UC SANTA BARBARA
Bren School of Environmental Science & Management

Eco-E Project Guidelines

MESM Class of 2026

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INTRODUCTION

These guidelines define the Bren School's expectations for Master's Eco-Entrepreneurship (Eco-E) Projects and explain the Eco-E Project process, timeline, and required deliverables.

MESM students have the option to complete either a Master's Eco-E Project or an Eco-E Project to fulfill core requirements. The Eco-E Project prepares students for careers as solution-oriented environmental entrepreneurs or innovators who can identify opportunities where market demands overlap environmental solutions. Students who complete an Eco-E Project work as a team to test their ideas and perform market validation, as they develop a business model intended to create a positive and measurable environmental impact. Students will cultivate innovative and agile thinking, hone communication skills and learn how to build a convincing business case.

Without exception, all students pursuing the Master of Environmental Science and Management (MESM) degree must successfully complete a Eco-E Project or an Eco-E Project. For more information about Eco-E Projects, please refer to the MESM Eco-E Project Guidelines.

In completing Eco-E and Eco-E Projects, students are expected to seek advice from outside sources, which may include individuals affiliated with industry, government, and non-government organizations. However, unlike Eco-E Projects, students may not conduct an Eco-E Project in collaboration with an outside client. The Eco-E Project, which includes all ideas and concepts set forth in the business model, must be the original work of the student team members.

All Eco-E Projects begin in the Spring Quarter of the first year of study and end in mid-Spring Quarter of the second year. The project requires:

- an environment in which the students can learn to operate as an independent professional team;
- a spirit of trust and collaboration;
- student-generated projects to allow students to develop their own ideas and approaches;
- healthy and professional communication and rapport; and,
- the ability of students to choose courses of action, make mistakes, and learn from those experiences.

Students who complete Eco-E Projects are required to enter at least one new venture competition as part of the training. Participation in such a competition gives students valuable experience and increases the visibility of the Bren School and its students.

ECO-E PROJECT TIMELINE OVERVIEW

Below are the key deadlines for this year’s Eco-E Projects. Note that there may be additional deadlines associated with ESM 402A or faculty advisors may request additional milestones and set internal deadlines for drafts or other materials in addition to deadlines listed here.

Spring Quarter 2025	
Tues, Apr 1 (Week 1)	Attend Eco-E Project Kickoff Workshop (11 am - 12 pm)

By Fri, Apr 4 (Week 1)	● Get to know the members of your Eco-E Project
	● Determine team roles:
	  ○ Project Manager (PM)
	  ○ Financial Manager (FM)
	  ○ Data/Computing Manager (DM)
	  ○ Communication Manager (CM)
	● Report alias and PM, FM, DM, CM to Bren Projects Team

Wed Apr 16 (Week 3)	Project management plan due
Fri, Apr 18 (Week 3)	Submit short project description (1-3 paragraphs) to Bren Projects Team for Bren website
Fri, April 25 (Week 4)	Attend Master's Project Final Presentations for MESM Class of 2025
Fri May 2 (Week 5)	Eco-E Advisory Council (EEAC) Meeting
Fri May 30 (Week 9)	Present "Lessons Learned" Presentation to Judging Panel
By Fri Jun 6 (Week 10)	Complete environmental problem literature review
Fri Jun 6 (Week 10)	Submit Team Evaluation to Eco-E Project Coordinator

Fall Quarter 2025	
By Fri Oct 3 (Week 1)	Schedule regular biweekly meetings with primary faculty advisor(s)
By Fri Oct 10 (Week 2)	Confirm external advisory committee
Tues, Oct 14 (Week 3)	Participate in MESM 2026 Master's Project Flash Talks
By Fri Oct 24 (Week 4)	● Host fall review meeting with faculty advisors, external advisors and Innovation Program Committee members ● Submit 1-page summary of fall review meeting to faculty advisors
Mid Nov	Eco-E Advisory Council (EEAC) Meeting
By Fri Nov 21 (Week 8)	Complete environmental impact literature review
Fri Dec 5 (Week 10)	Submit Team Evaluation to Eco-E Project Coordinator
Fri Dec 12 (Finals Week)	Submit outline of Final Report to faculty advisors

Winter Quarter 2026	
By Fri Jan 9 (Week 1)	Schedule regular biweekly meetings with primary faculty advisor(s)

Fri Jan 23 (Week 3)	Submit preliminary draft Final Report to faculty advisors
Fri Jan 30 (Week 4)	Master's Project Faculty Reviews
Weeks 5-7	Incorporate feedback from faculty reviewers and advisors into Final Report
Fri Feb 20 (Week 7)	Submit revised draft Final Report to faculty advisors
Fri Mar 13 (Week 10)	Submit Team Evaluation to Eco-E Project Coordinator
Fri Mar 20 (Finals Week)	Submit Final Report (.pdf version) to faculty advisors and Bren Projects Team

Spring Quarter 2026	
Fri Apr 10 (Week 2)	● Draft Executive Summary due to faculty advisors ● Submit project Abstract and Acknowledgements to Bren Projects Team for Bren website
1-2 weeks before Final Presentation	● Take team photo w/ faculty advisors to use as the first slide in the Final Presentation; ● Submit draft Final Presentation to faculty advisors for review
Fri Apr 17 (Week 3)	Submit Final Executive Summary (.pdf version) to faculty advisors and Bren Projects Team
Thurs Apr 23 by 5 pm (Week 4)	Submit Final Presentation (slides) to Senior Events Manager
Fri Apr 24 (Week 4)	Master's Project Final Presentations
Early May	Eco-E Advisory Council (EEAC) Meeting
Fri May 8 (Week 6)	● Submit Team Evaluation to Eco-E Project Coordinator ● Submit faculty advisor evaluations to Bren Projects Team

1. GENERAL INFORMATION

A. Eco-E Project Timeline

MESM students begin their Eco-E Projects in the Spring Quarter of their first year of study and complete their project by the middle of Spring Quarter of their second year of study. Master's Project Faculty Review, including both Group Projects and Eco-E Projects, are generally Friday of the fourth week of Winter Quarter, with the Final Report due at the end of Winter Quarter. Master's Project Final Presentations are generally held on Friday during the fourth week of Spring Quarter. The timeline overview provides a snapshot of key milestones and deliverable due dates. Working with their faculty advisors, teams define their own deadlines for intermediate products.

B. Academic Units and Grading

Students must register for ESM 402A, 402B, 402C and 402D in spring, fall, winter, and spring, respectively, for a total of 14 units. The instructor grades the ESM 402A course. The team's faculty advisors grade all other ESM 402 courses and the grades will be assigned at the end of their respective quarters.

Students must achieve a grade of C or better on their Eco-E Project to be eligible for the MESM degree. Students working together on a project may not necessarily receive the same grade. Additionally, students cannot be recommended for graduation until they have submitted an approved final report.

