at the scale of the problem?

This course introduces Ecosystem Health (ESH) as a framework and practice for developing complex solutions for grand challenges. In particular, the course will:

-focus on the emerging discipline of Ecosystem Health, and associated approaches and technologies that support solutions to grand challenges of health at the interface of humans, animals and the environment.

-introduce a toolset for approaching, defining, and responding to these grand challenges, including systems thinking, complexity science, and integrative leadership.

11 Billion People: How Long Can the Planet Sustain Humanity?

GCC 1911
3 Credits
Spring 2022

Ashok Singh
*Veterinary Population
Medicine*

-interrogate the conflicts that exist between differing conceptions of health, through the study of several complex cases.

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

Barrett Colombo is a manager for education and policy initiatives at the Institute on the Environment (IonE). At IonE, he directs efforts to translate the Institute's research into action, both within the University and alongside stakeholders in the public and private sector. He is the lead producer for Food Matters, which provides cutting-edge briefings on our global food system.

The earth is finite (an open system for energy but closed system for matter), thus its ability to provide resources for biosphere and to absorb waste is also finite (Figure-1, Motesharrei et al. (2016). Resource utilization and waste generation is directly related to the human's population, need, affluence and demand (Van Timmeren et al. 2012). Humans, from its first two-legged ancestor in Pliocene to the appearance of Homo sapiens, have interacted with their environment and changed enormously the human ecological niche and the breadth of its impact on the environment. But, they also have adapted to adversities via technological developments (from stone-age hunters and gatherers to the information age of modern Homo sapiens) that have kept in pace to meet the ever increasing human population and their affluence. As the technologies (including the digital technology of 21st century) are becoming more complex, their energy demand is increasing proportionally, resulting in overexploitation of resources and accumulation of toxic waste (including global warming gases) into the environment, an unsustainable trajectory. Unless a serious corrective action is implemented, the planet may not sustain 11 billion people, the expected population by the end of 2020.

Students registered in this course will investigate the past, present and future of humanity's ecological niche on the planet. They will explore the environmental context of the present in an evolutionary light, as well as, the tools to evaluate possible remediation and sustainability approaches to control the problems at local and global scales. By focusing on multiple vectors of inquiry (i.e., society, economy, technology, environment) which can be

considered at different scales (i.e., past to present, local to global, individual to societal, temporary to long term), students' progress through the course will give them powerful tools to confront the Grand Challenges of our age, i.e., the Anthropocene.

Dr. Singh, an associate professor of toxicology in the Department of Veterinary Population Medicine, College of Veterinary Medicine, received his M.S/Ph.D. in Biochemistry from Banaras University (India) and Ph.D. in Toxicology from Simon Fraser University (Canada). His research interests are Neuro- and Analytical-Toxicology. He teaches freshman seminars, undergraduate and graduate courses in Environmental Toxicology, Nano-toxicology, Garbage and the Environment and Global effects of Human Activity.





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