Course Description
Addressing environmental and natural resource problems requires ingenuity, agile thinking, and innovation. In this course, students will learn how to use “customer discovery” to identify needs and pain points, which could: (1) develop into new products or services; (2) create value across industry sectors; or, (3) create value through partnerships between multiple stakeholders. Working on teams, students will gather research around environmental problems, industry dynamics, and human context, then collaborate on ideation. Students are encouraged to research ideas that could develop into Master’s Group Project or Eco-E Project proposals.

Course Objectives
• To learn the basics of customer discovery research.
• To acquire an agile mindset for solving environmental problems.
• To learn an ideation process for developing more innovative solutions.

Course Software
GauchoSpace – Learning Management System
Zoom – Online Conference System
Slack – Messaging Application
• Slack will be used for class announcements, communication, and collaboration.
• Students should register for a free account with Slack and join the esm256Afall2022 workspace.
• See GauchoSpace for the invitation link.

Required Reading and Videos
All required reading will be made available via download on GauchoSpace. Assigned videos will be posted on GauchoSpace and Slack.

Optional Reading
The Entrepreneur’s Guide to Customer Development, Brant Cooper and Patrick Vlaskovits
https://startupbluebook.com/
COVID-19 and Our Classroom
There is currently no campus requirement to wear masks in the classroom. While masks are not required, Santa Barbara County continues to recommend that masks be worn indoors. Free masks can be picked up at many locations around campus, including the UCEN Campus Store Customer Service Desk, the A.S. Pardall Center, and other locations around campus. Please respect one another’s choices regarding whether or not to wear masks.

Attendance and Participation
Students are expected to attend every class. Attendance and participation will account for 25% of your grade (max. 500 points). Participation is evaluated in several ways. Obviously, participation is correlated with attendance. It is impossible to earn participation points if a student is not in class. Students remain responsible for submitting work due even if absent. Students should e-mail the instructor prior to any missed class.

Attendance at all class sessions is critical to the learning process and the participation component of the course. The innovation process requires collaboration and interactions. Innovators and entrepreneurs find opportunities, adapt, and improve themselves by listening and learning from others. Please come to class prepared to participate in the day's activities.

Course Assessment

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Individual Contribution</th>
<th>Team Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Profile</td>
<td>100 points (5%)</td>
<td></td>
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<tr>
<td>Discovery Teams:</td>
<td></td>
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<tr>
<td>Sprint 1</td>
<td></td>
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</tr>
<tr>
<td>Interview Summaries</td>
<td>200 points (10%)</td>
<td>100 points (5%)</td>
</tr>
<tr>
<td>Team Formation Post</td>
<td></td>
<td>100 points (5%)</td>
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<tr>
<td>Progress Report</td>
<td></td>
<td>200 points (10%)</td>
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<tr>
<td>Sprint Presentation</td>
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<tr>
<td>Sprint 2</td>
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<tr>
<td>Interview Summaries</td>
<td>200 points (10%)</td>
<td></td>
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<tr>
<td>Team Formation Post</td>
<td></td>
<td>100 points (5%)</td>
</tr>
<tr>
<td>Progress Report</td>
<td></td>
<td>200 points (10%)</td>
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<tr>
<td>Final Presentation</td>
<td></td>
<td>300 points (15%)</td>
</tr>
<tr>
<td>Attendance and Participation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Attendance</td>
<td>500 points (25%)</td>
<td></td>
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<tr>
<td>• In-Class Discussions</td>
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<td>• Panels/Speakers</td>
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<td>• Workshops</td>
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<tr>
<td>TOTAL</td>
<td>600 points (30%)</td>
<td>400 points (20%)</td>
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<tr>
<td>GRAND TOTAL</td>
<td>2,000 points (100%)</td>
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The deadline is at the beginning of class (i.e., 2:00 pm) on the due date listed for each assignment, unless otherwise instructed. Assignments submitted after the deadline but within 24 hours will lose 5% of the total points; after that, an additional 5% for each day that the assignment is late.