By the end of each quarter's last instructional day, students must fill out and submit an Eco-E Project Peer and Self Evaluation Form. These evaluations will be considered by the faculty advisor when grades are being assigned. The Eco-E Project Coordinator will provide an evaluation form each quarter.

C. Student Time Commitment

Students should expect to devote **at least 10-12 hours per week** to their Eco-E Project, although more time may be needed for some tasks. Eco-E Project work should be evenly allocated over the 3.5 quarters to avoid excess workload at the end of the project. Students should treat the project as though it is another 4-unit course each quarter.

D. Summer Eco-E Project Work

Some students may participate in a summer internship associated with the Eco-E Project. Students who are not involved in an Eco-E Project-related internship may continue some level of work on their projects during the summer, as determined by the team and faculty advisors.

E. Deliverables

The major deliverables for the Eco-E Project are:

- Project Management Plan
- Quarterly meetings with the Eco-Entrepreneurship Advisory Council (EEAC)
- Faculty Review presentation
- Final Report
- Executive Summary
- Final Presentation
- Participation in at least one approved new venture competition
- Optional (not graded): Teams are encouraged to develop and create a media/communication product of their choice

All deliverables should provide an honest assessment of the state of science, communicating both pros and cons of each individual issue rather than advocating for a specific outcome or point of view. Students should acquire and review sufficient data and information needed to conduct objective research. Students should present their data, results, and recommendations with the information needed to convince the audience and readers of the Final

Report that all relevant evidence has been explored and analyzed before making conclusions or recommendations. Analyze the pros and cons so the audience will understand and be convinced that the conclusions are justified. For example, a literature review can explain which results are inconsistent and why one finding may be stronger than another. The Final Report and Final Presentation should demonstrate that students understand both sides of each issue and the scientific basis for each choice or assumption.

F. Idea Generation/Intellectual Property

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

To avoid misunderstandings and confusion, if a team member wants to contribute Prior IP to the Eco-E Project, that team member should clearly identify it as Prior IP to the other team members and notify the Eco-E Project Coordinator that the Prior IP is being contributed to the project for academic use in the Eco-E Project.

G. Authorship/Ownership

Each member of the group is an equal owner of the intellectual property of the project. Frequently, teams allocate tasks among members to advance the project; one or several individuals may invest more time in one aspect of the project than others. However, each member of the team ultimately contributes to the body of work that emerges from an Eco-E Project. Therefore, **every required paper, executive summary, presentation, etc. that is produced by the team must list every member as an author.**

Teams are encouraged, but not required, to present their Eco-E Project findings in formal conferences and new venture competitions outside the university. Participation in such events gives students valuable experience and increases the visibility of the Bren School and its students. Teams also may want to publish results in a peer-reviewed journal. Teams may collectively develop criteria for authorship of these supplemental materials (e.g., 2-unit independent study with advisor) but all members of the team must agree to these criteria. A team member may choose not to be included as a co-author on a publication. However, all team members must be offered the opportunity to make their own decisions about their authorship. Teams also may include faculty advisors or others who contributed substantially to the research as co-authors.

H. Data Distribution

Datasets obtained or derived during your work may be licensed, copyrighted or confidential. Students should not make these data available to third parties, or generally available online, without authorization from the original source of data and their faculty advisors. If a team is working with confidential data, a Non-Disclosure Agreement (NDA) will likely be necessary between the source and UCSB. NDAs are developed, approved, and signed by UCSB's Office of Technology and Industry Alliances. Under no circumstances can a student or faculty advisor sign an NDA with a source of data.

I. Publishing

If a team would like to publish its work, team members must discuss this with their advisor. Faculty advisors are experts in peer-reviewed publication, and students should take advantage of their knowledge and experience. Publishing peer-reviewed literature requires interfacing with a larger scholarly community, and this should be done in a way that reflects well on the students, their advisor, and the Bren School. Note that it often takes a prolonged period (months to years) to get a paper published.

J. Use of Human Subjects

Faculty and students who engage in research involving human subjects (e.g., a survey of people) must complete the Human Subjects training, submit a survey tool for review and approval, and obtain approval from the UCSB's Human Subjects Committee (HSC) prior to conducting research. The faculty advisor(s) also will need to complete the Human Subjects training and will submit the students' survey tool on behalf of their students.

To qualify as "human subjects" research as defined by the Common Rule, activities must fall under both definitions of (1) research and (2) human subjects under 45 CFR 46.102 (see definitions below). If the activities fit the definitions of (1) research and (2) human subjects, then the activities are considered human subjects research and an application will need to be submitted to the HSC for review and approval (or exemption) before research can begin.

45 CFR 46.102 Definitions:

- "Research" means a systematic investigation, including research development, testing, and evaluation, designed to develop or contribute to generalizable knowledge. Activities that meet this definition constitute research for purposes of this policy, whether or not they are conducted or supported under a program that is considered research for other purposes. For example, some demonstration and service programs may include research activities.
- "Human subject" means a living individual about whom an investigator (whether professional or student) conducting research obtains:
    - Data through intervention or interaction with the individual, or
    - Identifiable private information.
        - **Intervention** includes both physical procedures by which data are gathered (for example, venipuncture) and manipulations of the subject or the subject's environment that are performed for research purposes.
        - **Interaction** includes communication or interpersonal contact between investigator and subject.
        - **Private information** includes information about behavior that occurs in a context in which an individual can reasonably expect that no observation or recording is taking place, and information that has been provided for specific purposes by an individual and which the individual can reasonably expect will not be made public (for example, a medical record). Private information must be individually identifiable (i.e., the identity of the subject is or may readily be ascertained by the investigator or associated with the information) in order for obtaining the information to constitute research involving human subjects.

The Office of Research Human Subjects Department reviewed and discussed "Bren Eco-Entrepreneurship Market Research" related to the Eco-E Project and determined that it did not meet the criteria for human subjects research as defined in the Common Rule (45 CFR 46). IRB review and oversight is not required because the activities are not considered a systematic investigation designed to develop or contribute to generalizable knowledge; instead, the activities are designed to allow students enrolled in courses within the program to meet their learning objectives.

At this time, the Eco-E Project teams may conduct market research as IRB approval is not necessary. Should student activities develop into meeting the criteria for human subjects research as defined in 45 CFR 46, the students will need to obtain IRB approval before continuing with the project(s).

2. COMPOSITION OF THE ECO-E PROJECTS

A. Team Members

Each team is composed of 2 to 5 students. Students are responsible for building their own teams.

B. Faculty Advisors

Each Eco-E Project is assigned one innovation faculty advisor and one primary faculty advisor. Teams must also obtain the counsel of two or more external advisors, one of which must be another faculty member appointed by the Academic Senate at UCSB or another UC. Teams commonly invite a second Bren faculty member to serve as an external advisor, but it is also permissible to invite a UC Senate faculty member in another department at UCSB or another UC. Once teams have two faculty advisors, then their other external advisor(s) can be any individual from government agencies, industry, non-governmental organizations, universities, or private citizens who may be interested in the project. Only the (pre-assigned) business faculty advisor and primary Bren faculty advisor need to sign the final report and assign grades. To view a searchable list of all Senate-appointed faculty members for each department at UCSB, visit https://senate.ucsb.edu/about/members.

