

ENVS 196: Bicycle Planning (Senior Seminar)

Winter 2020

Thursdays 1.30-4.30pm, ISB 455

Instructor

Prof. Adam Millard-Ball

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Office: ISB 459

Office Hours: Thursdays, 10.45am-12.45pm

Sign up for an appointment at <https://goo.gl/X7vFOD>

Cell: XXXX

For use only on field visits or during fieldwork (in an emergency or if you get lost)

Course Description

This course will consider how bicycle improvements can encourage alternatives to the private car, increase mobility for all income groups, improve safety, and reduce air pollution and greenhouse gas emissions. We will examine new innovations in bicycle planning and design, and then apply these concepts to Santa Cruz. We will work on team projects that collect field data and develop recommendations for improvements. We will work in close collaboration with city and/or campus decision makers to design real-world projects that can make our local transportation system more sustainable, equitable and efficient.

Prerequisites

ENVS 145 (Green Cities) or equivalent experience.

Course Goals

After completing this course, you should be able to:

- Understand some key policies and design principles that can improve bicycle transportation in a city, and make it more sustainable
- Critically evaluate the merits of different approaches to designing bicycle facilities
- Understand the opportunities and constraints that affect a city or university's ability to improve conditions for bicyclists
- Develop technical abilities in mapping, data collection and analysis, and/or professional report writing
- Develop team-working and project management skills

Thank you to the UCSC Carbon Fund for making this course possible



Class Participation and Leadership

This is a small seminar, and your active participation is essential to making this course successful and enjoyable. This class is also a unique opportunity to help improve transportation in Santa Cruz. Neither the professor nor the city has all the answers (if we did, we wouldn't be running this class), and we are relying on you to bring your ideas, skills, experiences and energy.

For each class, one or two students will be responsible for leading the discussion. This entails:

- In advance of class, synthesizing discussion questions and comments posted by other students on Canvas
- Providing a 5-minute introduction to that day's topic based on the readings
- Initiating and helping to facilitate the discussion

Sign up for a slot during the first week of class.

In addition, before each class, all students should post to Canvas 1-2 brief discussion questions and/or comments on the readings for that class. These are due at 6PM the day before. These posts might include a question that was sparked by one of the readings, a broad comment on or reaction to the readings, or an example that further illustrates a concept from the readings.

Course Schedule (subject to change)

Specific readings are posted on Canvas. You can expect 50-100 pages of reading a week, particularly in the earlier part of the course. In the second half of the course, we'll focus more on writing up the projects.

Week	Topic
1	Introduction, patterns and trends
2	A history of bicycle planning What determines bicycle use?
3	Data collection and audits
4	Designing for bicycles (i): Principles
5	Designing for bicycles (ii): Streets
6	Designing for bicycles (iii): Intersections
7	The bicycle plan
8	Equity in bicycle planning and provision
9	Bike sharing, scooters and the new mobility framework
10	Bikelash and conclusion

Graded Assignments

Team project	Sampling and survey plan	5%
	Existing conditions report	20%
	Final report (draft report)	10%
	(final report)	25%
	(presentation)	5%
Individual work	Research paper	20%
	Class participation	15%

Team Project

Working in teams, you will provide analysis and recommendations regarding a bicycle transportation project in Santa Cruz. More detailed guidance on the format of each assignment will be distributed early in the quarter.

Sampling and survey plan

Due: Week 3

The sampling and survey plan sets out what data you will collect, and how you will collect and analyze it. It will be your work plan for the remainder of the quarter.

Existing Conditions report

Due: Week 6

The Existing Conditions report compiles your data collection and analysis. The format and precise contents will vary between teams, but it should allow the reader to understand the nature of the problem and the constraints and opportunities, and include text, photographs, and maps and charts of your data.

Final report

Draft due: Week 9

Final due: Week 10

The final report includes your existing conditions analysis (revised in response to comments), and your analysis and recommendations.

Individual assignments

Research paper

Due: Week 8

Your research paper will analyze a specific aspect of the bicycling research literature. It could focus on street design, the determinants of bicycling, parking, bike sharing, or a related issue. A list of potential topics will be distributed in Week 1.

Class Participation

Your class participation grade will include attendance and active participation in class, and discussion leadership. One absence will be allowed with no deduction, but repeated absences will reduce your participation grade. Your questions and comments on the readings, as posted on Canvas, will also contribute to your participation grade.

Late Submission of Assignments

Students can make a formal request to the professor for special consideration for an extension to an assignment due date. This request should be received at least 48 hours before the due date.

Otherwise, **ten percent** will be deducted for every 24-hour period an assignment is late. *Due at the start of class means 11.40am sharp, so an assignment handed in at noon will incur a 10% deduction.*

Academic Integrity

Students are expected to adhere to the UCSC policy on academic integrity - http://www.ucsc.edu/academics/academic_integrity/. All assignments should be written individually and be original works for this class. All academic integrity violations (e.g. plagiarism, cheating, multiple submissions, facilitating dishonesty) will be prosecuted if encountered. Please talk with Prof. Millard-Ball IN ADVANCE if you are unsure about citation styles or what may violate the academic integrity policy.

Accessibility and Disabilities

If you have any mobility or other limitations that may affect participation in field visits, please contact Prof. Millard-Ball before the quarter starts. This will help inform planning for transportation and field visit activities.

If you qualify for classroom accommodations because of a disability, please submit an Accommodation Authorization from the Disability Resource Center (DRC) to Prof. Millard-Ball **within the first two weeks of the quarter**. You may submit these outside of class (e.g., office hours) to ensure anonymity. Contact DRC at 831-459-2089 (voice), 831-459-4806 (TTY), or <http://drc.ucsc.edu> for more information on the requirements or process.