Course Opportunities: Week of June 29, 2020

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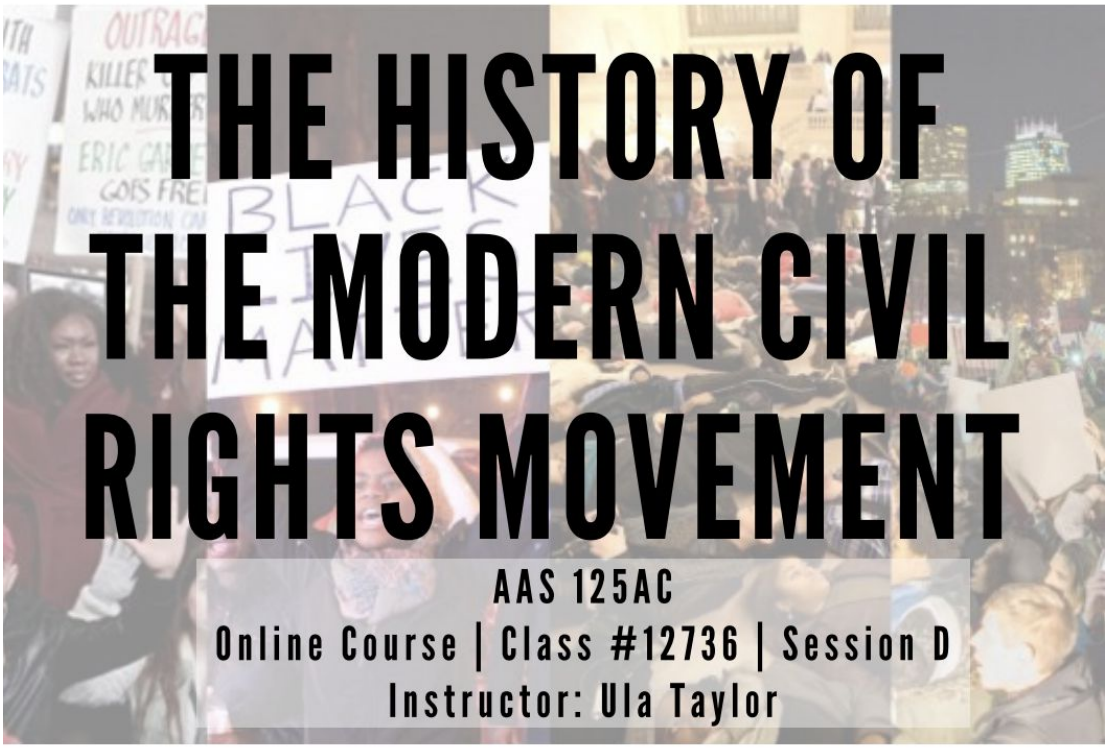
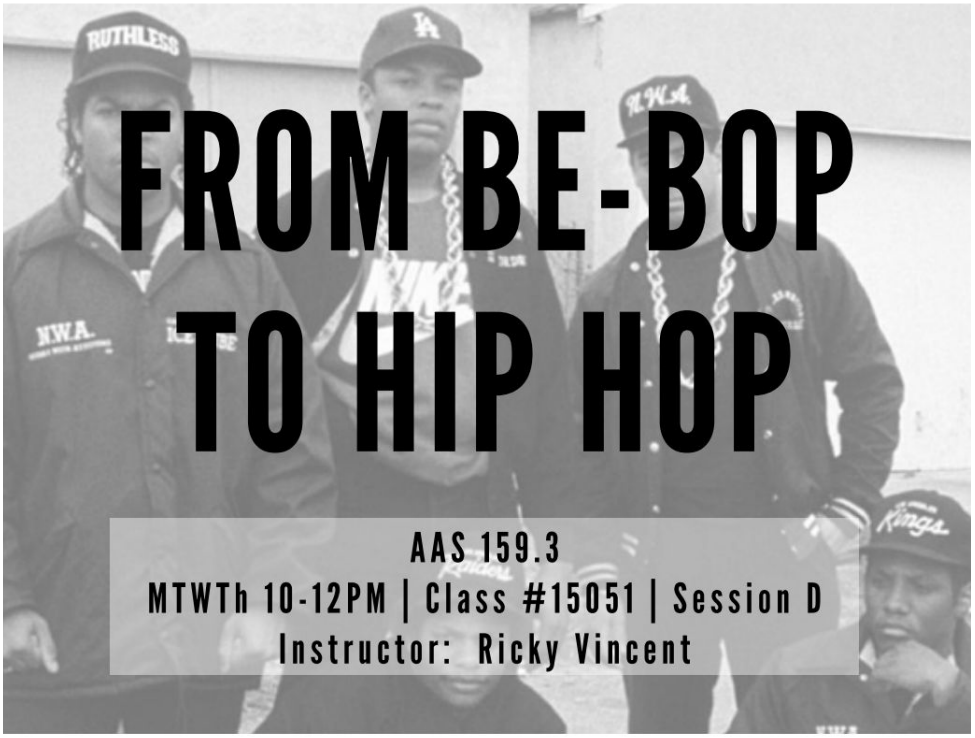
Summer Session D: African American Studies

AAS 125AC - The History of The Modern Civil Rights Movement



AAS 159.3 - From Be-Bop to Hip Hop

Berkeley SUMMER SESSIONS



This course is an interdisciplinary analysis of the aesthetics and politics of black popular music since WWII with an emphasis on the "Black Awakening" of the 1960. The many great changes in black music, from Swing to Bop to Rhythm and Blues, through Soul, Rock, Funk, Reggae, Disco and Hip Hop are analyzed in terms of their expressions of African America beliefs and values, both traditional and contemporary. Students will come to understand the many aesthetic links between popular music, politics and culture, and the relationship to national identity and the struggle for freedom and self-determination.

SUMMER.BERKELEY.EDU
1995 UNIVERSITY AVE. | BERKELEY, CA 94704-7026 | MC #1080 | 510-642-5612

AAS 159. 2 - Reading and Writing A Black Feminist Creative Practice of Care
Reading and Writing a Black Feminist Creative Practice of Care

Berkeley SUMMER SESSIONS

Reading and Writing a Black Feminist Creative Practice of Care engages theories and methods of radicallycreative Black feminism by centering scholars like Alice Walker, Audre Lorde, June Jordan, Toni CadeBambara, Toni Morrison, Lucille Clifton, and Sonia Sanchez. The course is designed to explore the ways inwhich Black women writers and thinkers have conceptualize creativity and care, with a particular focus onin teriority, intimacy, spirituality, and sisterhood. We will read canonical texts and lesser known texts that deal with the complexities of Black life for Black women in a variety of time periods, in a variety of places. We will also explore contemporary works by Black women who are in conversation with these canonical works and think about what new discourses around these topics have emerged. I will expose students to theories of intersectionality through creative writing, and explore new ways of leaning into the creative works of Black women as theory and method. Students will engage their own process of writing poetry and prose about the influences of race, class, gender and sexuality by making connections between the texts and their lived realities. There will be three major assignments that will be graded based on how well students can conceptualize course themes for themselves and incorporate their knowledge into projects that align with their own interests rooted in course material.

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Summer Session D: Cognitive Science

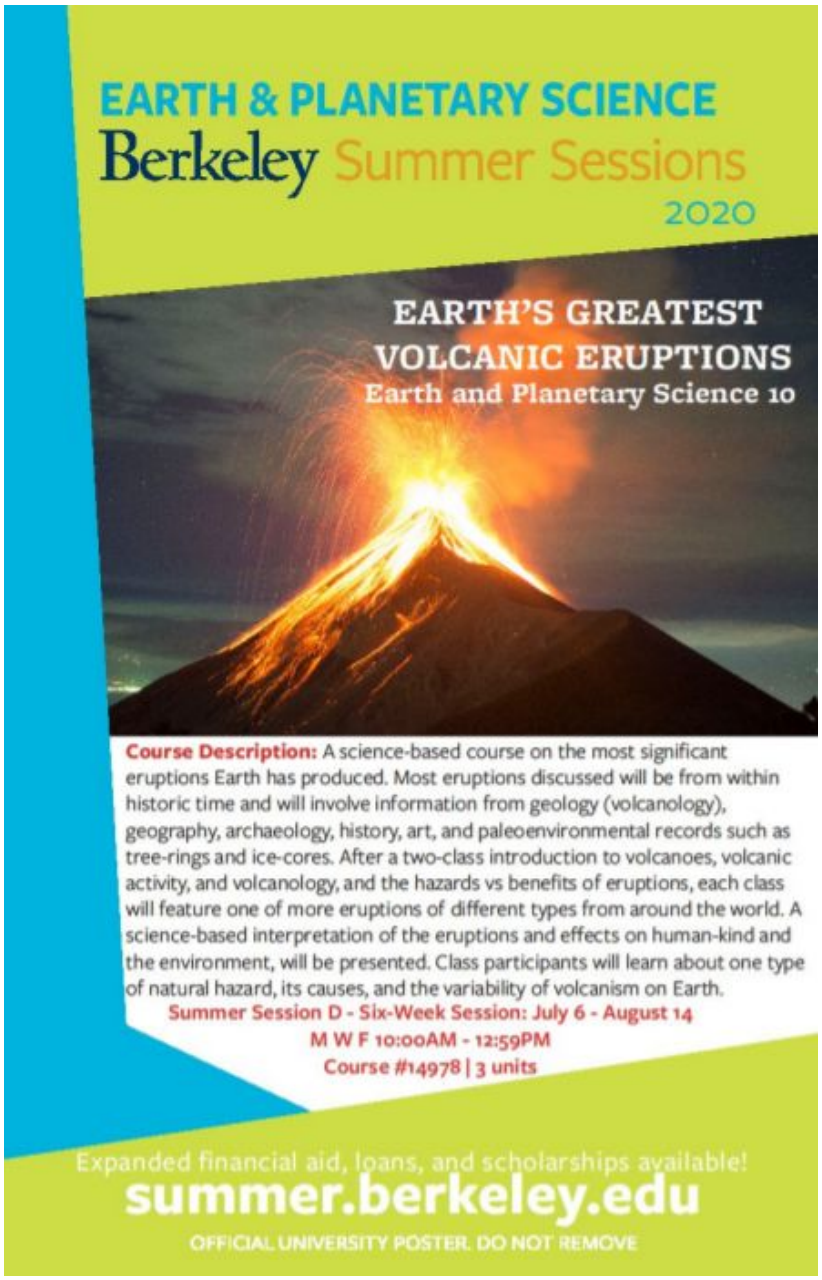
COGSCI 181: The Cognitive Unconscious - Class #: 15310
Fulfills the Philosophy or Society, Culture, and Cognition distribution, or can count as an elective
Meets Philosophy & Values, L&S Breadth

- 3 units
- Instructor TBA
- Summer Session D: July 6 - August 14
- M, TU, W, TH: 4:00 pm - 5:59 pm

This class is on the cognitive unconsciousness. This is the unconscious mind from a cognitive science point of view rather than one from psychoanalysis (though we will briefly touch on the psychoanalytic notions of the unconscious to clarify the distinction). The basic guide will be asking whether there is explanatory value to explaining human behavior with mental states or events that are not conscious to the person who has them. We say, for example, that a person flinched because they felt pain. Pain is a mental state that can explain the behavior (the flinch) of the person. Are there good reasons to think that some behaviors are explained by unconscious mental states?

