



Spring 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:

*****NEW COURSE JUST ADDED*****

INT 84AR: Manifolds-- The Scene for Geometry and Modern Physics
Professor Denis Labutin, Mathematics

Date: Tuesdays
Time: 0500-0650
Location: SH 6635

Enrollment Code: 61531

The vector space is introduced early in calculus and is fundamental for applications in sciences. At the same time in modern mathematics and its applications to physics and other sciences the action happens in "curled", "twisted" spaces. Those are manifolds. The simplest manifolds are curves and surfaces such as a sphere, Moebius band, Klein's bottle, The study of manifolds is an advanced subject somewhat unusual if compared to more traditional areas of mathematics. However, the main concepts and the technique can be well understood intuitively just with the calculus-4 background. We shall study gluing, surgery, homotopy, and other operations without complicated formulas but with clear geometric meaning. We also see how manifolds appear in mechanics, liquid crystals, and even advanced areas of theoretical physics.

Professor Labutin, earned his PhD 2000 at the Australian National University. His research interests are nonlinear partial differential equations and their applications in geometry.

labutin@math.ucsb.edu

*****OVERNIGHT EXCURSION*****

INT 84ZA: Owens Valley, Mono Lake, and the LA Aqueduct

Professor Jordan Clark, Earth Science

Day: Fridays
Time: 0100-0150
Location: GIRV 1106

Enrollment Code: 27318

This class focuses on a three-day field trip that will leave Friday morning and return Sunday. During the trip we will stop at important sites related to the LA Aqueduct, Mono Lake, and watch a PBS documentary. Finally, the class will meet twice prior and once after the **field trip scheduled for May 3-5, 2019.**

Dr. Clark is an environmental scientist who works in geochemistry and hydrology. Much of his current research relates to water supply problems in California. In particular, he investigates groundwater flow near Managed Aquifer Recharge sites.

jfclark@geol.ucsb.edu

*****INCLUDES EXCURSION*****

INT 84ZB: Causes and Consequences of Sea Level Rise: A Geologic Perspective

Professor Alexander Simms, Earth Science

Day: Thursdays
Time: 0400-0450
Location: ELLSN 2816

Enrollment Code: 54874

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. This course **includes an overnight excursion on April 26 & 27, 2019.**

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

INT 84ZK: Introduction to Linear Programing

Professor Gustavo Ponce, Mathematics

Day: Tuesdays
Time: 0300-0450
Location: HSSB 3202

Enrollment Code: 27334

The beginning of what is called Operation Research (OR) has commonly attributed to the military activities early in World War II. This was mainly due to the need of designating scarce resources to different military operations and to the activities within each operation in an efficient manner. After the war OR had a very rapid development, so techniques as linear programing, dynamics programing and inventory theory among others were well developed at the end of the 1950's. Latter, the computer revolution provided a great impulse to the growth of the OR. Thus, large amount of computations often required in the complex problems typically analyzed by OR could be easily handled.

Professor Ponce's research interest is at the intersection of mathematical physics, harmonic analysis and nonlinear partial differential equations. The goal is to describe the qualitative behavior of solutions to model physical situations by developing techniques coming from harmonic analysis.

ponce@math.ucsb.edu

INT 84ZP: Observing Behavior

Professor Michelle Brown, Anthropology

Day: Fridays
Time: 0900-1050
Location: HSSB 2018

Enrollment Code: 27359

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.

mbrown@anth.ucsb.edu

INT 84ZR: Wild Journey

Professor John Lew, Molecular, Cellular and Developmental Biology

Day: Fridays
Time: 1100-1250
Location: HSSB 2201

Enrollment Code: 27367

There is so much more to who you are than you know right now. You have all it takes for a deeply meaningful life of the greatest fulfillment, passion, and service. Yet, few of us are ever taught to clearly identify and develop our authentic life gifts that we've been all given, to offer the world. Where our true gifts and the needs of the world touch lies our Calling. Like a wild animal able to roam without boundaries, the journey across all barriers to our deepest life purpose is the Wild Journey. This course will focus on how our own psyches can potentially lead as called beings into the deepest, most meaningful lives if only we knew who we truly are and what we're truly meant to do. This class is experiential; we will meet outdoors employing Nature as a template for seeing ourselves as whole and authentic agents of ultimately radical cultural change. **ADD CODE IS REQUIRED TO ENROLL IN THIS COURSE – CONTACT PROFESSOR LEW.**