The primary faculty advisor typically meets biweekly with students during the academic year, monitors progress, provides technical assistance, expertise, project evaluations, and co-assigns grades. Bren faculty and other experts on the external advisory committee are expected to review the team's progress at least once per quarter during review meetings but they are not expected to read and provide detailed feedback on the team's deliverables (see External Advisors below). Project leadership, management, and the quality of the final products are ultimately the students' responsibilities.

Primary faculty advisors do not serve as project managers; their role is similar to that of a consultant. They are expected to attend regular meetings with the team during the academic year and are responsible for grading. Advisors may offer reactive advice, respond to project activities, and provide guidance when asked. The advisors also may give proactive advice regarding deficiencies and deadlines. Students must understand the role of the advisors, recognizing their significance while understanding their limitations in directing the project. Each faculty advisor has a unique approach. Students should expect variability in engagement, expectations, and feedback from one advisor to the next. During the first quarter, each team should clarify the expected level of interaction with their advisors.

C. External Advisors

Interacting and networking with the professional community are critical components of the Eco-E Project process. Teams must obtain the counsel of two or more external advisors, individuals from universities, government agencies, industry, non-governmental organizations, or private citizens who may be interested in the project, its data, or its deliverables. An external advisor is someone who has knowledge about the project topic and can provide unbiased feedback. If one Bren faculty advisor is assigned to the project, then the team must select at least one other member of the UC Academic Senate for the external advisory committee, as described previously under Faculty Advisors. However, only one of the two or more external advisors may be drawn from the Bren faculty. Other external advisors may be invited from government agencies, industry, non-governmental organizations, and other relevant institutions.

Each team will be responsible for identifying external advisors and maintaining professional contact with them for the duration of the project. The external advisors should be invited to meet, together with faculty advisors, Innovation program committee members and team members, once in Fall Quarter of the second year of study. If an external advisor is not able to attend a meeting in person, the team should engage the person by teleconference or Zoom. External advisors do not need to review the entire final report, although the team may ask for feedback on specific sections if the external advisor has time. External advisors also should be invited by the students to attend the project's Faculty Review and Final Presentation. External advisors are likely busy people and their time should be respected. When scheduling a meeting, the team should be prepared with an agenda and specific questions, so the meeting time is valuable for all parties.

D. Eco-E Project Coordinator

The Eco-E Project Coordinator is a Bren staff member who assists students, faculty advisors, and the Innovation Program Committee in facilitating the Eco-E Project process. The Eco-E Project Coordinator is Emily Cotter, Bren School Environmental Innovation & Entrepreneurship Program Manager. Any questions or concerns regarding an Eco-E Project should be addressed to the Eco-E Project Coordinator by contacting ecotter@bren.ucsb.edu.

E. Bren Projects Team

The Bren Projects Team is a team of Bren staff members who assist students and faculty advisors in facilitating the Eco-E Project and Group Project process. Any questions or concerns regarding project deliverables and events coordinated by the Bren Projects Team should be addressed to this team by contacting projects@bren.ucsb.edu.

F. Eco-E Advisory Council (EEAC)

The Eco-Entrepreneurship Advisory Council (EEAC) guides, promotes and supports the Bren School's Environmental Innovation & Entrepreneurship ("Innovation") program. The council is composed of experienced business professionals, known as EEAC Advisors, who actively share their experience, expertise and networks to directly engage students as they explore becoming environmental entrepreneurs and innovators. Eco-E Project teams will meet with the EEAC on a quarterly basis (Fall, Winter, and Spring) to receive feedback, guidance and support. The Eco-E Project Coordinator will schedule the EEAC meetings and notify all participants of the expectations for each quarterly meeting.

G. Innovation Program Committee

The Eco-E Project process is overseen by the Bren School's Innovation Program Committee, which consists of at least 3 Bren School faculty members. The Committee is responsible for selecting Eco-E Projects and monitoring the progress of each Eco-E Project. Additionally, the Innovation Program Committee selects recipients of Innovation fellowships and awards. Any questions or concerns regarding the Committee's decisions should be presented to the Eco-E Project Coordinator or a member of the Innovation Program Committee.

3. PROJECT MANAGEMENT

A. Team Meetings and Class Sessions

Teams are encouraged to meet as often as necessary, but all teams must meet at least once per week at a designated place and time. **Regular team meetings should not be scheduled on Monday through Thursday between 11:00 am – 12:15 pm** as these days and times are reserved for seminars, career talks, faculty meetings, and master's project workshops. Teams are expected to participate in all scheduled ESM 402A, ESM 402B and ESM 402C class sessions. In addition, the team must meet regularly with the primary faculty advisor(s): five meetings in Spring Quarter of the first year and at least biweekly in Fall Quarter through Winter Quarter of the second year. Teams will meet with the innovation faculty advisor and primary faculty advisor(s) in Spring Quarter of the second year, alternating weeks. It is the responsibility of the students, not the primary faculty advisor(s), to schedule the primary faculty advisor meetings and meeting rooms, and make necessary arrangements. Advance notification of absences is expected as a matter of courtesy. Participation in the 402-series class sessions, lab sessions and team meetings is a portion of each student's grade; missed sessions negatively affect the overall grade.

B. Scheduling Meeting Rooms

Students are responsible for scheduling their own rooms for regular Eco-E Project meetings. When Bren Hall is open, students may reserve the Visitors Center (BH 1410), Bonsai (BH 4327), Manzanita (BH 4329), Oak (BH 1520), Sycamore (BH 1510), Maple (BH 3016), and Pine (BH 3526) rooms via Robin Powered scheduling software. You will be asked to log in to the booking dashboard using your @ucsb.edu email address. When self-booking Bren rooms for Eco-E Project meetings, please enter a title that includes the Eco-E Project name and the word Bren. Including the word Bren ensures your reservation is a Bren reservation at a glance, as non-Bren people used our system and rooms in the past. Self-booking online allows up to 14 days in advance only.

If students wish to create a repeating meeting beyond 14 days in advance, they must self-book the first meeting iteration, and then submit a Bren Hall Room Request Form that goes to scheduling@bren.ucsb.edu, which will extend the booking for the quarter.. Students should include the reason for the room reservation, the number of meeting participants, the audio-visual or other equipment needed, and the dates and times of all requested meetings, as well as any other relevant information. Requests to scheduling@bren.ucsb.edu should be made at least 48 hours in advance.

Please also use scheduling@bren.ucsb.edu to reserve a conference phone if needed. A regular phone line can receive only one call at a time; however, conference phones may dial out to two different numbers. Please contact Finance Manager Bridget Mastopietro (bridget@bren.ucsb.edu) at least 24 hours before your event if you need a

Ready Talk account (for two or more parties calling in) or a UCSB authorization code (required for long-distance calls).

