ACADEMIC SENATE
Executive Committee
REFERRAL FORM

CALIFORNIA STATE POLYTECHNIC UNIVERSITY, POMONA

Date:	11/12/2025
To:	General Education Committee
From:	Academic Senate Executive Committee
Subject:	Academic Senate Referral
Classification	GE-016-256
Title of Referral:	LA 4441 - Critical Mapping in Fire Ecology (New GE Area 4C)
Background:	See attached referral request form. Additional background provided by the Executive Committee: New course proposed for GE Area 4C.
Recommended resources:	See attached referral request form and supporting documentation. Additional resources recommended by the Executive Committee: None. For the Committee's Report on this referral, please list in separate sections, the resources recommended, and resources actually consulted. If a resource was not consulted, briefly state why.
Review and recommend:	Review and recommend as appropriate.
Date required for presenting committee report to the Executive Committee:	3/2/2026

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Keywords: LA, 4441, Critical, Mapping, Fire, Ecology, New, GE, Area, 4C

Background:
Technical, applied, and theoretical aspects of landscape fire history and critical mapping. Quantitative and qualitative methods of ecological evaluation of vegetation change applied to understanding the landscape's particular, anthropogenic or "natural" vegetation, its current or historical fire regimes, and its potential futures.

1. Quantitive analysis of fire occurrence based on vegetation, topography, climate data, and land-use patterns using printed and digital maps, and tabular data [4C Critical Thinking, Quantitative Literacy, Written Communication].
2. Develop and test multi-variable ecological models and spatial outcomes utilizing Bayesian co-occurrence ratios, covariance, and other basic statistical methods [4C Quantitative Literacy, Information Literacy]
3. Document and evaluate slope, hill aspect, and vegetation types/conditions, and make comparative evaluations from photographs and site observation [4C Critical Thinking, Intercultural Engagement
4. Qualitative research of historical documents [4C Information Literacy, Quantitative Literacy, Intercultural Engagement]
5. Library resources and observe cultural facts in real time [4C Information Literacy]

COURSE COMPONENTS + ORGANIZATION

Material in this course will be presented in the form of readings (books, journal articles, online publications, digital videos etc.), lecture slides, assignments, and other hard copy or digital materials. Teaching formats include but not limited to lectures, discussions, workshops, design charrettes and field trips. Students should be prepared to participate in individual and group assignments including but not limited to literature review, writing assignments, data collection, and exercises in planning, designing, graphing, mapping, computing, and modeling the landscape, presentations, and team projects, throughout the learning process. The intent of this course is to facilitate learning through reading, discussion, design, modeling and action. This course aims to create a collaborative learning environment in where students can engage in experimentation and investigation.
This course will utilize the University's learn-by-doing philosophy as a primary method of instruction. This approach will blend theory with real application through the execution of projects.

Journal Assignment [4C Written Communication]

For this class, students will need at least one medium sized unlined blank sketch book and pens. Students will be doing their sketching and writing here. This journal will be turned in several times and evaluated.
Students are instructed to go each week (or as much as possible) to their site and make observations, writing a few hundred words accompanied by sketches. The writing in the notebook, at generally 12pt size, should add up to 2000 words, when roughly evaluated.

Final Paper Assignment [4C Written Communication]

The grade of the final paper is based on having a clear thesis, and developing this thesis in body paragraphs. Remember that although this paper is based on the same site as that of the rest of the team, it should have a unique topic. A thesis and outline will be turned in ahead of time for for 20% (40pts) of the final paper grade. Developing this thesis and outline with drawings, notes, observations, and some historical research constitutes the remaining 80% (160pts) of the final paper grade.
The final paper should not be similar to a Wikipedia article. It should not list a timeline of events that occur in the site. It should not be written by generative ai. Do not use generative ai in your process. The paper should have a clear thesis or "concept" which tells a particular story of the place. This can come across more as a narrative, in which the drama of the actors unfolds, or as a technical discussion of the involvement of the actors in space; or some combination thereof. Dropping into office hours to discuss the paper topic is advised.

Final Presentation [4C Oral Communication]

Conducted in groups, the final presentation takes student's accumulated knowledge of evaluating fire risk by vegetation and hill aspect, and applies it in terms of the study area. Each team develops an algorithm for risk which can be compared, and aggregated, for the same area. Students must understand how their team extrapolates risk based on their area of study, to create accountability, projected onto the surrounding area. We will be able to tell how historically accurate our cumulative estimate is. The final presentation will be video recorded and, likely, made available online for municipalities to better understand their risk.

