



# Winter 2019 Honors Seminars

Honors Seminars are open to students who are members of the Honors Program in the following schools: College of Letters & Science, College of Creative Studies, and College of Engineering.

These **two-unit** courses provide an opportunity for research exploration in various disciplines and consider advanced studies beyond college. To earn honors credit, seminars must be completed with a letter grade of B or higher. Eligible students may take 8 units maximum of INT 84 seminars and 8 units maximum of INT 184 seminars.

**All Honors Seminars are 2 units. Consult GOLD for additional course details.**

**Please note if your class is not a 10-week course the add/drop deadline may be earlier.**

## Lower-Division Seminars:

**\*\*\*JUST ADDED\*\*\***

**INT 84AH: Special Relativity for Pedestrians**  
**Professor Tengiz Bibilashvili, Physics**

**Day: Wednesdays**  
**Time: 0500-0650**  
**Location: BRDA 3302**

**Enrollment Code: 65698**

The goal of the seminar is to teach Special Relativity (SR) using Einstein Notation (EN). The class is designed for enthusiastic students with no or little background in SR. **Prerequisite Physics 20, and 21, or at least concurrent enrollment in Physics 21.** First we will see how EN is used in non-relativistic physics. Then we will learn SR using EN. At the end we will explore how relativistic kinematics is used in High Energy Experiments (HEX) in colliders (like LHC). Good grasp of EN will prepare students to better understand General Covariance of Physics laws like Maxwell's equations in Electromagnetism.

Dr. B aka Tengiz Bibilashvili earned his Ph. D. at Tbilisi State University. His Ph. D. thesis was

about Non-equilibrium Quantum Field Diagrammatic. Later he focused on teaching physics and he prepared several Gold, Silver and Bronze Medal winners at the International Physics Olympiads based on physics problem solving.

[tbib@physics.ucsb.edu](mailto:tbib@physics.ucsb.edu)

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**INT 84AQ: Feminist Thinking and Activism in Spain: From the 19th Century to the Present**  
**Professor Silvia Bermudez, Spanish and Portuguese**

**Day:            Thursdays**  
**Time:           0200-0350**  
**Location:       HSSB 2201**

**Enrollment Code:   63974**

Professor Bermudez' areas of research and teaching are the cultural productions (especially literature and music) of the Iberian Peninsula, Equatorial Guinea, and Latin America, particularly Peru. Her critical work focuses on migration studies, feminism, women's studies, poetic discourses, and politics. One of her 2018 publications is the co-edited volume 'A New History of Iberian Feminisms.'

The purpose of this seminar is to familiarize students with the feminist cultural history of Spain taking into account its diverse geopolitical areas and languages--including Catalonia, Galicia, and the Basque Country. Particular attention will be paid to the diverse network of feminist voices whose concerns remain absolutely current in twenty-first century society, despite labels such as "postfeminism."

[bermudez@spanport.ucsb.edu](mailto:bermudez@spanport.ucsb.edu)

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**\*\*\*OVERNIGHT EXCURSION\*\*\***

**INT 84ZB: Causes and Consequences of Sea-Level Rise: A Geologic Perspective**  
**Professor Alexander Ray Simms, Earth Science**

**Days:            1<sup>st</sup> 4 Tuesdays/Thursdays**  
**Time:            0400-0450**  
**Location:        GIRV 1106**

~and~

**Overnight camping trip (see description below)**

**Enrollment Code: 63982**

During this course we will discuss the causes of sea-level rise at several different time scales and its influence on the natural and geologic system. We will also examine the ancient record of sea-level rise recorded in rocks. Camping is required. **Friday, January 25th and Saturday, January 26, 2019 is an overnight camping trip.**

Although Alex Simms grew up in Oklahoma, he became interested in sea-level changes while attending graduate school in Texas. He has now studied coastlines and their records of sea-level changes from Scotland to Antarctica.

[asimms@geol.ucsb.edu](mailto:asimms@geol.ucsb.edu)

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**\*\*\*EXCURSIONS\*\*\***

**INT 84ZI: Plant and Habitat Diversity: An Introduction to Local Biodiversity**

**Professor Susan Mazer, Ecology, Evolution and Marine Biology**

**Days: Last 4 Fridays (February 22, March 1, 8, and 15, 2019)**

**Time: 1230-0520**

**Location: LSB 4307**

**Enrollment Code: 62208**

We will take field trips to nearby (and stunning) coastal and mountain habitats to learn about wild plant species and their adaptations. Field trips will include visits to chaparral, oak woodland, and beach communities in order to sample the botanical diversity that Santa Barbara has to offer. Bring a notebooks, hat, binoculars (if you have them), water, and good walking shoes.

Professor Susan Mazer is a professor of Ecology and Evolution. Her research examines the processes contributing to the evolution of reproductive and life history traits in wild plant species. In California, Dr. Mazer's research focuses on the ecological causes and consequences of mating system and life history evolution in California native wildflower species in the Sierra Nevada and Coastal Ranges. Currently, she teaches an upper division course in Plant Biology and Biodiversity (EEMB127 and 127L, its lab course); and a year-round upper division seminar in Plant Reproductive Ecology and Evolution (EEMB 194M). In addition, 6-15 undergraduates work in her lab per quarter, earning research units as EEMB 199 or EEMB 99 students and conducting both field and greenhouse-based experiments.