Discovery Teams
Working on teams, students will work collaboratively on discovery research, generating ideas and analyzing potential opportunities for innovation and entrepreneurship. Discovery Teams should be
comprised of three to six people. Teams are encouraged to select a Project Manager who will be responsible for helping the team perform at its highest level. This involves removing any impediments to progress, facilitating meetings, and making sure the team is organized and working efficiently during each sprint.

Students will sign-up for a team on Slack. If you do not sign-up for a team by the deadline, you will be assigned to a team by the instructor. Each team will have a private channel on Slack for communication and collaboration. Students may be able to switch teams for Sprint 2, if space allows.

The Team Formation Deadline is 2:00 PM on Tue 10/18/22.

During the quarter, teams will conduct discovery research and perform analysis in two three-week long “sprints,” as follows:

<table>
<thead>
<tr>
<th>Sprint Period</th>
<th>Progress Report</th>
<th>Sprint Presentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sprint 1:</td>
<td>10/18/22 to 11/7/22</td>
<td>11/8/22</td>
</tr>
<tr>
<td>Sprint 2:</td>
<td>11/8/22 to 11/28/22</td>
<td>11/29/22</td>
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*The Final Presentation will be given to the Eco-E Advisory Council (EEAC) on Friday, December 2nd and is tentatively scheduled for 9:00-11:30 am (please mark your calendar).

The goal of these sprints is to “get out of the building” and talk to potential beneficiaries, customers, or users and industry experts face-to-face (in-person or via Zoom). Teams should set milestones for each sprint (e.g., interview 5 industry experts and 5 potential customers during Sprint 1). During each sprint, teams should set a goal to conduct at least 10-15 interviews. The required minimum for each team will be 3 interviews for every team member per sprint. For example, a team of 5 students is required to conduct at least 15 interviews during a given sprint. Interviews are defined as qualitative, in-depth interviews (not online surveys using closed-ended questions).

**Idea Generation**

As part of the educational process, throughout the Environmental Innovation and Entrepreneurship program, individual students will bring a variety of ideas and information to a class project for discussion, review, and analysis. Any ideas or information introduced to a class project by an individual student will be available for use by any student team member, both during or after the class project, for any purpose, unless it is Prior IP. Prior IP is intellectual property that is developed by a student before the class project began and that is both recognized and protectable under United States copyright, patent or trademark laws. Any Prior IP introduced by a student during the course of an Environmental Innovation and Entrepreneurship class project may be used by all student team members in the course of the class project for academic purposes only.

To avoid misunderstandings and confusion, if a student wants to contribute Prior IP to an Environmental Innovation and Entrepreneurship class project, that student should clearly identify it as Prior IP to the other student team members and notify the instructor that the Prior IP is being contributed to the class project for academic use in the Eco-E class project.

**Description of Course Assignments**

**Student Profile**

The purpose of a Student Profile is to provide the instructor and your classmates with some insight into your background and to help in the formation of compatible discovery teams. **Note:** Your responses will
be shared with the entire class. You will create a post in #profiles within the esm256Afall2022 workspace on Slack. See “Instructions for Profile Post” in #profiles.

Your Student Profile must be completed by 5:00 PM on Tue 10/4/22. The Student Profile will account for 5% of your grade (max. 100 points).

Team Formation Posts
At the beginning of each sprint, teams will create “Team Formation” posts in Slack. The post should provide the team’s working name and the name of each team member, followed by the team’s research focus. In a brief paragraph, explain why the team came together and address at least one of the following questions:

- What environmental problem does the team want to help solve?
- Is there a particular industry that interests all the team members?
- Is there a trend in a specific industry that may represent an opportunity?
- Have you identified a potential beneficiary, customer, or user, based on observations of a pain point or problem to be solved?