Summer Session D: Earth & Planetary Science

EPS 10 – Earth's Greatest Volcanic Eruptions



Summer Session D: Geography

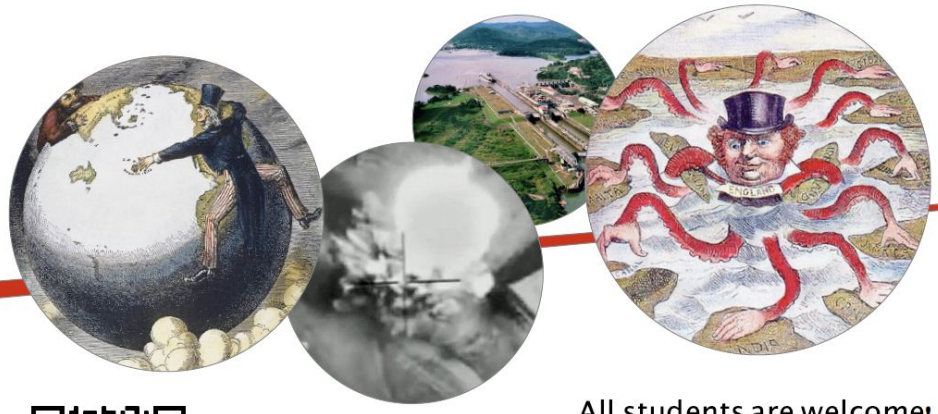
GEOG 31: Global Geographies of Imperialism

GLOBAL GEOGRAPHIES OF IMPERIALISM

SUMMER SESSION D (JULY 6 – AUGUST 14)

Focusing on the twentieth century into the present moment, this survey course explores global geographies of imperialism and hegemonic transitions. What drives imperialism? Are militarism and war inherent to global capitalism? How do historical relations of colonialism relate to uneven capitalist development today at the global scale? The course introduces key theories and debates on the topic of imperialism and explores the themes of race, gender, territory, development, resource extraction, finance, and militarism.

GEOG 32 (3 Credits)
Instructor: Bridget Martin (Martb244@berkeley.edu)
Times: Tues, Weds, Thurs 9:00 – 11:30 (Most lectures are asynchronously provided. Synchronous meeting times will be determined after the first class meeting.)



All students are welcome!
Contact the instructor for details.

GEOG 138: Global Environmental Politics

Geography 138: Global Environmental Politics

July 6 – August 14: TU/W/TH 9:00 am - 11:30 am
Instructor: Erin Torkelson

- Read texts from scholars and activists writing from within environmental struggles around the globe.
- Examine the colonial, imperial and capitalist circuits of global environmentalism.
- Analyze how post/de-colonial struggles politicize relations among environmental resources, rights and cultural identities.

South Africans protest against an Australian titanium mine, Xolobeni,Wild Coast, 2018.

GEOG 170: Walkers in the City: Landscape, Mobility and Everyday Life

Walkers in the City: Landscape, Mobility, and Everyday Life

Geography 170 **CCN: 15722**
Instructor: **Summer Session D (from July 6)**
Dr. Peter Ekman **TWTh 3:00–5:30**

Thinkers across the disciplines address themselves to matters of embodiment, materiality, and mobility. There is a long and varied tradition concerned with how these matters intersect questions of urban landscape, laced with openings and leads onto urban geographies that have yet to be written. This course invites students to reassess walking as a way of knowing, and to recommit to what Walter Benjamin, wandering through Paris and Berlin a century ago, semi-famously called "botanizing on the asphalt."

Throughout, we consider how the very ordinariness of walking can update or undo some of the major categories humanists, social scientists, and practitioners use to make sense of urban space, place, politics, power, economy, culture, and the axes of organized difference that freight and fracture them. How to adjust our sense of landscape's materiality given that every observer, lay or expert, is in some sense on the go? How to interpret the interactions between walking bodies and those urban spaces built to accommodate ever more mechanized technologies of getting around? Between organic and inorganic matter more generally? Matter and mind? Methodologically speaking — and critically reprising older notions of the transect, the cross-section, and the regional survey — how might a concern with pedestrian and other mobilities accompany urban and spatial theory? What new forms of engagement might it allow with the archives of urban history?

This course will be run as a seminar, punctuated once a week by lectures. As befits the subject matter, it may also include one or more exercises in self-directed field study — solitary walks through the "socially distanced" city — with brief but closely observed essays the result. Students will also read and react to one another's writing.

Summer Session D: History

N100.002 Whose Rights? Citizens and Citizenship in American History**

What does it mean to be an American citizen? What are U.S. citizenship rights? Do citizenship rights mostly serve to expand access to the public sphere and the political economy among diverse citizens or to restrict access on the basis of nationality and immigrant status? And how have these questions changed over the nearly two and a half centuries-long existence of the American Republic?

N100.003 History of Silicon Valley**
Silicon Valley: the place where our quotidian is manufactured. The Hollywood of the digital, it's the literal ground upon which new forms of relating, learning, and consuming are invented, tested, codified, packaged, and disseminated until we've reconfigured our "natural" and given environment again and again.

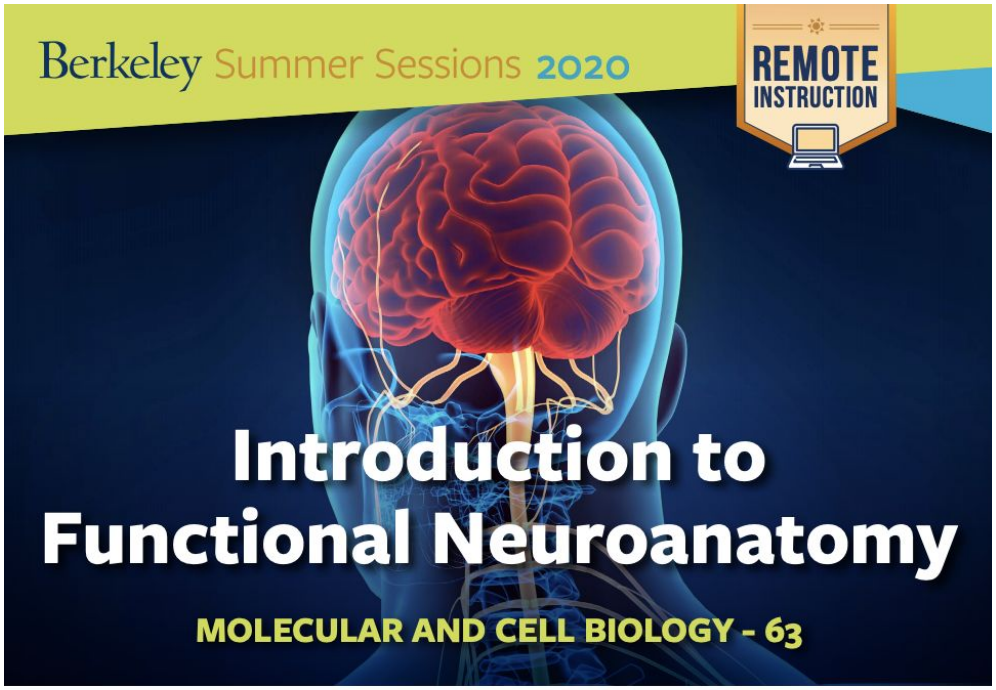
116D 20th Century China
This course examines the origins of present-day China in its twentieth-century past. China's most recent century was a period of dramatic upheaval and fundamental transformation, the outcomes of which were far from inevitable.

160 International Economy of the 20th Century
This course looks at the massive economic and social changes that shaped the 20th century. As a compass that guides us through the century we will use the work of the Austro-Hungarian economic historian Karl Polanyi who in mid-century published the seminal book The Great Transformation.

*Course satisfies American Cultures requirements
** 2-unit course. Does NOT satisfy a history major requirement.

Summer Session D: Molecular & Cell Biology

MCB 63 - Introduction to Functional Neuroanatomy



Course Description: This course emphasizes beginning anatomy of the brain and spinal cord to individuals interested in understanding the dynamics of motor and sensory functions in the human body. Students in the Departments of Education, Psychology, and Integrative Biology, as well as students interested in medicine and the life sciences, are especially encouraged to attend.

- Meets Biological Science, L&S Breadth

Session D - Six-Week Session: July 6-August 14
M, TU, W | 10:00 a.m. - 12:00 p.m. | Course #12276 | 3 units