Dr. Lew is a professor of biochemistry and molecular biology. His research focuses on the discovery of natural molecules as potential therapeutics for Alzheimer's disease. His life passion is students, and their personal development. He sees students as the next generation of leaders and influencers, and feels deeply called to guide students into the most meaningful life possible. Dr. Lew is a wilderness-based self-awareness guide who trains extensively with Animas Valley Institute specifically in the area of nature-based approaches to mature human development.

lew@lifesci.ucsb.edu

*****OVERNIGHT EXCURSION*****

INT 84ZX: The Sierra Nevada

Professor Peter Alagona, Environmental Studies

Day: Mondays

Time: 0200-0250

Location: BREN 4316

Enrollment Code: 54882

This course will use the Sierra Nevada as a bioregional case study to explore key issues in California environmental history and geography, with a focus on water resources. Students will attend weekly discussions during the first seven weeks of the quarter. In late May, we will then take a four-day field trip to UCSB's Sierra Nevada Aquatic Research Laboratory in Mammoth Lakes, where students will experience a packed weekend of field work, site visits, meetings with local experts, guest lectures, and discussions. **Potential excursion dates are April 18-21, 2019 – PLEASE VERIFY DATES WITH FACULTY MEMBER.**

Peter Alagona is an associate professor of history, geography, and environmental studies at the University of California, Santa Barbara. He is an environmental historian whose work examines the role of science in environmental politics, policy, and popular ideas about nature, with a particular focus on California and the American West. He is the author of numerous publications on these topics, including *After the Grizzly: Endangered Species and the Politics of Place in California*, published by the University of California Press in 2013.

alagona@history.ucsb.edu

INT 84ZY: Don Quixote and the Search for Reality

Professor Antonio Cortijo, Spanish & Portuguese

Day: Fridays

Time: 0900-1050

Location: HSSB 2201

Enrollment Code: 27383

This seminar explores Cervantes' novel *Don Quixote*. It analyzes how Don Quixote embarks on an exploratory journey that will take him to question reality and seek love and fulfillment beyond the constraints of contemporary society. Through epiphanies and paradoxical realizations, Don Quixote will discover his destiny is to become a hero for himself and for others.

Professor Antonio Cortijo analyzes in his research the ideological structures and tensions that have forged the Modern Period across the Atlantic and across the languages and cultures of the Iberian Peninsula. He deals with issues such as nation building, power and ideology, religion and economy in the late medieval through 18th centuries, as well as with the larger topic of the relevance of Humanism in the creation of the modern nations. He is the author of over 50 monographs and editions.

cortijo@ucsb.edu

Upper-Division Seminars:

INT 184AK: What is Nature?

Professor Volker M Welter, History of Art & Architecture

Date: Tuesdays
Time: 0900-1050
Location: HSSB 3202

Enrollment Code: 54841

"We recognize nature when we see it, yet trying to describe it leads to vexing questions. What separates nature from artifacts? Is nature always "good and organically" better? What about humanity's ingenuity in designing the artificial (art, architecture, technology)? This seminar will read and discuss historical and contemporary Western accounts of nature, the natural, and their opposites.

Professor Volker M. Welter teaches modern architectural history and theory in the Dept. of the History of Art & Architecture. One of his interests is the often strenuous relationship between architecture and the natural world, and how architecture and design manipulate the latter for good or bad.

welter@arthistory.ucsb.edu

*****NEW COURSE JUST ADDED*****

INT 184AP: Capitalism, Technology and Climate Change: Applying the Insights of Critical Theory to Effect System Change

Professor Harold Marcuse, History

Date: Wednesdays
Time: 0200-0350
Location: HSSB 3001E

Enrollment Code: 61564

While many people hope that technological fixes can be found to mitigate global warming, others think that only a shift from capitalism to new forms of economic and social organization can address the root

causes of unsustainable growth. In this seminar we will read essays about the roles technology might play in such a transition, and discuss theories about how the transition can be brought about.

Professor Marcuse was an activist in the anti-nuclear movement before he began studying the dynamics of social movements, particularly how they draw on history to mobilize supporters. He is organizing a conference at UCSB in which scholars and activists will discuss how theories of social change can inform the praxis of the climate justice movement.

marcuse@history.ucsb.edu

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

<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

<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.

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 Spring 2019 Honors Sections.