C. Conflict Resolution

The primary responsibility for intra-team conflict resolution lies with the team members. The faculty advisors should help resolve any issues that cannot be adequately addressed by the team members. If a team is still unable to resolve a conflict after faculty arbitration, the team may seek assistance from the Eco-E Project Coordinator or the Chair of the Innovation Program Committee, who will consult with the Innovation Program Committee if needed. Students may also wish to contact the campus ombuds office (http://www.ombuds.ucsb.edu). Trained mediators are available at no cost throughout the year. Their mediation techniques are informal, confidential, and impartial.

If students have difficulty with a member of their team, it is critical that they maintain written documentation of the problem and attempted solutions. For example, if one member of a team is not doing their share of work or not providing timely products or products of adequate quality, the other team members must document the dates of specific incidents and what efforts were made to address the problem. Only under these circumstances will it be possible for faculty advisors and administrative personnel to intervene and help craft a solution. Administrative involvement is generally limited and occurs only when there are serious issues that remain unresolved after considerable effort by the students and faculty advisor(s). Because of federal privacy laws, students may not be informed of specific interventions or disciplinary actions taken against other students; however, this does not mean the problem was not acted upon by the administration.

Conflict resolution process. Some of the tasks undertaken by the group may turn out to be unexpectedly difficult or even impossible. A team member who encounters such a difficulty must communicate the problem to other members promptly and explicitly. The team might then share ideas or seek guidance from the faculty advisors or re-focus the project if the task is beyond the capacities of the team. Prompt and continuous communication will help the team overcome such difficulties and avoid late surprises or disappointment. Other difficulties can arise because of uneven contributions among the members. This dynamic can lead to feelings of exclusion or that one or more members are not pulling their weight. Describe steps that the team will take if a member does not sufficiently contribute. It is better to decide on ways of dealing with such problems before they arise.

To understand different working styles and minimize the likelihood of conflict, the team should discuss the following issues, internally and with the advisors:

- How do you like to receive negative feedback?
- How do you like to receive positive feedback, and how often do you like to receive it?
- What steps do you take to ensure your work is high quality?
- How would you like a teammate to address you if they thought your work was not up to the team's quality standard?
- How would you like a teammate to address you if they thought you were crossing the boundary of their role's responsibilities?
- How do you like a team to make decisions? How would you like a teammate to address you if you made a decision that they wanted to weigh in on?

The starting point for managing conflict is for the team to assume initial responsibility for the problem. The team's management plan should first focus on assisting or motivating a team member having trouble, realizing that

problems might arise for anyone. Methods for dealing with problems include peer review, and/or division or re-negotiation of responsibilities. If a resolution cannot be reached using these tools within a reasonable time (no longer than a month), the team should engage the faculty advisors or the Eco-E Project Coordinator. If a team member consistently fails to contribute at the expected level, the Project Manager should meet individually with the faculty advisors and/or the Eco-E Project Coordinator to discuss the problem and possible solutions. If a serious problem emerges, Project Managers and other team members should feel free to schedule individual meetings, as needed with their faculty advisors and/or Eco-E Project Coordinator. If it is not possible to resolve the problem with team and faculty advisor intervention, then it may be necessary to schedule a facilitated team meeting with the Assistant Dean or campus ombuds person.

Common GP conflict scenarios include the following:

- A student is contributing minimally or not at all to the project, forcing others to pick up the slack
- A student is not completing assigned tasks by agreed deadlines
- A student is consistently late or missing meetings
- The quality of a student's work does not meet team expectations
- A student is not fulfilling their assigned role
- A student is completing tasks that are within another team member's responsibilities
- Unprofessional communication styles, including rude comments, dismissive body language, refusal to communicate, lack of inclusivity, etc.
- Team members are unable to agree on a major aspect of the project (goals, deliverables, timeline, methodology)

Being aware of these issues is important, and talking about them early on will avoid having a major conflict.

4. PROJECT DELIVERABLES

Refer to the timeline overview for a summary of Eco-E Project deadlines and deliverables.

Students must pass all ESM 402 courses with a C or better to be eligible for the MESM degree. Students must be actively involved with their team throughout the year-long project to receive a passing grade.

A. ESM 402A (Spring Quarter, First Year of Study)

MESM students begin Eco-E Projects in Spring Quarter of their first year of study and are required to register for ESM 402A Business Model Development for New Environmental Ventures (4 units).

ESM 402A has a regular class schedule that meets twice per week. In addition, students are required to attend relevant workshops, and must schedule at least (1) one weekly meeting with all team members and (2) one monthly meeting with the primary faculty advisor.

ESM 402A requires completion of the following elements:

1. Project Management Plan

Each team will prepare a 1-2-page project management plan detailing the following:

- Names of participants
- Purpose of the project
- Participant responsibilities
    - A definition of each area of responsibility (e.g., project manager, communications manager, data manager, financial manager, etc.)
- Idea generation and prior IP
- Termination date of project

All members of a team are expected to contribute to all project deliverables. Roles should be assigned to organize the team. While each role has specific responsibilities, all members of the team should participate to advance the project objectives and deliverables. Each team is required to assign the roles of project manager (PM), communications manager (CM), data/computing manager (DM) and financial manager (FM). The participant responsibilities section should include a description of the duties assigned to each of these roles and who will assume the roles.

A signed copy should be submitted to the Eco-E Project Coordinator. If any components of the project management plan change during the project, a revised project management plan should be created and signed by the team.

2. Eco-E Advisory Council (EEAC) Meeting

Each team will introduce their initial business model hypotheses from their current business model canvas to the EEAC in Spring Quarter of the first year of study. Following the presentation, the team will receive feedback from the EEAC.

3. Sprint Updates

During ESM 402A, each team will manage its business model development process collaboratively online and will document its hypotheses, experiments and insights by submitting progress reports. For each sprint, the latest Business Model Canvas should be downloaded and submitted as a PDF with the progress report.

Each sprint, teams should perform the following:

- Update the canvas
    - Create new hypotheses, under individual canvas building blocks.
    - Create a new canvas, if appropriate.
    - Submit PDF of latest canvas.
- Write up a progress report
    - Write a brief report summarizing what the team accomplished during the last sprint and discuss next steps.
    - Discuss hypotheses, experiments, and key insights.
    - Submit progress report.

4. Sprint Presentations

During ESM 402A, each team will present to the instructor and to the other teams their progress from sprint to sprint. Each sprint presentation should cover the following:

Which Business Model Canvas building block(s) did you test? What did you learn during the last sprint? How will you apply what you learned?

- Current Business Model Canvas
- Assumptions/Hypotheses
- Experiments
- Observations/Results
- Key Insights/Lessons Learned
- Decisions/Actions
- Next Steps

Each team presentation will be followed by class discussion on the project's recent progress to provide each team with peer feedback.