SEE COURSE LISTING

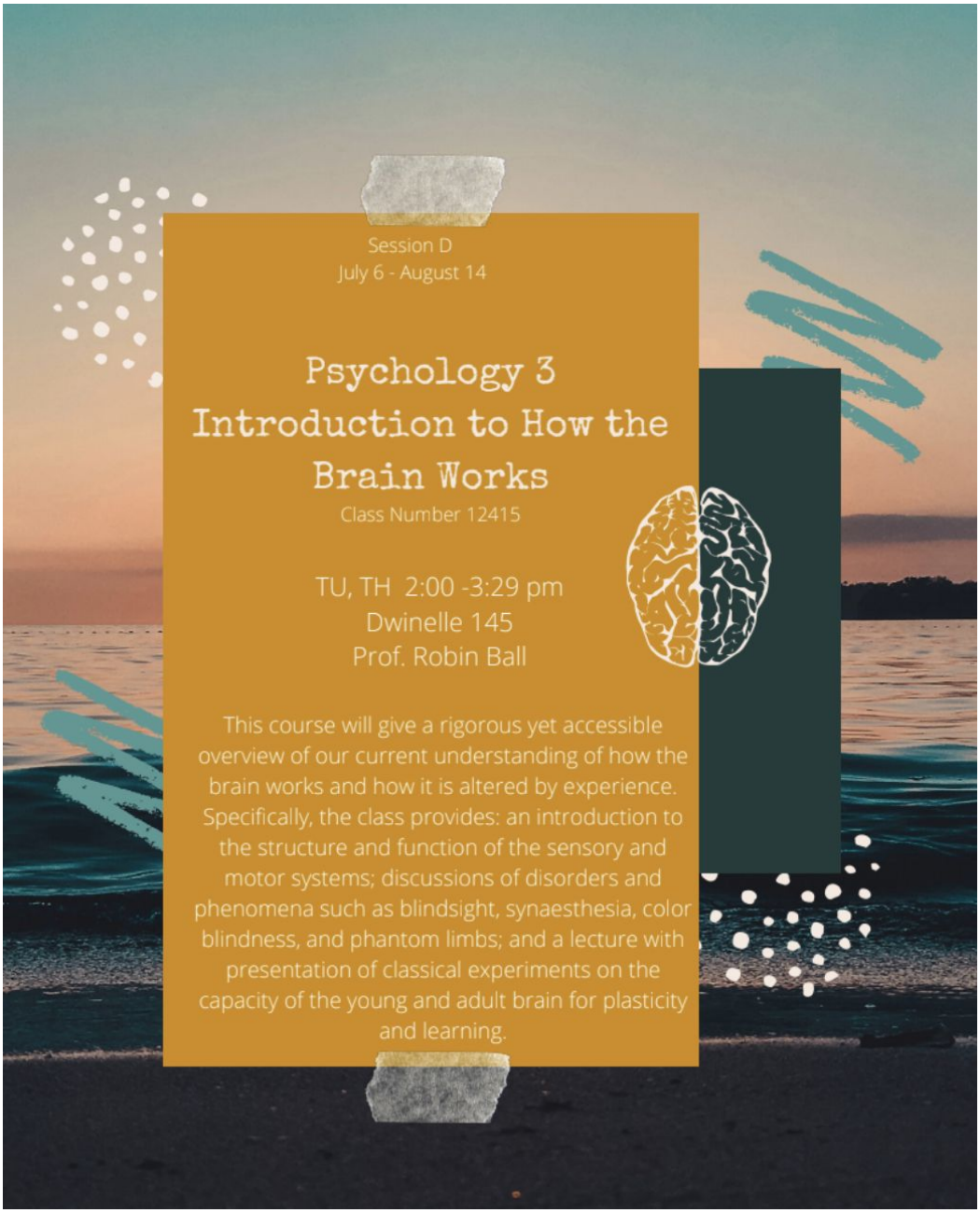
summer.berkeley.edu

Summer Session D: Psychology

Psych 3 – Introduction to How the Brain Works

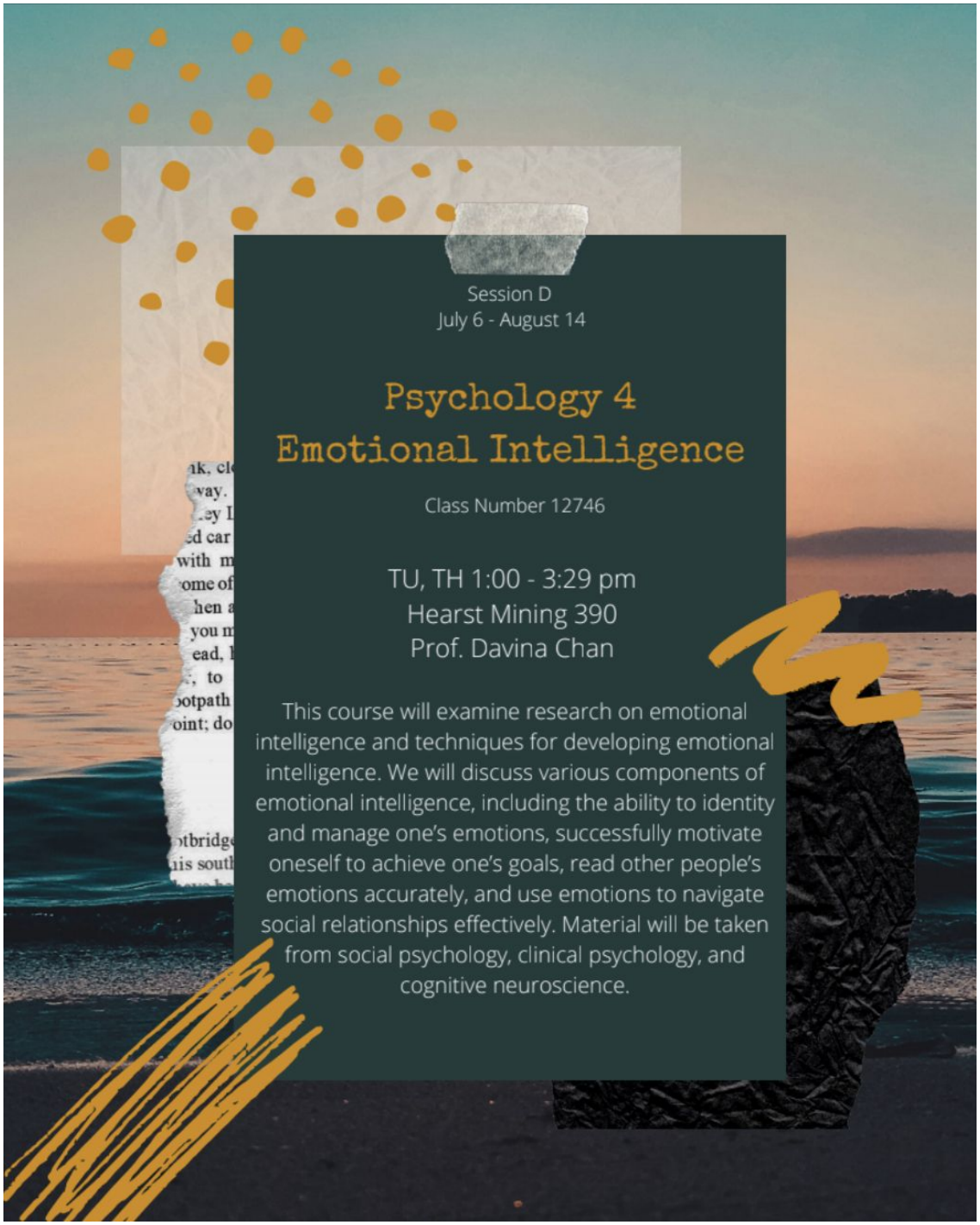
All Psych summer courses will now be online. Visit the academic guide for our course offerings!

Course Opportunities: Week of June 29, 2020



Psych 4 – Emotional Intelligence

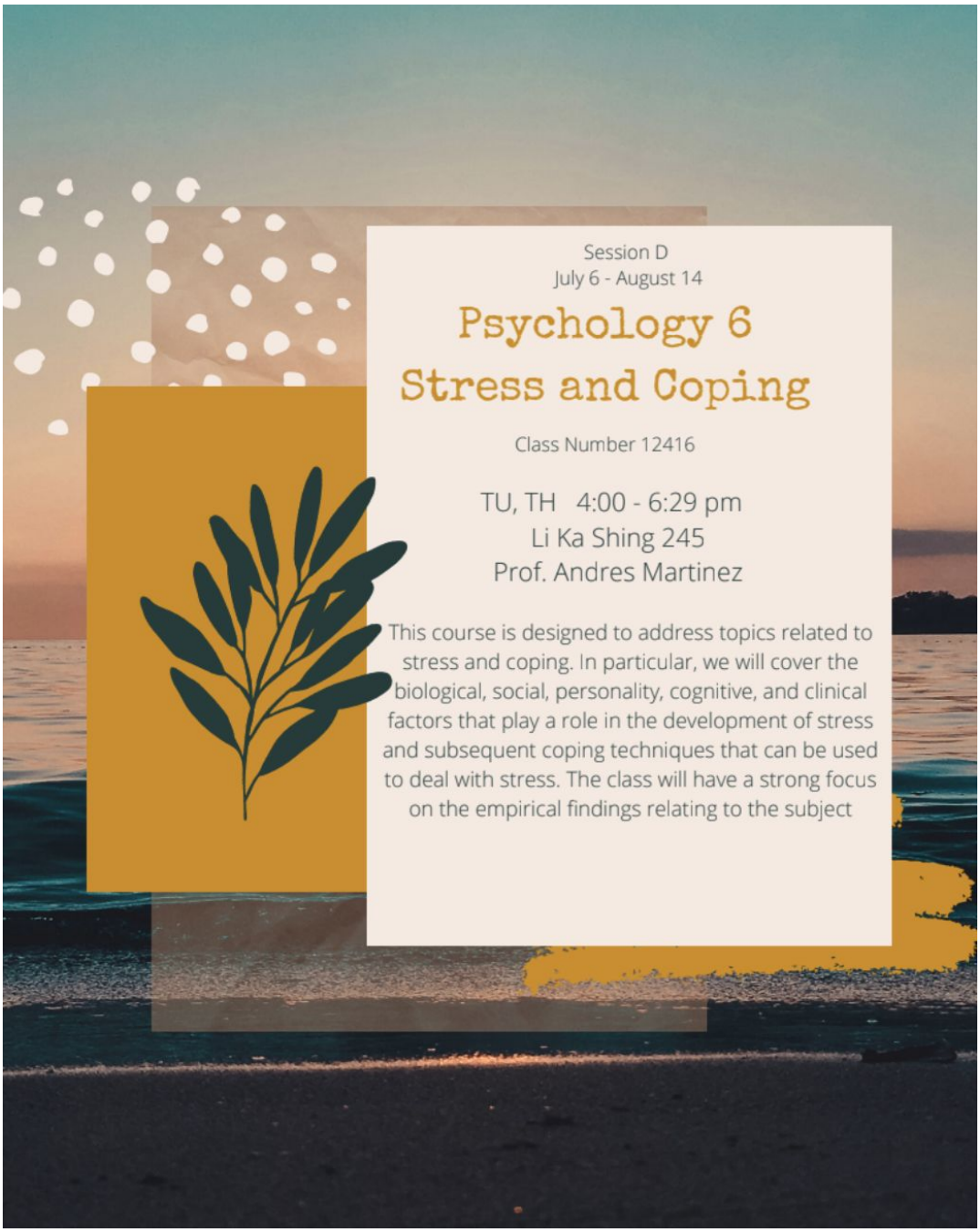
All Psych summer courses will now be online. Visit the academic guide for our course offerings!



Psych 6 – Stress and Coping

All Psych summer courses will now be online. Visit the academic guide for our course offerings!

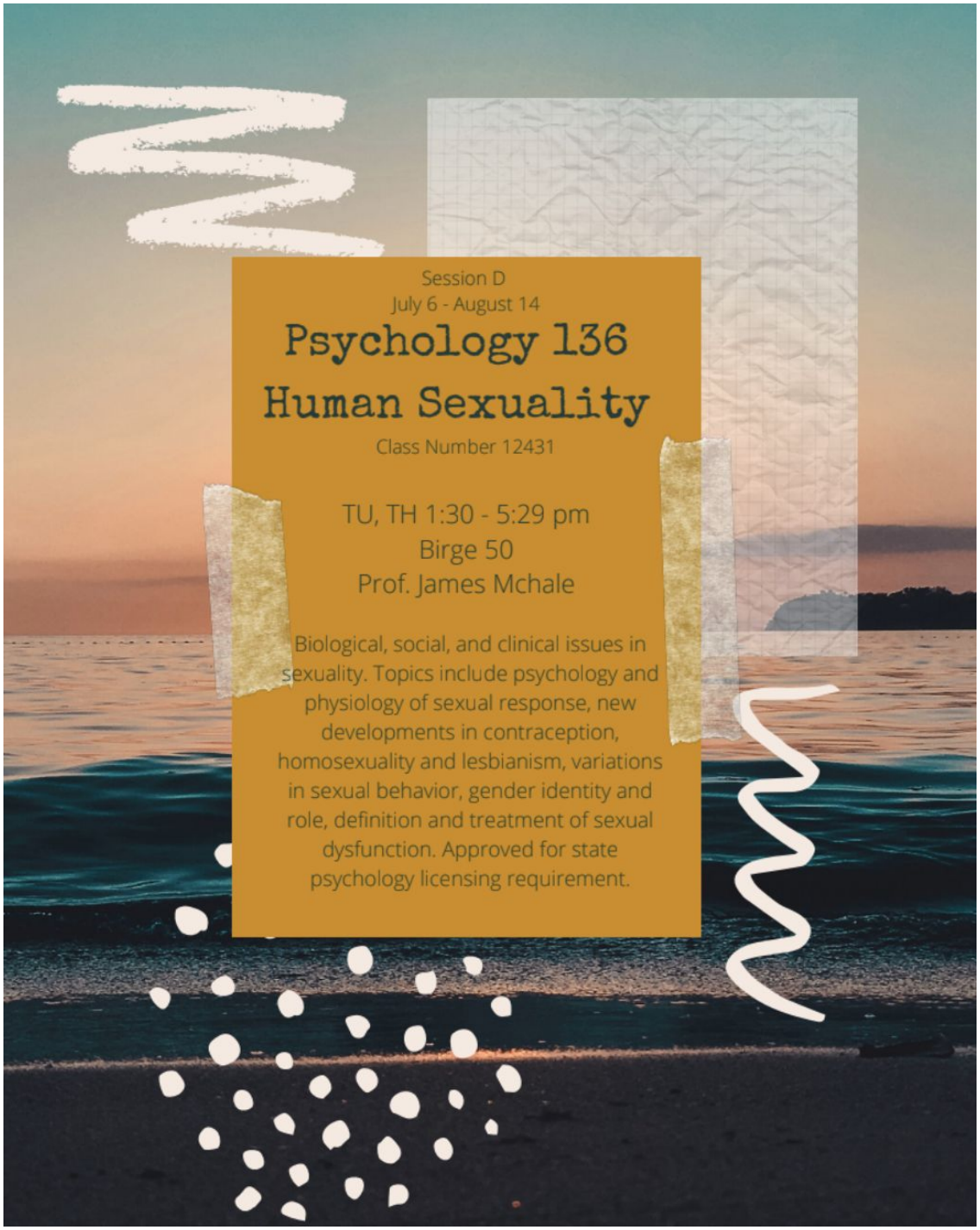
Course Opportunities: Week of June 29, 2020



Psych 136 – Human Sexuality

All Psych summer courses will now be online. Visit the academic guide for our course offerings!