The Team Formation Post for Sprint 1 must be submitted in #sprint-1-teams within the esm256Afall2022 workspace on Slack by 2:00 PM on 10/18/22. This Team Formation Post will account for 5% of your grade (max. 100 points). These points will be the same for each team member.

The Team Formation Post for Sprint 2 must be submitted in #sprint-2-teams within the esm256Afall2022 workspace on Slack by 2:00 PM on 11/15/22. This Team Formation Post will account for 5% of your grade (max. 100 points). These points will be the same for each team member.

Interview Summaries
Students will demonstrate their analytical skills, observation skills, and their ability to synthesize data through summarizing interviews with academic experts, industry experts or potential beneficiaries, customers, or users. Each student is required to participate in at least 3 interviews per sprint. You may have more than one team member participate in an interview and work together on the interview summary. However, each team is required to have a minimum number of interviews per sprint, equal to 3 interviews per team member. For example, a team of 5 students must conduct a minimum of 15 interviews during a given sprint.

An interview summary should be submitted for each interview conducted. It is a brief report of the key insights from an interview with an academic expert, industry expert or potential beneficiary, customer, or user. Be sure to list all students who participated as interviewees. Students should be prepared to provide a link to the full interview (e.g., transcribed interview from Zoom), in case anyone would like to read the full transcript. You will create an “Interview Summary” post in the relevant research channel(s) within the esm256Afall2022 workspace on Slack. For further instructions, see “Submit Your Interview Summary by Post” in #tips-for-slack.

Your interview summaries for Sprint 1 must be completed by 2:00 PM on Tue 11/8/22. These Interview Summaries will account for 10% of your grade (max. 200 points).

Your interview summaries for Sprint 2 must be completed by 2:00 pm on Tue 11/29/22. These Interview Summaries will account for 10% of your grade (max. 200 points).
**Team Progress Reports**
At the end of each sprint, teams will submit Progress Reports. Each team will report what they learned through discovery research during the sprint, which may include: (1) any new insights about an environmental problem; (2) any beneficiary, customer, or user needs or pain points identified; (3) any new product or market opportunities hypothesized; (4) any potential ways to create value across sectors or multiple stakeholders. Based on the team’s key takeaways, any new ideas generated or any resulting pivots should be shared, along with the team’s future direction. Teams will be evaluated based on the quality of the research/analysis performed, not the volume of ideas generated through this course. However, each team is encouraged to generate and analyze more than one idea during the quarter, guided by discovery research.

Each team will create a “Progress Report” post in their private team channel within the esm256Afall2022 workspace on Slack. For further instructions, see “Submit Your Team’s Progress Report by Post” in #tips-for-slack.

The Progress Report for Sprint 1 must be completed by 2:00 PM on Tue 11/8/22. This Progress Report will account for 5% of your grade (max. 100 points). These points will be the same for each team member.

The Progress Report for Sprint 2 must be completed by 2:00 PM on Tue 11/29/22. This Progress Report will account for 10% of your grade (max. 200 points). These points will be the same for each team member.

**Team Presentations**
Each team will give one Sprint Presentation in class on Tue 11/8/22 and one Final Presentation to the Eco-E Advisory Council (EEAC) on Fri 12/2/22. Specific guidelines for the Sprint Presentation and Final Presentation will be posted on GauchoSpace.

A soft copy of the Sprint Presentation must be uploaded onto GauchoSpace by 12:00 PM on Tue 11/8/22. The Sprint Presentation will account for 10% of your grade (max. 200 points). These points will be the same for each team member.

Please use the following format for submission of your team’s Sprint Presentation:
Sprint Presentation_(Team Name)

A soft copy of the Final Presentation must be uploaded onto GauchoSpace by 8:00 AM on Fri 12/2/22. The Final Presentation will account for 15% of your grade (max. 300 points). These points will be the same for each team member.

Please use the following format for submission of your team’s Final Presentation:
Final Presentation_(Team Name)