5. Environmental Problem Literature Review

Early in the project, the team should find out what is known about the environmental problem that it is addressing. The team needs to locate materials already written about the specific problem and its location or other context, including agency, industry, and consultants' reports, which will often lead to critical datasets and useful scientific literature. The team will also need to search for technical literature (journals, books, electronic resources) describing and explaining the problem and methods for studying it.

The team should resist the temptation to locate a source on the basis of keywords or a title, and then to download it and absorb only enough information to write a sentence about it in a literature review. Storing a PDF file on the computer is not the same as absorbing the content well enough to explain which material in the paper is relevant and usable for a particular problem. At the same time, a team often cannot afford the time to become as broadly knowledgeable about the subject as an academic researcher. This task of locating relevant, useful information for a single project requires strong focus and balance between obtaining directly useful information and developing a breadth of perspective which can lead to innovation. It is not simply a matter of meeting a quantitative target, such as "refer to n articles."

Teams typically start their literature review with keyword searches (e.g., general concepts, species or chemical names, region or environment type) of publication databases such as the Web of Science. Teams unfamiliar with these databases should take advantage of the training in library research techniques provided by UCSB Research Librarian Kristen LaBonte (klabonte@ucsb.edu). Each team is encouraged to schedule a meeting with the Research Librarian (separate from the workshop provided) at least once in Spring Quarter to learn more about the available resources that are related to their specific topic.

If the literature review is comprehensive, clearly presented, and well referenced, it will form an integral part of the final report, saving valuable time at the end of the project.

6. "Lessons Learned" Presentation

At the end of the Spring Quarter, each team will present the evolution of its business model. Each team will give a "Lessons Learned" presentation to a judging panel. Following the presentation, the team will participate in a Q&A session with the judges. In addition, the team will receive written feedback from each judge.

7. Evaluations

By the end of each quarter's last instructional day, students must fill out an Eco-E Project Peer and Self Evaluation Form and submit them to the Eco-E Project Coordinator. The evaluation requires realistic reflection on the progress and functioning of the team. The primary goal of the evaluations is to inform the faculty advisors and Eco-E Project Coordinator of team dynamics and any problems that may require future intervention. With appropriate justification, self and peer evaluations may impact grade assignments by the faculty advisors. Evaluations are confidential from other team members. This form will be provided to students via Canvas.

B. ESM 402B (Fall Quarter)

Students must enroll in ESM 402B Eco-E Project for 4 units with their primary faculty advisor in the Fall Quarter of the second year of study.

ESM 402B has a regular class schedule that meets every other week. In addition, students are required to schedule at least (1) one weekly meeting with all team members and (2) biweekly meetings with the primary faculty advisor. Teams must hold a progress review meeting before the middle of Fall Quarter. During Fall Quarter, students typically work on developing a minimum viable product (i.e., a small-scale prototype or pilot project). Students work on data analysis and interpretation, as well as an environmental impact literature review. Students create figures and charts for their final report and other products. They write an annotated outline of their final report and complete as much of the writing of the final report as possible.

1. Fall Progress Review Meeting

Towards the beginning of Fall Quarter, each team must hold a progress review meeting. The purpose of the meeting is to report the team's progress to its faculty advisors, external advisors and Innovation Program Committee members and to obtain feedback, as the team plans its final research experiments including any plans for developing a Minimum Viable Product (MVP).

The Fall Quarter progress review meeting should cover the following:

a. Review of project objectives
b. Environmental problem
c. Current business model
d. Research plan, including MVP development (small-scale prototype or pilot)
e. Status of environmental impact literature review
f. Timeline for remaining tasks and deliverables

Students must coordinate with their faculty advisors regarding the date, participants, and agenda for the fall progress review meeting. Once a date has been selected, students must schedule a meeting and invite the Innovation Program Committee and their external advisors. Students should contact the Innovation Program Committee members and external advisors at least 2 weeks before the fall progress review meeting. Students should provide all participants with a meeting agenda and any supporting materials at least 1 week in advance.

At the meeting, teams should present a brief review of project objectives. These may evolve over time as the project develops. However, the team must maintain open communication with its faculty advisors about these

changes and be certain that they agree with any proposed changes. Students should present the current results from their work and discuss their strategy for completing the remaining tasks and deliverables. The focus of the meeting should be to invite the faculty advisors, Innovation Program Committee members and external advisors to share their feedback about how the team can solve any problems and complete the project on time.

Following the fall progress review meeting, students should write thank you notes to the Innovation Program Committee members and their external advisors and submit to their faculty advisors a 1-page summary of the feedback gathered during the meeting.

2. Eco-E Advisory Council (EEAC) Meeting

Each team will present the project's current business model and lessons learned during the EEAC meeting in Fall Quarter of the second year of study. Following the presentation, the team will receive feedback and guidance from the EEAC.

3. Environmental Impact Literature Review

Now that its value proposition has been refined and tested, the team should be determining how its business model will generate a positive and measurable environmental impact. The team needs to locate materials already written about similar environmental solutions and their locations or other context, including agency, industry, and consultants' reports, which will often lead to critical datasets and useful scientific literature. The team will also need to search for technical literature (journals, books, electronic resources). The team needs to gather data that will help support its methodology for measuring the environmental impact which could be generated by its proposed business model.

The team should resist the temptation to locate a source on the basis of keywords or a title, and then to download it and absorb only enough information to write a sentence about it in a literature review. Storing a PDF file on the computer is not the same as absorbing the content well enough to explain which material in the paper is relevant and usable for a particular problem. At the same time, a team often cannot afford the time to become as broadly knowledgeable about the subject as an academic researcher. This task of locating relevant, useful information for a single project requires strong focus and balance between obtaining directly useful information and developing a breadth of perspective which can lead to innovation. It is not simply a matter of meeting a quantitative target, such as "refer to n articles."

Teams typically start their literature review with keyword searches (e.g. general concepts, species or chemical names, region or environment type) of publication databases such as the Web of Science. Teams unfamiliar with these databases should take advantage of the training in library research techniques provided by UCSB Research Librarian Kristen LaBonte (klabonte@ucsb.edu). Each team is encouraged to schedule a meeting with the Research Librarian (separate from the workshop provided) at least once in Spring Quarter to learn more about the available resources that are related to their specific topic.

The Environmental Impact Literature Review should be completed during Fall Quarter (see timeline for exact date).

4. Outline for Final Report

At the end of Fall Quarter, each team submits an outline for the final report to the faculty advisors. The outline should include:

a. Introduction
b. Project objectives and revisions, if applicable
c. Environmental problem-solution analysis (background and signficance)
d. Research methods to the extent completed. Describe anticipated methods, if not completed.
g. Results to the extent completed. Include figures and tables to the extent completed. Describe anticipated results, if not completed.
e. Business model environment (context, design drivers and constraints), including industry/market analysis and competitive analysis
f. Proposed business model, including discussion of business model pivots
g. Environmental impact. Explain whether it will be positive and how it can be measured.
h. Discussion and conclusions to the extent completed.
i. References

For each section of the outline, include as much information as completed to date and note the extent to which the section is completed, and/or any remaining obstacles to its completion (e.g., data availability).