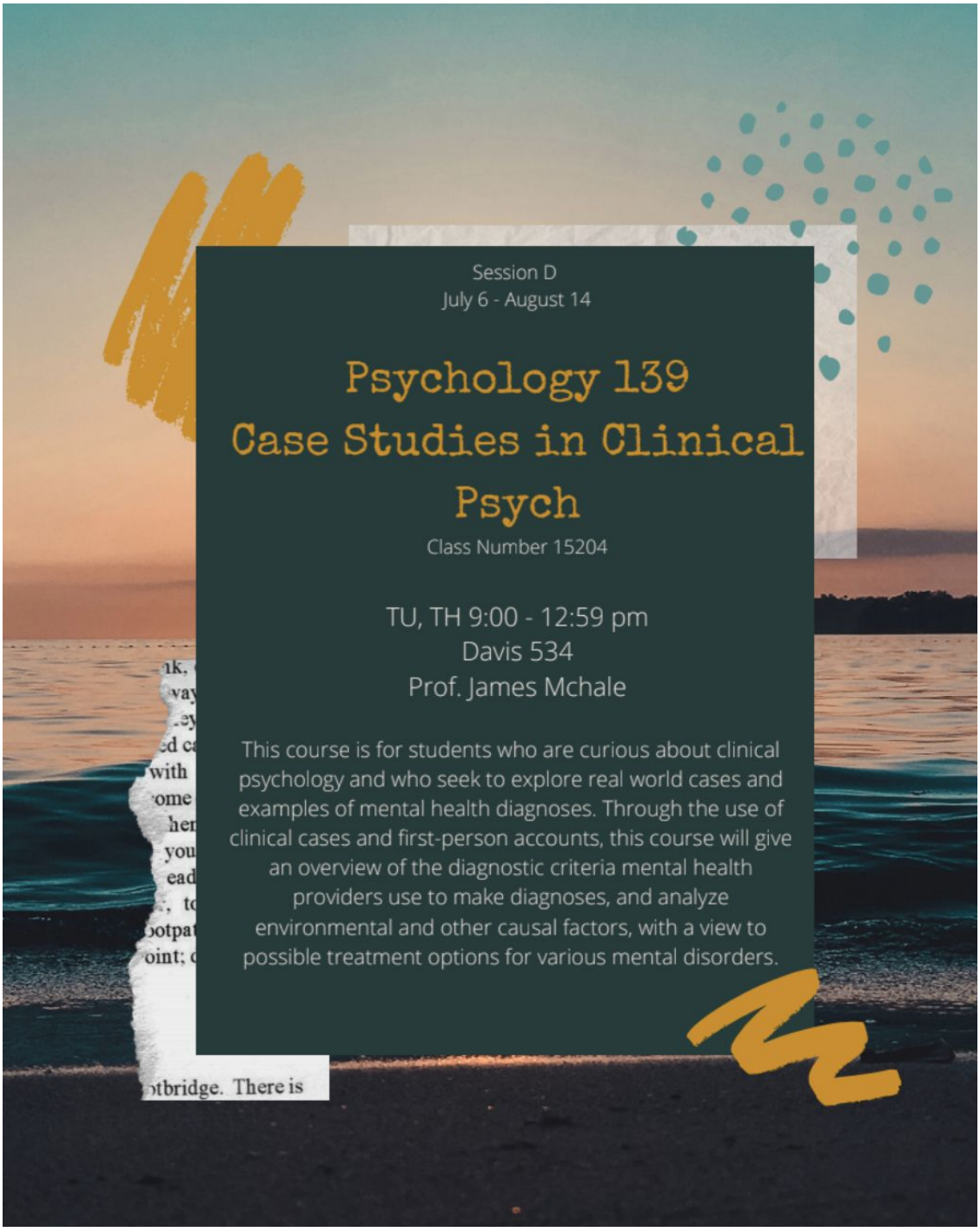
Course Opportunities: Week of June 29, 2020



Psych 139 – Case Studies in Clinical Psych

All Psych summer courses will now be online. Visit the academic guide for our course offerings!

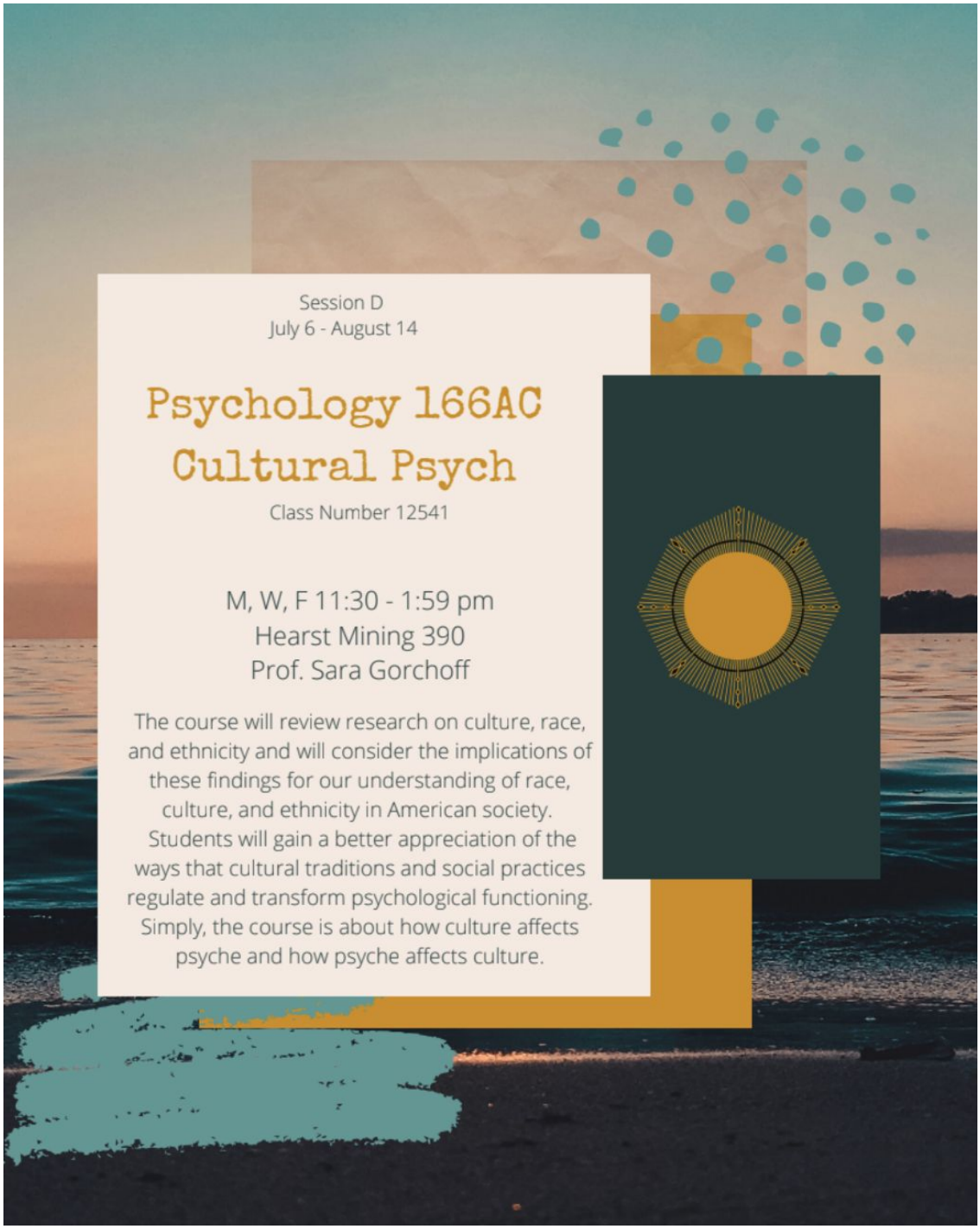
Course Opportunities: Week of June 29, 2020



Psych 166AC – Cultural Psych

All Psych summer courses will now be online. Visit the academic guide for our course offerings!

Course Opportunities: Week of June 29, 2020



Psych N180 – Industrial-Organizational Psychology

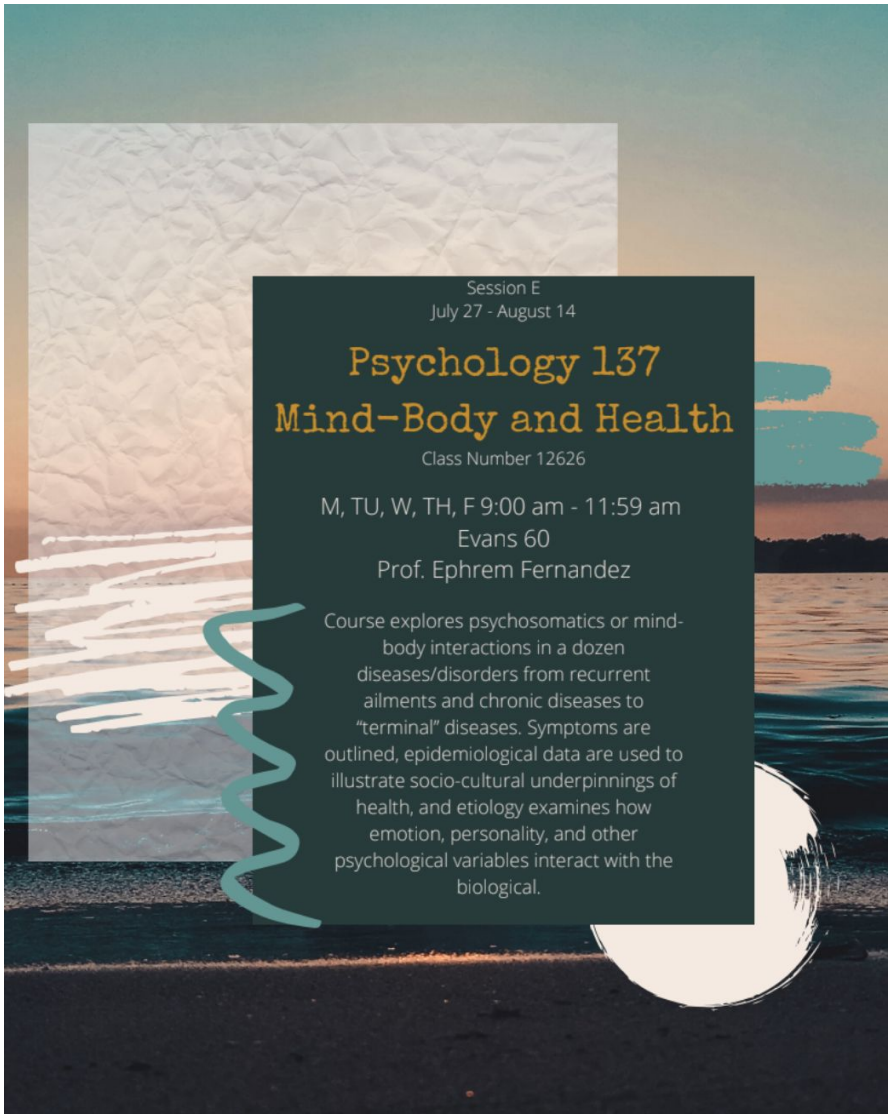
All Psych summer courses will now be online. Visit the academic guide for our course offerings!