[mazer@lifesci.ucsb.edu](mailto:mazer@lifesci.ucsb.edu)

**\*\*\*EXCURSIONS\*\*\***

**INT 84ZP: Observing Behavior**

**Professor Michelle Brown, Anthropology**

## **HAS BEEN CANCELLED**

Observational methods are the cornerstone of behavioral studies on vertebrate and invertebrate species and are utilized by both anthropologists and ecologists. Students will learn a variety of techniques for documenting behavior by observing other UCSB students, dogs, and local wildlife in the Isla Vista environs.

Professor Brown studies the behavioral ecology of non-human primates to understand the evolution of social systems, the interplay of cooperative and competitive actions, and the effects of environmental change on the behavior of individuals, groups, and populations.

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**\*\*\*JUST ADDED\*\*\***

**INT 84ZT: Mathematics of Origami**

**Professor Jeffrey Stopple, Mathematics**

**Day: Mondays and Wednesdays**

**Time: 0800-0850 am**

**Location: SH 1607**

**Enrollment Code: 66761**

Origami is the ancient Japanese art of paper folding. One uncut square of paper can, in the hands of an origami artist, be folded into extraordinarily complicated and intricate shapes. The art of origami has been going through a renaissance over the past 30 years, with new designs being created at ever-increasing levels of complexity. It's no coincidence that this rise in origami complexity has emerged at the same time scientists, mathematicians and origami artists have been discovering more and more of the mathematical rules that govern how paper folding works.

**This course requires Linear Algebra Math 4A (or equivalent) as either prerequisite or concurrently enrolled.**

Students in previous versions have said "Super fun and interesting!!" "The topic is very interesting, the discussion between students allowed for a lot of fun conversations, and the

hands on activities were great.” “The class was hands-on and engaging. The format facilitated discussion on the topic and activity with other students and with the professor. It was

satisfying to be able to finally successfully put together whatever we were working on. It was fun to team up with someone and use each other's strengths to accomplish the task. Professor Stopple's research is in number theory, particularly prime numbers. Lately he is also interested in mathematical aspects of origami.

[stopple@math.ucsb.edu](mailto:stopple@math.ucsb.edu)

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**INT 84ZW: Past, Present, and Future Climate Changes: a Geological Perspective**  
**Professor Syee Weldeab, Earth Science**

**Day:            Fridays**  
**Time:           0200-0350**  
**Location:       GIRV 1108**

**Enrollment Code:    28712**

The goal of the seminar is to develop a better understanding of climate changes over the last 800,000 years. We will examine the magnitude, timing and pace of changes in atmospheric greenhouse gasses, temperature, and sea level. The seminar will highlight that understanding past climate changes is critical to assess future climate changes

Professor Weldeab’s research focuses on understanding the mechanisms of past climate changes and the lesson we learn from past climate changes. Using marine and terrestrial

climate archives, Dr. Weldeab reconstructs changes in past climate and examine their relationship to changes in atmospheric greenhouse gasses and Sun-Earth constellation.

[weldeab@geol.ucsb.edu](mailto:weldeab@geol.ucsb.edu)

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## **Upper-Division Seminars:**

**INT 184PD: Introduction to Clinical Medicine**

This course is designed to provide students interested in a medically related career an introduction to clinical medicine. Upper-division standing and consent of instructor required.

The selection process is competitive. Honors students interested in INT 184PD should review the course requirements (see link below) and if eligible, email Dr. Stephen Blain, [sblain@ltsc.ucsb.edu](mailto:sblain@ltsc.ucsb.edu)

<http://www.duels.ucsb.edu/honors/advantages/health>

**INT 184DH: Introduction to Clinical Medicine**  
**(This course is for those who have already taken INT 184PD)**

This course is designed to provide students interested in a medically related career an introduction to clinical medicine. Upper-division standing and consent of instructor

required. The selection process is competitive. Honors students interested in INT184DH should review the course requirements (see link below) and if eligible, email Dr. Stephen Blain, [sblain@ltsc.ucsb.edu](mailto:sblain@ltsc.ucsb.edu)

<http://www.duels.ucsb.edu/honors/advantages/health>

***Students: Please remember to read through the course requirements for INT 184PD and INT 184DH prior to contacting our office about enrollment.***

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**INT 184ZB: Where Is Utopia?**  
**Professor Volker Welter, History of Art & Architecture**

**Day:           Tuesdays**  
**Time:          1100-1250**  
**Location:     GIRV 2135**

**Enrollment Code:    62182**

For centuries, visions of a perfect society have occupied the minds of many. But where is Utopia? Moreover, what is it, a non-place (u-topia), a good-place (eu-topia), or a bad-place (dys-topia)? This seminar will read and discuss classic Western accounts of Utopia and its opposite, Dystopia, by for example Thomas More, Edward Bellamy, William Morris, Charlotte Perkins Gilman, Yevgeny Zamyatin, B. F. Skinner, Ernest Callenbach, and others.

Professor Volker M. Welter teaches modern architectural history and theory in the Department of the History of Art & Architecture. His teaching focuses in particular on the

aesthetics of architecture and the often strenuous relationship between architecture and the natural world. He is also fascinated by Utopian thoughts which have inspired many architects and designers to propose visionary cities and societies of tomorrow.

[welter@arthistory.ucsb.edu](mailto:welter@arthistory.ucsb.edu)

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We encourage you to continue to check our website for additions to our **Honors Seminars** offerings.

<http://www.duels.ucsb.edu/honors/experiences#seminars>

**Please see the Section list online Winter 2019 Honors Sections.**