As an appendix to the outline, describe the work to be completed during Winter Quarter and a timeline for remaining tasks and deliverables. Keep in mind that the draft background, methods and preliminary results are due to the faculty advisors by the end of the third week of Winter Quarter and the complete draft final report is due at the end of the seventh week. Build in sufficient time for the team's Communication Manager to review and revise the draft final report so that the various sections are written in a single, professional voice. The draft final report should be the team's first best effort to present its work!

5. Evaluations

Each individual on the team must complete self and peer evaluations and submit them to the Eco-E Project Coordinator by the last day of instruction for Fall Quarter. Results will be shared with the faculty advisors. This form will be provided to students via Canvas.

Teams must complete these deliverables by the end of Fall Quarter to the satisfaction of their faculty advisors. Failure to do so may result in a grade of C- or lower, or I (incomplete) or NG (No Grade) in ESM 402B until the work is completed.

C. ESM 402C (Winter Quarter)

Students must enroll in ESM 402C Eco-E Project for 4 units with their advisor in the Winter Quarter of the second year of study.

ESM 402C has a regular class schedule that meets once per week. In addition, students are required to schedule at least (1) one weekly meeting with all team members and (2) biweekly meetings with the primary faculty advisor.

The following academic deliverables are due in Winter Quarter (see timeline for dates):

a. Preliminary draft final report (Week 3)
b. Eco-E Project Faculty Review (Week 4)
c. Complete draft of Final Report (Week 7)
d. Self and peer evaluations (Last day of instruction for Winter Quarter)

e. Final Report (Last day of Winter Quarter)

Teams must complete these deliverables by the end of Winter Quarter to the satisfaction of their faculty advisors. Failure to do so will result in a grade of B- or lower, or I (incomplete) or NG (No Grade) in ESM 402C until the work is completed.

1. Faculty Review

On Friday of Week 4 of Winter Quarter (see timeline for exact date), each team presents its project for faculty review. By the end of Week 3, teams should submit their preliminary rough draft of their final report to their faculty advisors. The Faculty Review presentation is an opportunity for the students to describe their approach to solving an environmental problem and the data considered, preliminary results/findings from testing their proposed business model, lessons learned and next steps. The Faculty Review is a checkpoint in the Eco-E Project process so that students receive feedback from other Bren faculty in addition to their advisors; the primary emphasis is on objectives and technical approach, data availability, and preliminary results. Faculty reviewers may also help to identify data gaps or different approaches. At the time of the review, the project is still underway, and students should integrate feedback from faculty reviewers to the extent possible.

For the Faculty Review, teams will prepare a 20-minute presentation. The focus should be on the project's environmental significance and impact assessment, as well as the data, methods, and validated learning used to inform the proposed business model. Students also may include any outstanding questions for which they are seeking guidance. Following the presentation, two Bren faculty reviewers will engage students in 20 minutes of questions and discussion. It is recommended that no more than three team members present since speaker transitions are disruptive and generally reduce the effectiveness of the presentation, especially when there is limited time. However, three team members can present if the team works on seamless transitions between the speakers to reduce disruption. All members of the team must be in attendance and will be part of a panel seated in front of the audience. The entire team will participate in answering questions, as appropriate. Every team member must present during either the faculty review or public presentation; teams should discuss in advance who will present at these events.

Teams should expect questions and criticism from their reviewers that may result in some revisions to their final reports. It is not expected that the two faculty reviewers read the draft final report although some may choose to do so. It is the team's responsibility during the faculty review to explain their work to the faculty reviewers and audience. The faculty reviewers provide oral and written feedback to the team, summarizing the strengths of the project and/or recommendations for improvement. The Bren Projects Team will collect and distribute written feedback to the team members and faculty advisor(s).

The entire Bren School community is invited to attend the Master's Project Faculty Review Presentations. The Bren Projects Team makes all arrangements, including setting the presentation schedule, assigning faculty reviewers, and facilitating presentations and Q&A. The Bren Projects Team will provide a workshop on how to prepare for Faculty Reviews in early Winter Quarter. Teams should invite their external advisors to attend this presentation.

2. Final Report

The final report is a complete discussion of the project objectives, environmental problem-solution analysis (including background and significance), research methods and results, business model environment, proposed

business model and pivots based on validated learning, and environmental impact to be derived from the proposed business model. A rough draft of the final report must be submitted to the faculty advisors by the end of Week 3 and a complete draft of the final report must be completed by the end of Week 7. The revised final report is due at the end of Winter Quarter (see timeline for dates). The deadline for the final report is firm. If additional time is needed, the team must complete a formal petition including justification for an extension to the deadline.

The final report should reflect the team's ability to articulate in writing the 1) environmental problem-solution, 2) proposed business model, 3) scope of work, 4) analytical approaches, 5) results, 6) conclusions, and 7) how the business model would create a positive and measurable environmental impact. The final report must demonstrate that the team has the ability to create original interpretations of the work of others and/or generate original data that leads to original interpretations.

Conclusions in the report are to be based only on 1) original interpretation and synthesis of the work of others; 2) original data and interpretations of the data; and/or 3) a combination of 1 and 2. The unsupported expression of opinion in the final report is not appropriate. As noted earlier, the final report should provide an honest assessment of the state of science, communicating both pros and cons of each individual issue rather than advocating for a specific outcome or point of view. Students should present their data, results, and conclusions with the information needed to convince the audience and readers of the final report that all relevant evidence has been explored and analyzed before making conclusions. Students should analyze the pros and cons so the audience will understand and be convinced that the conclusions are justified. The final report should demonstrate that students understand both sides of each issue and the scientific basis for each choice or assumption.

The Final Report typically includes the following:

- Title page
- Completed signature page
- Table of contents
- Introduction
- *Project objectives
- *Environmental problem-solution analysis (background and significance)
- *Research methods and results
- *Business model environment (context, design drivers and constraints), including industry/market analysis and competitive analysis
- *Proposed business model, including discussion of business model pivots
- Environmental impact to be generated by the proposed business model
- Next steps for future research
- Appendix, including literature reviews and business model canvas(es)

*A draft of introduction, project objectives, environmental problem-solution analysis, research methods and results, business model environment, and proposed business model are due to the faculty advisors at the end of Week 3 of Winter Quarter. A complete draft of the final report is due to the faculty advisors at the end of Week 7 of Winter Quarter. The revised final report is due on the last day of Winter Quarter.

The final report should acknowledge any individuals or organizations that have supported the project in any significant way. Students must obtain their permission to include such acknowledgement; supporters have the right not to be publicly associated with the final report.