Course Opportunities: Week of June 29, 2020

Psych 137 – Mind-Body and Health

All Psych summer courses will now be online. Visit the academic guide for our course offerings!

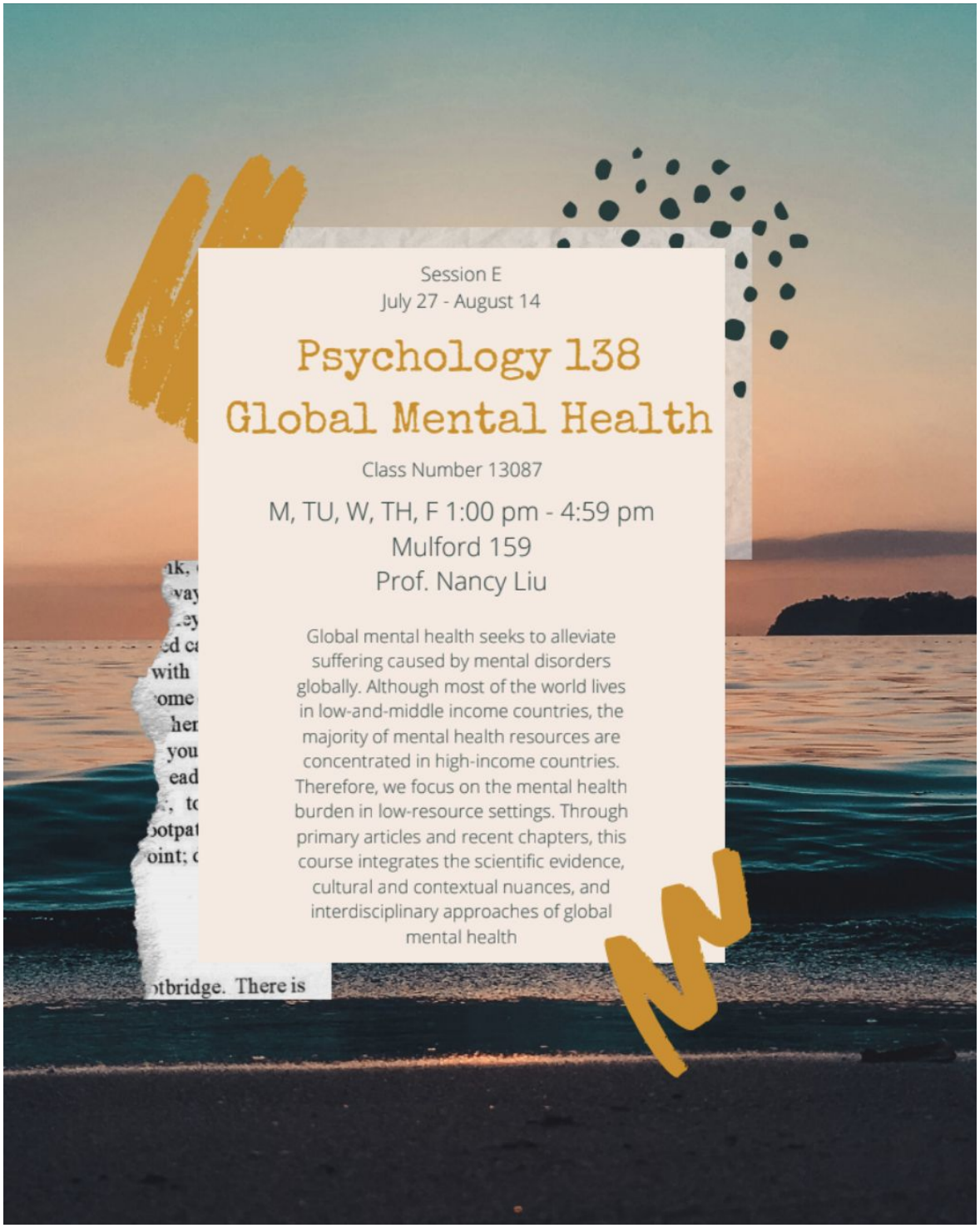
Course Opportunities: Week of June 29, 2020



Psych 138 – Global Mental Health

All Psych summer courses will now be online. Visit the academic guide for our course offerings!

Course Opportunities: Week of June 29, 2020



Summer Session D: Rhetoric

"Fundamentals of Public Speaking"— Online, Summer Session D

Rhetoric 2 | D | CCN: 12518
Instructor: Michael Dalebout
M/W/F 1:00pm-3:30pm | 4 Units

This course is an online workshop in which students cultivate their own speaking style while developing strengths in skillful communication with diverse audiences in a variety of situations through multiple media. During the six-week term, students will engage in activities designed to foster their skills in written self-presentation, online visual and audio performance, and face-to-face encounters via streaming and collaborative technologies. By interacting individuals and groups online, students will exercise their ability to communicate well within the online public sphere, using digital technologies to exercise techniques that translate to in-person, real world success, as well.

To promote the students' exploration of themselves as public figures, we will explore the views of others who have considered the question of public speech, and who have engaged in public performance in a variety of contexts. The goal of this course is that students who begin with solid English reading and speaking comprehension skills will complete the course with 1) an enhanced capacity to successfully represent themselves and their perspectives in a variety of social circumstances, and 2) a refined sensitivity to how their self-presentation affects the lives of those around them.

This class will be taught via SYNCHRONOUS REMOTE INSTRUCTION.**
Time conflicts are not allowed for this class.

Course Opportunities: Week of June 29, 2020

"Rhetoric of New Media"— Online, Summer Session D
Rhetoric 114 | D | CCN: 15203
Instructor: Ryan Ikeda
Tu/W/Th 10:00am-12:30pm | 4 Units

This course explores the effects of digital technology on human expression.

Our first approach examines our daily encounters with born-digital artifacts, such as memes, GIFs, tweets, snaps, emoji, and new media works of art. Our second approach investigates hidden, physical infrastructure that make new media possible, for example, the undersea fiber optic cable network or cloud storage facilities that connect, protect, and enable digital culture. Lastly, we will read essays on digital culture written by a few of its leading thinkers.

Rhetoric of New Media directs our reading, writing, speaking, and thinking practices toward the analysis of digital culture through a series of projects—a presentation, a seminar discussion, and an essay—through the following questions:

What aspects of digital culture do I find most compelling?

- How does digital technology change the way I know myself?
- In what ways do new media change the pace and scale of my social interaction?

At the end of the semester, students will have cultivated a strong foundation for the analytical and theoretical study of new media applicable across disciplines, including but not limited to CS, EECS, Cognitive Science, MCB, Rhetoric, Film/Media, Media Studies, English, Philosophy, and many other majors and minors.

*This course satisfies the History & Theory concentration in the Rhetoric major

This class will be taught via SYNCHRONOUS REMOTE INSTRUCTION.**
Time conflicts are allowed for this class.

"Rhetoric, Culture and Society"— Online, Summer Session D
Rhetoric 116 | D | CCN: 15205
Instructor: Tim Wyman-McCarthy
M/W/F 10:00am-12:30pm | 4 Units

The Bard, like Elvis, can leave the building but not our lives. Though Shakespeare lived over 400 years ago, his plays continue to resonate today across the globe. In addition to direct adaptations to stage and screen, 'our' Shakespeare comes to us in an assortment of guises: the plots of The Lion King and 10 Things I Hate About You, the language of Deadwood or quotations in Mad Men, and even the characters in video games. In this course we will explore some of the subtle and not-so-subtle manifestations of Shakespeare lurking on the cultural landscape today. Through readings, in-class activities, group

presentations, and a final essay, Rhetoric 116 will help you develop your interpretive and critical thinking skills. Working together, we will ask:

- How do modern and contemporary artists honor or subvert Shakespeare's works?
- Why has Shakespeare managed to hang on to more than his share of fifteen minutes of fame while others have failed?
- What do adaptations of Shakespeare's works tell us about our contemporary social, cultural, and political preoccupations?

By the end of the semester, you will have acquired tools for the critical analysis of culture and society relevant to a range of disciplines, including but not limited to English, History, Philosophy, Film/Media, Rhetoric, Performance Studies, and many others.

*This course satisfies the History & Theory concentration in the Rhetoric major.

This class will be taught via SYNCHRONOUS REMOTE INSTRUCTION.**
**Time conflicts are not allowed for this class.*

Summer Session D: UGBA Courses

The following UGBA courses this summer are available to non-Haas majors for enrollment now. As a reminder, we do not enforce prerequisites during the summer for any of our upper division UGBA courses.

Below are the UGBA courses that still have seats available in Summer Session D (July 6th -August 14th). Please share this information with your students.

- UGBA 101B.2D Macroeconomic Analysis for Business Decisions (Class Number: 10078) with Steven Wood
- UGBA 137.1D Special Topics in Finance: **Financial Derivatives** (Class Number:10133) with Konstantin Magin