Homework and Research Expectations

Approximately 4-6 hours of reading is provided each week for students for at home study. This is supplemented by work in drawings and writing on own, in a physical journal notebook. This notebook may serve as a way to take notes on the reading on paper, in class, and in the field.
By providing primary sources to students and then working through methods by which to analyze these primary sources, a rigorous understanding of fire regimes, here in California, landscape history is approached. This course particularly focuses on Native Californian literature, with a large portion of all readings authored by descendant authors. It is an aim of the course to introduce students to at least one descendant author or artist or the work of such authors most weeks in the lecture portion and in assignment reading materials provided.

LA4441 is a BSLA and MLA Directed Elective, Landscape Minor Upper Division Elective, and GE Area 4C. It is unique among the BSLA and MLA Directed Electives with a focus qualitative literacy/methods, ecological modeling, and a critical exploration of indigenous culture. It is the only GE Area 4C offered by the department.
Landscape departmental course aims to apply critical design thinking and practice, design for health and justice, conduct culturally relevant practice, exhibit professional ethics and responsibility, and communicate for design advocacy. This course fits well within these goals, while making this content and practice available at an entry level to students of all disciplines.

Program Learning Outcomes
*PLO 1. Apply Critical Design Thinking and Practice (**DESIGN**)*

- *Apply critical, creative and evidence-based design processes to propose equitable, regenerative, and inspiring solutions.*

*PLO 2. Design for Health and Justice (**HEALTH AND JUSTICE**)*

- *Develop design and planning strategies to promote healthy and just natural, built and human systems.*

*PLO 3. Conduct Culturally Relevant Practices (**CULTURE**)*

- *Recognize and conduct culturally relevant community engagement, analysis, and design practices.*

*PLO 4. Demonstrate Ethics and Responsibility (**RESPONSIBILITY**)*

- *Demonstrate ethical and responsible behaviors and actions.*

*PLO 5. Communicate for Design and Advocacy (**COMMUNICATION**)*

- *Communicate effectively across platforms, audiences, and formats.*

EVALUATION OF STUDENT WORK

Grades will be determined as follows:

- 20% Chorographic notebook(s)
  This addresses critical thinking and site research, collecting fieldworks, and site and situational literacy.
- 20% Final paper (just you) 2000 words
- 10% In class participation in discussion, evidence of having done readings, writing in class.
- 10% written midterm essay questions
- 20% Workshops/group work
- 20% Final presentation (group work)

The course considers fire instances and extant vegetation as an index of social and historical processes. Wild-lands are considered, however, ideas of wild or stewarded and managed landscapes are understood in terms of the landscape in which the course focuses as area of study. In the California Coast Ranges, natural lightning driven fires are extremely rare, which is discussed in terms of scientific literature on weather. As a result, this iteration of the course provides sources and teaching such that students can unpack the idea of how the landscapes that they may have grown up seeing as natural, are in fact human constructed intentionally or unintentionally through distinct landscape management techniques. This requires an understanding of history and cultural syncretism as it unfolds in actual collective spaces.

GE 4C SLOs

Critical Thinking and Design: Hands-on collaborative mapping connects fire occurrence outcomes with vegetation, weather, land use patterns, systems of structural discrimination, marginalization, and displacement. Weekly workshops with mapping provide opportunities for group problem solving and discussion. Students read texts to understand historical narrative, and in their individual writing, explore connections between these texts and mapped spatial outcomes of vegetation and fire occurrence. Students learn how their writing of history along with process of social scientific and ecological scientific inquiry leads to different outcomes.

Quantitative Literacy: Students are taught to assemble and test multi-variable ecological models. They measure spatial outcomes of different data sets and use Bayesian co-occurrence ratios to evaluate the

significance factor of different variables such as slope, hill aspect, and vegetation type, in fire outcomes.

Written Communication: Students are required to take notes in a journal which is turned in for evaluation - in class, as they read texts each week, and on their own as they explore sites of their own choosing. These notes contribute to their preparation for their midterm and their final paper. The midterm exam is conducted in written essay and short answers, and the final paper is a developed long form essay.

Information literacy: Understanding quantitative data for their multi-variable ecological model is supplemented by understanding qualitative data in the study of historical texts and in journal and note taking.

Civic literacy and health and justice: Historical aesthetics are understood as frameworks of data that result in very different quantitative outcomes. These outcomes can be understood in terms of indices of fire occurrence in public space including fires in public lands, and the presence of informal settlements in public urban space. Students come to learn how to read public space in terms of actionable historical and contemporary aesthetics, and how these aesthetics play out in vegetation.

Intercultural engagement and culture: Approximately half of all texts read in this class are produced by descendant or Native authors, often in Indigenous languages with English translation. Most lectures involve a comparison of cultural aesthetics related to civic and social practice, and its resulting outcomes understood in indices of vegetation and risk.