Adherence to accepted rules of citation is required. Teams should use the Chicago Notes and Bibliography style guide for all citations and use it consistently. Chicago footnotes are part of the "Notes and Bibliography" citation style. These footnotes are used to cite the sources you refer to in your text. Only readily retrievable sources are acceptable. The Chicago style includes the footnote and an alphabetical bibliography that lists all of your references. The bibliography can also include sources that you consulted but did not cite.

Interviews should be listed separately from written sources (i.e., "List of Interview"), following the Bibliography. For interviews, include the date of the interview, whether it was conducted in person or by phone, name of interviewee, name(s) of interviewer(s), and location for in-person interviews (or location of interviewee).

Teams should expect multiple revisions and iterations with the faculty advisor before their report is finalized. The Communications Manager should review all sections of the final report to make sure that the report is presented in a single and professional voice. It is not acceptable to submit a draft report that cobbles together several sections created by different team members without at least one team member having reviewed all sections to make sure that the style and level of detail are consistent throughout the report.

Students and advisors must discuss and agree upon a realistic timeline and have consistent expectations for the review process. Some advisors will expect drafts earlier and may require longer periods for review and comment than others. In general, students should expect that their advisors will require at least one week, but maybe two weeks, to thoroughly review the report. More than one iteration likely will be necessary before the advisors find the report to be acceptable. The project timeline must take into account the required iterations for review and revision of the report and other project deliverables. The team's faculty advisors likely will be the only people who read and provide feedback on the complete draft final report. Faculty reviewers at the project's Faculty Review (see below) are not expected to read the draft final report, although some may choose to do so. Some external advisors also may have the interest, time and expertise to review and provide feedback on some or all of the draft final report and/or other deliverables.

Final reports must not exceed 100 pages, and must be free of typographical, formatting, and other errors. All final reports must be formatted in compliance with "Bren School Filing Guidelines" (see Appendix II).

Once approved, each team must provide an electronic copy (PDF format) of the final report, including an unsigned signature page, to the Bren Projects Team and faculty advisors. Since the team's business model may be considered proprietary, the final report will not be posted to the Bren School website, unless all team members agree to publicly share the final report in the Master's Project Directory on the Bren School website. Students must submit a stand-alone copy of the signed signature page to the Bren Projects Team. The signed signature page is not posted to the website to protect personal information of students and faculty.

3. Evaluations

Each individual on the team must complete self and peer evaluations and submit them to the Eco-E Project Coordinator by the last day of instruction for Fall Quarter. Results will be shared with the faculty advisors. This form will be provided to students via Canvas.

D. ESM 402D (Spring Quarter, Second Year of Study)

Students must enroll in ESM 402D for 2 units with their primary faculty advisor in Spring Quarter of the second year of study. Students shall participate in meetings twice per week for the first 4 weeks of Spring Quarter with (1) all team members and (2) all team members and one of the faculty advisors. The following academic deliverables are due in Spring Quarter (see timeline for dates):

a) Executive Summary
b) Abstract and Acknowledgements
c) Final Presentation
d) Self and peer evaluations

At the end of the fourth week of Spring Quarter, the Bren School hosts a special public event featuring presentations of the Team and Eco-E projects. The School invites academics from other UCSB departments and other universities, environmental professionals, Corporate Partners, and other Bren affiliates, in addition to the entire Bren community and public at large. Teams should personally invite their external advisors and other professionals with whom they interacted over the course of their project. Students may also extend invitations to personal guests.

Teams must complete these deliverables to the satisfaction of their faculty advisor(s). Failure to do so may result in a grade of C- or lower, or I (incomplete) or NG (No Grade) in ESM 402D until the work is completed.

1. Executive Summary

The executive summary is a short (1-2 page) document that provides a concise overview of the Eco-E Project opportunity and articulates a compelling business model and investment opportunity (if applicable). The executive summary should convey the environmental problem tackled, expected environmental impact and/or conditions required to generate a positive impact, what kind of business you are in, the product or service offering, who the key players are, and what makes your venture unique amongst the competition. Developing an executive summary is a critical, foundational skill not only for entrepreneurs but also for any technical job or leadership role, including policy work, analysis, research, and outreach.

In composing an executive summary, convey the key elements of your venture opportunity:

- Environmental Problem Definition
  - Why is this venture important ("so what")? This should be at the top, in the first 2-3 sentences, and should be clear.
  - What environmental problem does this venture help solve, and why does that matter? Quantify the environmental problem and be specific about your addressable piece of the problem.
  - What deficiencies and/or needs exist that warrant your solution?
- Venture Description
  - Clearly define who you are, what you do and why you will succeed.
  - Explain why the *who* and *what* are truly unique.
  - In other words, explain why you will win and what is it about your team and the environment in which you operate that makes it easy to win (i.e., your market definition and value proposition).
  - Craft a complete business concept (i.e., positioning statement).
- The Opportunity
  - Explain clearly why the market opportunity is really big and/or why your target market is attractive.
  - What industry/market dynamics or key trends make this a compelling opportunity?
  - What is the size of your market?
- Your Solution (Product/Service)
  - Your unique approach and why it's extremely valuable to your customers.

  - Basic technology explanations or differentiated intellectual property (IP).
  - What unique, defensible IP do you have or will you build that allows you to be a leader in the category, if you are right about the market?
- Environmental Impact
  - What is your expected environmental (and social) impact?
  - How will you measure environmental impact?
  - What is your expected environmental impact for a given unit of sales?
- Team and Contact Info
  - List the founders and provide company contact info.
- Communication style
  - An executive summary should be:
    - tailored to a public audience, such as investors, partners, and future employers;
    - modern and visually appealing;
    - a stand-alone document; and.
    - 1-2 pages, including acknowledgment or logo of the venture.

Use a combination of figures, tables, graphics and text boxes to summarize the main points and engage a reader. Organize the information with headers, captions, and other signposts. Use of color is appropriate for an executive summary. However, the document should be designed to be legible if photocopied in black and white. The executive summary must include the Bren logo, the School name (Bren School of Environmental Science & Management, University of California, Santa Barbara), Eco-E Project members, faculty advisor names, and academic quarter in a clear and easy-to-read format. Use single-spacing for the body of the text of the executive summary. Use 11-point Garamond type (or comparable font), columns with 0.75-inch margins, flush left and right, and 0.5 inch between columns. Section headings should be in larger type.

A draft of the executive summary must be submitted to the faculty advisors by the second Friday in Spring Quarter (see timeline for dates). The faculty advisors should provide prompt feedback on the executive summary. Students should integrate the feedback and submit an electronic (PDF) copy of the final executive summary to the faculty advisors and Bren Projects Team by the end of the third week of Spring Quarter.

2. Abstract and Acknowledgements

The abstract is a one-paragraph brief summary of the Eco-E Project, meant for a non-technical audience. The length of the abstract should be roughly around 225-250 words. The Acknowledgements should include advisors, professionals, organizations, etc. that assisted the Eco-E Project. Each acknowledgment should include the person's name, title (if known), and affiliation/organization.