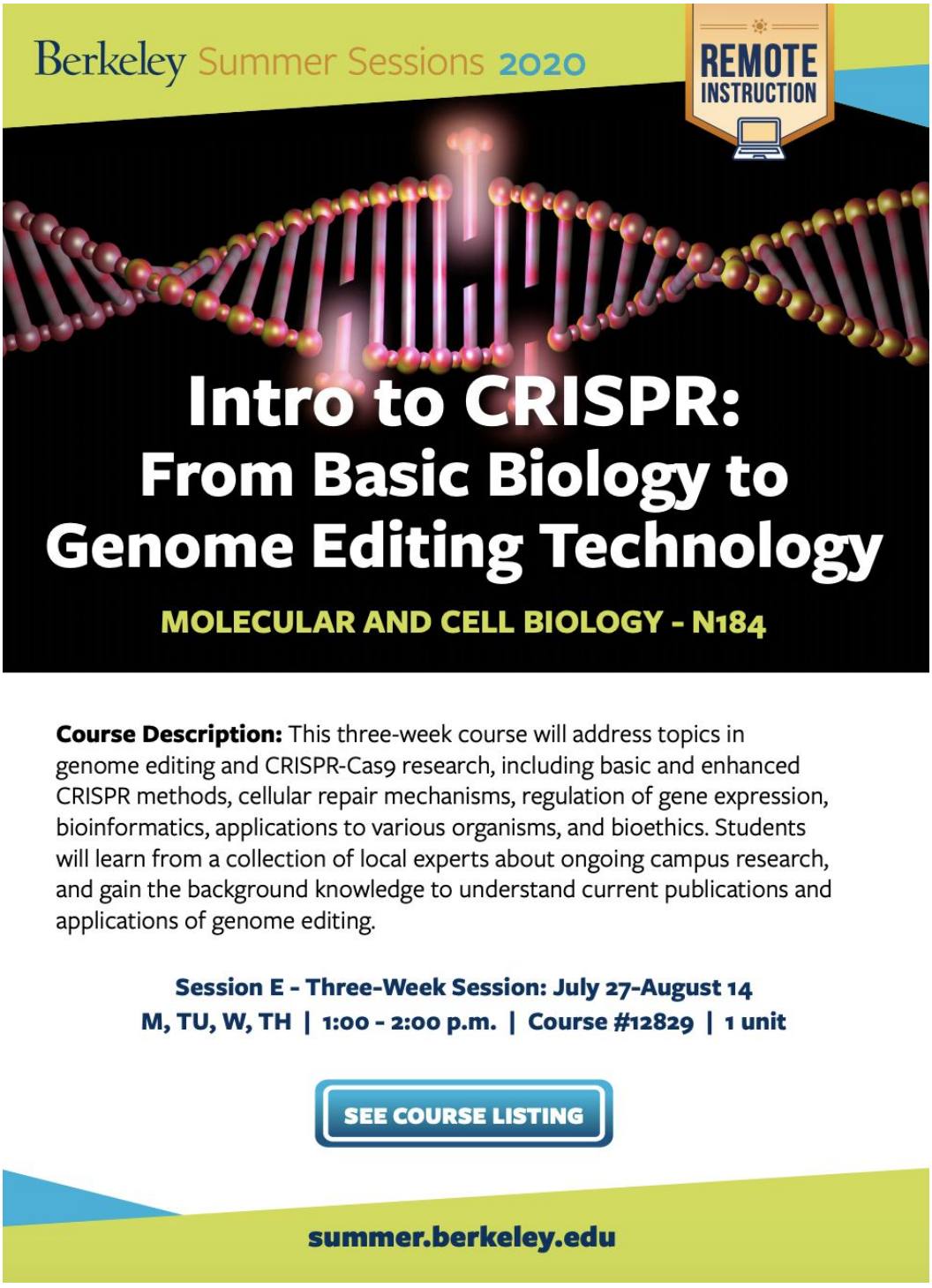
It is not too late to add these courses in Summer Session D. For more information regarding Summer Sessions registration, please direct your students to the following page: http://summer.berkeley.edu/apply

Summer Session D: Freedom Summer 2020 - unique summer opportunity!

Students will take a Social Movements, Organizing, & Policy Change course (AAS 182AC) to gain both real-life and theoretical grounding in social movements and organizing, and will use cutting edge relational voter engagement strategies in a field study course (AAS 197.1) to empower unlikely voters to exercise their democratic right to vote. Here is a very short promotional video from the American Cultures Center about the program. And here is the course webpage with more information.

Summer Session E: Molecular & Cell Biology

MCB N184 - Intro to CRISPR: From Basic Biology to Genome Editing Technology



Summer English Language Studies: Sessions B, D & E

2020 Summer English Language Courses for Multilingual Students

Course Opportunities: Week of June 29, 2020

Refine your academic English!
Earn UC Berkeley credit!
Enroll on CalCentral. For more information, go to http://summerenglish.berkeley.edu

ColWrit Online Courses
2 units, P/NP, July 6 - Aug 14
Taught entirely over the internet.

- W3B: Business English: Oral Communication
- W3D: Introduction to the U.S. Legal System
- W3E: Legal English: Listening and Speaking
- W3G: Grammar and Vocabulary
- W3I: Introduction to Technical Writing
- W200: Writing for Academic Publication*
    - * meets Session B: June 8 - Aug 14

ColWrit 5 and 9
3 units, graded or P/NP, July 6 to Aug 14
Friday/weekend fieldwork projects

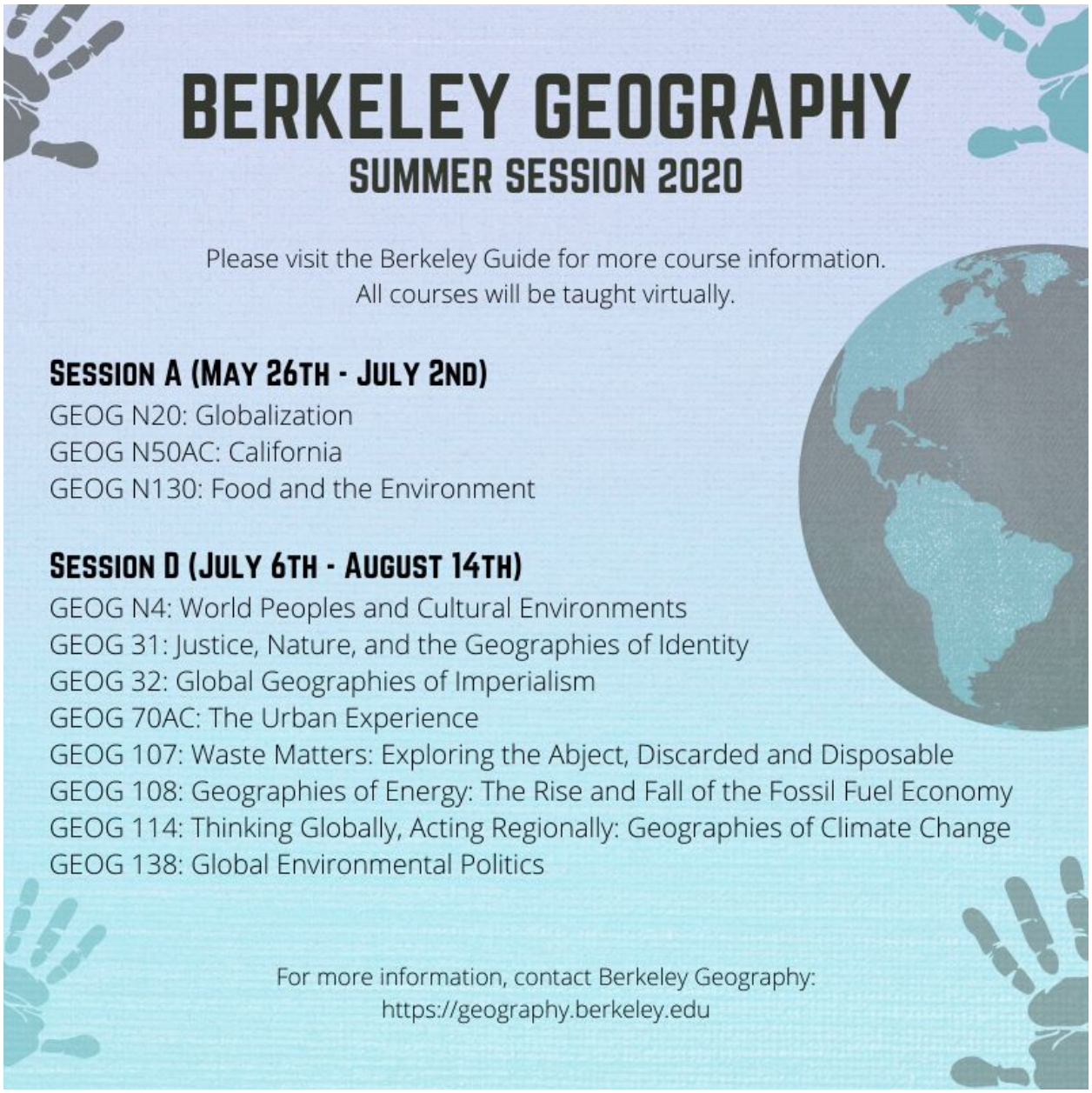
- 5C: Fim
- 5D: Literature
- 53: Popular Music
- 5F: International Human Rights
- 5K: Media
- 5N: Designing Public Spaces
- 5P: Makerspace Creativity: Craft and Technology
- 9A: Academic Research
- 9C: Academic Writing
- 9E: Business English
- 9I: Conflict Resolution
- 9J: Academic Language and Writing Style
- 9N: Legal English and U.S. Law
- 9O: Legal Writing
- 9R: Academic and Public Speaking
- 9S: Pronunciation
- 9V: Science and Engineering
- 9Y: Creative Writing

ColWrit 6
2 units, P/NP, July 27 - Aug 14

Course Opportunities: Week of June 29, 2020

- 6A: Academic Speaking
- 6B: Academic Vocabulary
- 6C: Business Vocabulary
- 6E: Grammar and Editing
- 6G: Writing for Digital Media
- 6H: Writing Creative Non-Fiction
- 6I: English through Conflict Resolution
- 6J: Academic Test Preparation
- 6K: Academic Reading and Writing
- 6L: Job Searching and Networking
- 6M: Graduate School Admissions & Expectations
- 6N: Art & Design
- 6P: Pronunciation
- 6Q: Alternative Dispute Resolution
- 6R: Speaking through Performance

Berkeley Geography: Summer 2020 Sessions A & D



For more information, contact Berkeley Geography: https://geography.berkeley.edu

Fall 2020: Art of Writing Courses

FALL 2020 ART of WRITING COURSES

Enrollment Now Open for Undergraduates

ART OF WRITING

Art of Writing courses teach UC Berkeley undergraduates to write clearly and eloquently in a variety of forms. These intimate courses develop advanced skills in close reading and artful writing, and provide students with intensive feedback on their work. Enrollment in **Fall 2020** courses listed below is now open.

Additional information is available on the **Art of Writing** website.

English 143N

M, W 12-1:30 pm

Scott Saul

Prose Nonfiction: Our Culture, Our Lives

Class Number **23967**

Academic Guide: https://classes.berkeley.edu/content/2020-fall-english-143n-001-lec-001

Sociology 190

Tu 12-2 pm

Kim Voss & Tyler Leeds

Writing Across the Partisan Divide

Class Number **17091**

Academic Guide: https://classes.berkeley.edu/content/2020-fall-sociol-190-004-sem-004

Film 194

W 9 am-12 pm

Mark Sandberg and Lisa Jacobson

Advanced Film Writing: Words and the Moving Image

Class Number **32177**

Academic Guide: https://classes.berkeley.edu/content/2020-fall-film-194-001-sem-001

Legal Studies 107WI

M, W, F 3-4 pm, W 6-8 pm

Christopher Kutz & Anna Zaret

Theories of Justice

Class Number **33162**

Academic Guide: https://classes.berkeley.edu/content/2020-fall-legalst-107wi-001-lec-001

Geography 129

Tu, Th 1:30-3 pm

Sharad Chari

Ocean Worlds

Class Number **26444**

Academic Guide: https://classes.berkeley.edu/content/2020-fall-geog-129-001-lec-001

Fall 2020 Big Ideas and Discovery Course websites are now live!

Please visit L&S Big Ideas Courses and L&S Discovery Courses - Fall 2020 for more course information!

Fall 2020: Center for Jewish Studies Courses

Berkeley | CENTER FOR JEWISH STUDIES

FALL 2020 COURSES

JS 39

Multilingualism in Israel: Arabic, Hebrew, and Yiddish Literature Post-1948

Wednesday 3:00pm–5:00pm
Instructor: Oren Yirmiya
CN: 33725, Units: 2
Room: TBD

JS 100

Introduction to Jewish Religion, Culture, and People

Tuesday & Thursday 12:30p–2:00pm
Instructor: Ethan Katz
CN: 3124, Units: 4
Room: Hearst Field Annex B5

JS 120

Jewish Folklore

Tuesday & Thursday 11:00am–12:30pm
Instructor: Sarah Levin
CN: 22185, Units: 3
Room: Dwinelle 211
Meets Arts & Literature breadth requirement.

JS 121

Contemporary Music in Israel

Tuesday & Thursday 12:30pm-1:59pm Instructor: Francesco Spagnolo
CN: 33279, Units: 4
Room: Morrison 128
Lab Section 101: M 12:00p to 1:00p, Morrison 124
Lab Section 102: M 1:00p to 2:00p, Morrison 124
Eligible for Arts & Literature, L&S Breadth
Eligible for International Studies, L&S Breadth

JS 122

Introduction to Jewish Mysticism

Tuesday & Thursday 2:00pm–3:30pm
Instructor: Tomer Persico
CN: 25444, Units: 3 or 4
Room: Barrows 252
Meets Philosophy & Values, L&S Breadth
Meets International Studies, L&S Breadth

HISTORY 178

History of the Holocaust

Tuesday & Thursday 9:30am–11:00am
Instructor: John Efron
CN: 25983, Units: 4
Room: Valley Life Sciences 2060
Meets Historical Studies, L&S Breadth *Meets Social and Behavioral Sciences L&S Breadth*
Counts towards Jewish Studies Minor

Legal Studies

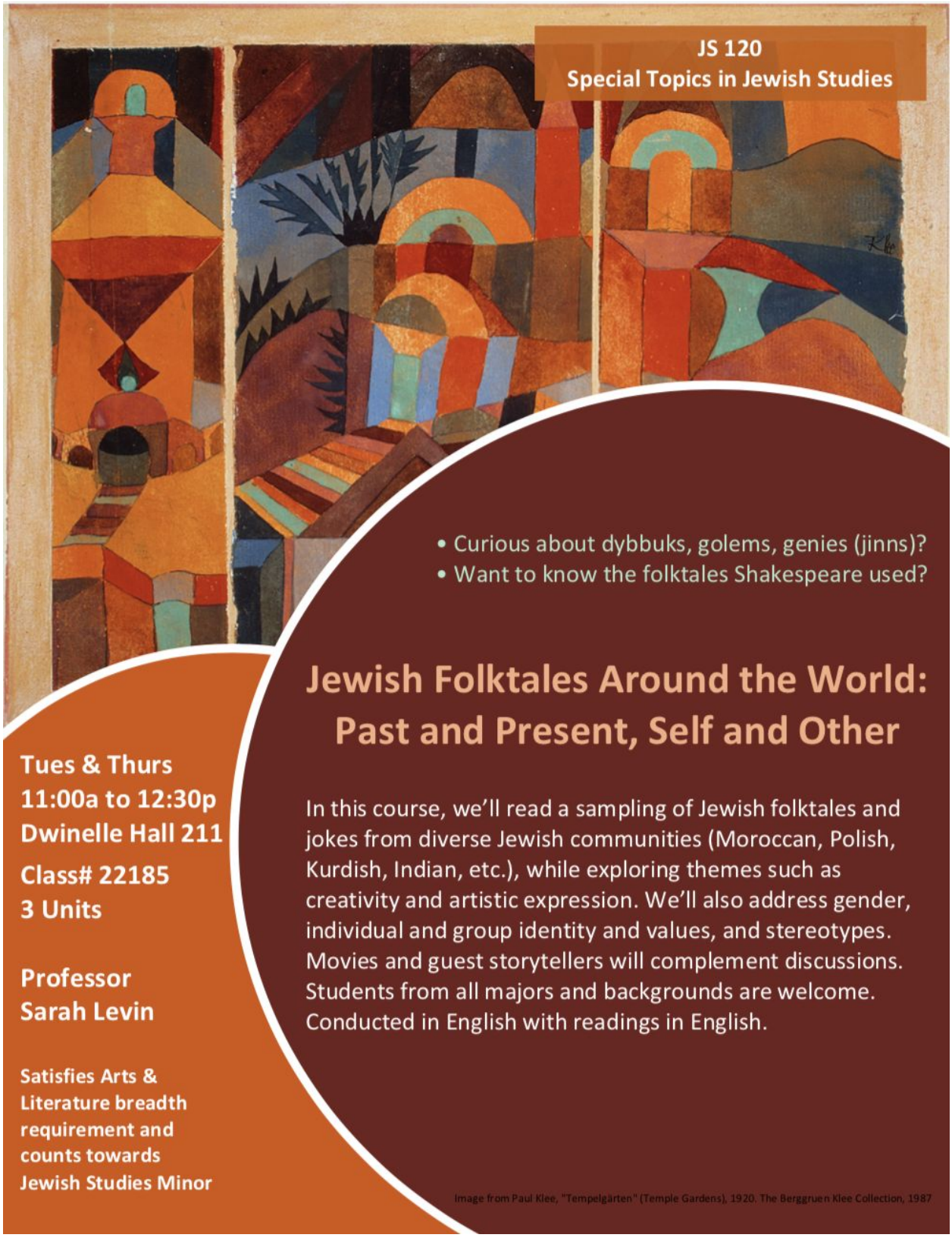
Minority Rights: The Israeli Balance

Tuesday 5:00pm–8:00pm
Instructor: Roy Peled
CN: 16708, Units: 4
Room: Latimer 102
Counts towards Jewish Studies Minor

All JS courses count towards the minor in Jewish Studies.

For more information on other courses that satisfy the requirements for the minor in Jewish Studies, please consult the Center's webpage: jewishstudies.berkeley.edu

4401 Dwinelle Hall . Berkeley Campus . Berkeley, CA 94720 . 510.664.4154 . jewishstudies.berkeley.edu


JS 120
Special Topics in Jewish Studies
• Curious about dybbuks, golems, genies (jinns)?
• Want to know the folktales Shakespeare used?
Jewish Folktales Around the World:
Past and Present, Self and Other
In this course, we'll read a sampling of Jewish folktales and jokes from diverse Jewish communities (Moroccan, Polish, Kurdish, Indian, etc.), while exploring themes such as creativity and artistic expression. We'll also address gender, individual and group identity and values, and stereotypes. Movies and guest storytellers will complement discussions. Students from all majors and backgrounds are welcome. Conducted in English with readings in English.
Tues & Thurs
11:00a to 12:30p
Dwinelle Hall 211
Class# 22185
3 Units
Professor
Sarah Levin
Satisfies Arts & Literature breadth requirement and counts towards Jewish Studies Minor
Image from Paul Klee, "Tempelgärten" (Temple Gardens), 1920. The Berggruen Klee Collection, 1987

Fall 2020 Classics Lower Division L&S Breadth Courses

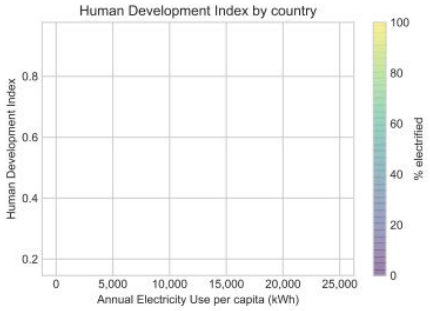
- CLASSICS 10A (crse# 21383) - Intro to Greek Civilization
    - Fulfills the L&S breadth requirements in Arts & Literature, Historical Studies or Philosophy & Values.
- CLASSICS 17A (crse# 21372) - Intro to the Archaeology of the Greek World
    - Fulfills the L&S breadth requirements in Arts & Literature or Historical Studies.
- CLASSICS R44 (crse# 21374) - Roots of Western Civilization
    - Fulfills the L & S breadth requirement in Arts & Literature, Historical Studies or Social & Behavioral Sciences.
    - Fulfills Reading and Composition Requirement either A or B

Fall 2020: ENRES 131 - Data, Environment and Society

Data, Environment and Society

Fall, 2020

Energy and Resources Group



ENERES 131

Professor Duncan Callaway (dcal@berkeley.edu)

This course will teach students to build, estimate and interpret models that describe phenomena in the broad area of energy and environmental decision-making. Students leave the course as both critical *consumers* and responsible *producers* of data-driven analysis.

The effort will be divided between (i) learning a suite of data-driven modeling and prediction tools (including linear model selection methods, classification and regression trees and support vector machines) (ii) building programming and computing expertise and (iii) developing capacity to formulate and answer *resource allocation* questions within energy and environment contexts.

We will work with Python, and students must have taken Data 8 before enrolling. The course is designed to complement and reinforce Berkeley's data science curriculum, in particular Data 100.

The course can be used to satisfy the upper division domain emphasis for the Data Science major and minor, the engineering elective for Energy Engineering, and the upper division requirement for Energy and Resources Group minor.

Lecture (#27412) TT 9:30 – 11am

There will be two options for lab section, timing to be announced.

Required Prerequisites: Experience with statistics and computing in Python (CS C8/IS C8/ Stat C8 satisfies this) and college calculus. Direct questions to the instructor.

Recommended Preparation: An introductory computer programming course (Computer Science 61A or Computer Science 88) and Linear Algebra (Mathematics 54, EE16A, or Statistics 89A)

FOR MORE INFORMATION CONTACT: ENERGY AND RESOUCES GROUP

ergdeskb@berkeley.edu * 510-642-1640 * 310 Barrows Hall

ER 131: Data, Environment and Society

Instructor: Duncan Callaway, dcal@berkeley.edu

Fall, 2020
4.0 Units

Lecture time and location: Tu/Th 9:30-11:00am, Barrows 60

Lab time and location: TBD
Office hours: TBD

Course Description

This course will teach students to build, estimate and interpret models that describe phenomena in the broad area of energy and environmental decision-making. The effort will be divided between (i) learning a suite of data-driven modeling approaches, (ii) building the programming and computing tools to use those models and (iii) developing the expertise to formulate questions that are appropriate for available data and models. Our goal is that students will leave the course as both critical *consumers* and responsible *producers* of data driven analysis.

We will work in Python in this course, and students must have taken Data 8 before enrolling. The course is designed to complement and reinforce Berkeley's data science curriculum, in particular Data 100 (though D100 is not a prerequisite). Whereas Data 100 focuses on a very broad set of data science tools including modeling, web technologies, working with text, databases and statistical inference, this course focuses more on how to use prediction methods as decision-making tools in energy and environment contexts.

This is a four unit course, with three hours of lecture and two hours of lab section each week. Lectures will focus on theoretical and conceptual material but also introduce the programming structures required to use the material. Labs will be computer working sessions with a GSI and lab helpers available to work through weekly lab exercises.

Prerequisites

- (required) Foundations of Data Science (CS/ INFO/ STAT C8)
- (recommended) Computing: An introductory programming course (CS61A or CS88).
- Math:
  - (required) High school or college calculus.
  - (recommended) Linear Algebra (Math 54, EE 16a, or Stat89a).

Satisfaction of degree requirements

This course can be used to satisfy the following requirements.

- Upper division domain emphasis for Data Science major
- Engineering Elective for Energy Engineering
- Upper division requirement for Energy and Resources Group minor

Resources

- You will need your own computer, but virtually any operating system will do (OSX, Windows, Linux, Chromebook).
- We will draw some material from Berkeley's Data 100 course book, freely available here: https://www.textbook.ds100.org
- We will draw material from the excellent text book, *Introduction to Statistical Learning*, available in both print and pdf form.
- We will do a variety of readings from peer reviewed journals and popular press.
- Lectures, readings, and solutions will all be available on the course github site: `https://github.com/duncancallaway/ER131_2020`.
- You'll complete all HW and lab assignments using Python, within Jupyter notebooks hosted on `datahub.berkeley.edu`.
- Links for assignments will be posted on bCourses. You'll submit you work there, too.

Assessment

The course will have weekly labs and homework assignments, a mid-term and a final project. Grading will be as follows:

- Homework: 20%
  - There will be ten. We drop the lowest grade.
  - HW will be released on Thursdays and due the following Thursday.
- Lab assignments: 15%
  - There will be nine. We drop the lowest grade.
  - Released on Mondays and due the following Monday.
  - Attendance is 40% of lab grade, completing the lab is 60% of the grade.
  - Grading will focus on completeness rather than correctness.
- Mid-term: 25% (November 19, in class)
- Final poster: 10% (the poster session will be December 17, 3-6pm)
- Final project: 30% (due December 18 at 6am)

Late policy:

- You may request up to two extensions of two days over the course of the semester. You may distribute those extensions as you wish over homework and lab assignments. Otherwise, we will not accept late homeworks and labs. Coordinate extension requests with the GSI.
- The poster must be presented during the poster session to receive credit.
- For the final project, we drop 10 points out of 100 for each day late, or roughly a full letter grade. Projects submitted after 11:59am on December 18, 2020 will not receive credit.

Working in groups

Homework and labs

You are encouraged to learn from one another by brainstorming solution strategies. However the work you submit must clearly be your own. We will give zero credit for assignment submissions that are identical to one another. If you work with others, be sure to finish assignments on your own. Comments and markdown cells must clearly be your own.

Final project

You must work in groups of 2-3 for the final project. The final project writeup must include a statement describing each team member's contributions and a statement that all team members agreed the division of labor was equitable.

Schedule

Session	Day / Week	Topic	Methods Reading	Domain Reading	Homework assigned
Lecture 1	8/29/19	Course introduction			
Lab 1	Week of 9/2/19	No lab – week of labor day			
Lecture 2	9/3/19	Data design		Blei and Smyth	
Lecture 3	9/5/19	Pandas, variable types and file types	DS100 Ch3		HW1: Getting started
Lab 2	Week of 9/9/19	Answer HW1 questions; Pandas			
Lecture 4	9/10/19	Pandas, ctd, and data for HW2 (PM2.5)		Kleinberg et al; Athey.	
Lecture 5	9/12/19	Merge, groupby, pivot	DS100 Ch4, 5		HW2: Pandas, PM2.5 and fires
Lab 3	Week of 9/16/19	Answer HW questions; Exploratory data analysis			
Lecture 6	9/17/19	Exploratory data analysis		Hino et al; Pelletier et al	
Lecture 7	9/19/19	Visualization	DS100 Ch6		HW3: EDA; Wildfire ignitions
Lab 4	Week of 9/23/19	Answer HW questions, visualization			
Lecture 8	9/24/19	Intro to modelling, review regression	DS100 Ch 10; ISLR Ch 2		
Lecture 9	9/26/19	Regression ctd, confidence intervals	ISLR 3.1		HW4: Visualization; renewable energy data
Lab 5	Week of 9/30/19	Basic modeling, KNN			
Lecture 10	10/1/19	Multiple Regression; Land Use Regression	ISLR 3.2		
Lecture 11	10/3/19	Regression wrapup, KNN.	ISLR 3.3		HW5: regression

Schedule

Session	Day / Week	Topic	Methods Reading	Domain Reading	Homework assigned
Lab 6	Week of 10/7/19	Answer HW questions, regularization			
Lecture 12	10/8/19	Gradient Descent	DS100 Ch 11	Novotny et al	
No power!	10/10/19	(Campus closed, power outage)			HW 6: Gradient descent; a "theory" homework.
Lab 7	Week of 10/14/19	Ans HW questions; gradient descent			
Lecture 13	10/15/19	Resampling	ISLR 5.1-5.2		
Lecture 14	10/17/19	Model selection and regularization	ISLR 6.1-6.2	Metz	HW 7 - Resampling; A "theory" homework
Lab 8	Week of 10/21/19	Review resampling			
Lecture 15	10/22/19	Finish regularization			
Lecture 16	10/24/19	Classification and regression trees	ISLR 4.1-4.3		HW8 - Model selection applied to land use regr...
Lab 9	Week of 10/28/19	Review classification			
Lecture 17	10/29/19	Guest Lecture (Dan Kammen); Environmental justice		Sunter et al	
Lecture 18	10/31/19	Wrap up EJ; wrap of regression trees	ISLR 8.1-8.2	Pastor	HW9 - Classification and regression trees with...
Lab 10	Week of 11/4/19	NaN			
Lecture 19	11/5/19	Classification trees; boosting, bagging and ra...			
Lecture 20	11/7/19	Support vector machines	ISLR 9.1-9.3	Badger	HW10 – Support vector machines with Cal Envir...
Lab 11	Week of 11/11/19	No lab – week of veteran's day			

Continued on next page

Schedule

Session	Day / Week	Topic	Methods Reading	Domain Reading	Homework assigned
Lecture 21	11/12/19	Guest lecture (Elinor Benami); Wrap up support...			
Lecture 22	11/14/19	Exam Review through HW10 / Lecture 21		Wattenberg et al	
Lab 12	Week of 11/18/19	Exam Review through HW10 / Lecture 21			
Lecture 23	11/19/19	Exam			
Lecture 24	11/21/19	Guest lectures (Evan Sherwin and Emma Tome)		Reading TBD	
Lab 13	Week of 11/25/19	Project check in			
Lecture 25	11/26/19	Neural Networks	Mah		
Lab 14	Week of 12/2/19	Project check in			
Lecture 26	12/3/19	Neural Networks	Gabrys et al		
Lecture 27	12/5/19	Career panel			

Fall 2020: NWMEDIA 151AC

NWMEDIA 151AC

Transforming Tech: Issues and Interventions in STEM and Silicon Valley

Abigail De Kosnik

MWF 11AM — 12 PM
Kroeber 160
4 units

In this course, we will study major tech industry controversies and heavily criticized tech products, policies, and effects, including technologies used at the U.S.-Mexico border, social media platforms' spread of disinformation and fake news, racial bias in algorithms, and internet trolling and harassment. We will also examine tech companies' long-running tendency to exclude women and non-Asian minorities, and how tech workers have occasionally come under fire for the industry's harms. Students will be required to brainstorm and design their own interventions into the workings of the tech sector to make it more inclusive, equitable, and diverse.

This course fulfills the American Cultures requirement, the Electrical Engineering and Computer Science Ethics requirement, and the Media Studies Requirement Group B: Specialization in a Medium.

Fall 2020: Berkeley Connect

Berkeley Connect is open to all students at UC Berkeley, it is a one-unit course, taken Pass/Not Pass (course number 98BC for freshmen and sophomores, 198BC for juniors and seniors). It is offered Fall and Spring through 15 different academic departments on campus, but you don't need to be a declared or intended major in one of those departments in order to enroll. When you sign up through a department that aligns with your academic interests, you will be assigned a graduate student from that department who will serve as your personal mentor for the semester. At the same time, you'll be placed in a group with 19 other students who share your interest in that subject. Over the course of the semester, you'll meet with your mentor for one-on-one conversations about anything you want to talk about related to your academic life, and you'll meet with your small group for discussions facilitated by your mentor about the academic discipline and about life at a research university. You'll also participate in special events organized just for Berkeley Connect students, featuring professors and alumni as guest speakers. Berkeley Connect assigns no homework, reading, tests or papers--it does not add to your workload, but rather gives you an opportunity to build community here at UC Berkeley so you can make the most of your time here.

Students consistently report that participating in Berkeley Connect increases their sense of belonging at UC Berkeley and their confidence they can succeed here. During the Spring 2020 semester, Berkeley Connect successfully operated as a remote program during the campus closure. In the event that any part of the 2020-21 academic year must be virtual rather than

in-person, Berkeley Connect will provide you with a great opportunity to meet and interact with your fellow students and start building your personal network.

If you have any questions about Berkeley Connect, please feel free to contact the program office at berkeleyconnect@berkeley.edu.

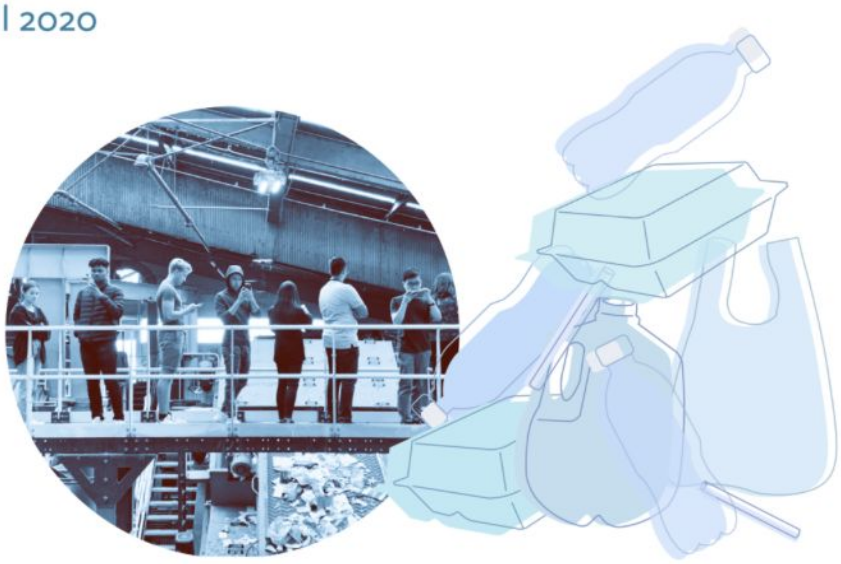
Fall 2020: Deplastifying the Planet

The Sutardja Center for Entrepreneurship and Technology is excited about an exciting, environmentally-focused entrepreneurship course they are offering in Fall 2020. The course, Deplastify the Planet (INDENG 190E), is a 1-2 unit seminar course where students have the opportunity to work with industry leaders to solve issues regarding plastic waste.

Deplastify the Planet

Sutardja Center for Entrepreneurship & Technology

Fall 2020



INDENG 290 001 – LEC 001

Gert Christen

Wednesday
5:00 pm - 6:59 pm

Barrows 60

Class #: 16952 Units: 2

INDENG 190E 001 – SEM 001

Gert Christen

Wednesday
5:00 pm - 6:59 pm

Barrows 60

Class #: 28229 Units: 2

The world is drowning in the plastic that we created, and which takes hundreds of years to decompose. It is a disaster choking our oceans, poisoning our food chains and clogging our landfills. To solve this problem, we must find ways to replace or at least reduce plastic in manufacturing, to reuse, recycle or repurpose the plastic already manufactured, to recuperate discarded plastic from the oceans and landfills, and to destroy plastic responsibly.

There are companies that want to achieve the same and will partner with UC Berkeley for this course. Each company is preparing a "deplastifying challenge" based on their business and student teams will choose a challenge for which they wish to develop an entrepreneurial solution. The student teams will be supported by representatives from the partner companies. A final list of partner companies and challenges will be provided before the start of the course. Past company sponsors include Whole Foods, Faurecia Automotive, Danone, Nestle, Recology SF, Method Home Products, Samsung and more!

The course will cover ethnographic interviewing, design thinking, ideation tools, designing and prototyping products, validation with customer feedback, and business modeling.

All majors are welcome!

Undergraduates see here for more info: https://bit.ly/3eB3l4b
Graduates see here for more info: https://bit.ly/2KmVpFP