A template guide for the abstract and acknowledgments will be provided to students during the last week of Winter Quarter. Please note that the abstract and acknowledgments will be posted on the Bren website. An abstract, along with the project title, team members, advisor(s), and acknowledgments must be sent electronically to the Bren Projects Team by the end of Week 2 of Spring Quarter (see Eco-E Project timeline for the date).

3. Final Presentation

Master's Project final presentations celebrate the completion of innovative, leading-edge research and offer the opportunity for Bren MESM students the opportunity to share their work with the faculty, peers, potential employers, members of the community, family and friends. The final presentation should focus on the project findings and their significance. Final presentations contribute to the reputation and prestige of the Bren School

and, hence, on the value of the students' degrees. All 2nd year MESM students are expected to participate in the final presentations. Participants are advised to dress in business attire.

Each team has 25 minutes, which includes 13-15 minutes for the presentation and 10-12 minutes for questions. It is recommended that no more than three team members present, since speaker transitions are disruptive and generally reduce the effectiveness of the presentation, especially when there is limited time. However, three team members can present if the team works on seamless transitions between the speakers to reduce disruption. All members of the team must be in attendance and will be part of a panel seated in front of the audience. The entire team will participate in answering questions, as appropriate.

The audience at the final presentations is different than the audience at the Faculty Review presentations. The final presentations need to be understandable to a diverse team (employers, experts, non-experts, family, and friends, etc.). This does not mean that it is necessary to "dumb down" the presentation. However, students should prepare a presentation for an audience that is more interested in substance and findings and less interested in, for example, analytical methods or data management.

4. Evaluations

Each individual on the team must complete self and peer evaluations and submit them to the Eco-E Project Coordinator by the last day of instruction for Fall Quarter. Results will be shared with the faculty advisors. This form will be provided to students via Canvas.

5. PROJECT EVALUATION

A. Faculty Evaluation of Students

Each student on the team will receive a separate grade for each quarter of the project (ESM 402A, 402B, 402C, 402D). If a team performs well together, it is likely that all team members will receive the same grade, but this is not guaranteed.

Student performance on an Eco-E Project is evaluated and graded based on demonstrated depth of understanding, critical thinking, interdisciplinary approach, originality, external development, resourcefulness, professionalism, and communication skills. Specific criteria that faculty advisors will use in assigning project grades include:

1. Depth of understanding. A working understanding of the published literature and facts immediately relevant to the project. A literature review on the environmental problem should be largely completed by the end of Spring Quarter of the first year. A literature review on environmental impact of the proposed business model should be largely completed by the end of Fall Quarter of the second year.

2. Critical thinking. A critical perspective on the quality and shortcomings of prior work relevant to the project. This should include an identification of attempts to answer similar questions in other contexts. This critical review should be at least 50% completed by the end of Spring Quarter of the first year of study and fully demonstrated by the fall progress review.

3. A critical perspective on the viability of the business model. This should include analysis of lessons learned through customer research.

4. Knowledge and synthesis. A working understanding of the social and natural science dimensions of the issues and an aggressive plan for integration of these dual perspectives into the project. This should be demonstrated at a level of 75% by the end of the Spring Quarter of the first year and 100% by the beginning of Winter Quarter of the second year.

5. Originality. The originality of analysis, problem formulation, and scope of work. This should be demonstrated throughout the project.

6. Professional Relationships. Formation of working relationships with industry experts and environmental professionals outside of the Bren School. In some cases, external advisors may be identified when the Eco-E Project is proposed. In other cases, students may have to identify external advisors who can benefit the Eco-E Project. This should be completed by the beginning of Fall Quarter of the second year of study.

   Team members shall demonstrate the highest level of professionalism and respect in their dealings with each other, their faculty advisors, external advisors and other stakeholders.

7. Resourcefulness. Throughout the project, students shall demonstrate initiative in finding information, performing customer discovery research, testing business model hypotheses, seeking outside advisors, and establishing internships for themselves, as appropriate.

8. Punctuality. Students shall deliver intermediate and final products on schedule.

9. Knowledge and analytical thinking. Students shall gain knowledge about the environmental problem, conduct a rigorous scientific analysis and produce well-reasoned conclusions and recommendations.

10. Communication skills. Oral presentations and written reports shall be well-organized, professional, and well-communicated. Each team member must co-present the work orally, either at the Faculty Review or Final Presentation, and be present and participate in both events.

    All team members, particularly Project Managers, are expected to communicate concerns and issues with each other and their faculty advisors in a timely manner.

11. Participation. Students shall participate and actively contribute in meetings, training sessions, and events.

B. Student Evaluations of Faculty Advisors

At the end of the project, all Eco-E Project members should complete an evaluation for their faculty advisors and submit it to the Bren Projects Team (see Appendix I). The Bren Projects Team compiles all comments for anonymity and provides them to your faculty advisors only after the final grades for ESM 402D are issued.

In the event that there are any serious advising problems mid-way through the project, this should be brought to the attention of the Bren Projects Team or the Assistant Dean. These staff members understand and are committed to respecting privacy and anonymity in working with students to try to find solutions to problems.

6. CREATING A PROJECT BUDGET

Each Eco-E Project is allotted $1,000 as a base budget, and up to an additional $200 for printing on Bren School printers. The Financial Manager (FM) for each team must attend a meeting with the Bren School's Finance Team in the spring of the first year of study in order to activate the team's account.

Each team must create a budget for its project, estimating expenses to the best of their ability and accounting for phone calls, travel, software, datasets, laboratory fees, business cards, reference books, presentation materials, photocopying, publication expenses, and a printed copy of the final report (if requested by the faculty advisors). The budget is for reasonable expenses directly related to the Eco-E Project.

Bren School Purchasing Procedures: https://bren.ucsb.edu/purchasing

Please note: There are numerous restrictions to the use of Eco-E Project funds provided by the Bren School. **These funds cannot be used (****see exception below***) to pay for gifts, awards, or donations. There are strict eligibility requirements related to hiring. The team's Financial Manager must discuss all potential hires with the Bren School's Business Officer before proceeding with the hire. Restrictions related to the use of funds for food and beverages are as follows:**

- Funds may only be used for food and beverages associated with entertainment/business meetings if (1) prior approval is obtained from the Bren School's Business Officer; and (2) the entertainment is associated with a meeting that includes other people who are not from the University (i.e., external advisor). **The funds cannot be used to provide food and beverages for meetings that include only UC personnel and/or students**. Your client must be in attendance for food/beverage to be reimbursed. If you do not have a client or external advisor, food/beverages will not be reimbursable at team meetings. There are NO exceptions to this UC policy.
- Funds may only be used for food and beverages related to travel if the travel conforms to UC travel policies (https://bren.ucsb.edu/travel).

**Under special circumstances, the team can request an exception to policy for expenditure for a gift. However, a request for an exception to the policy must be made to the Bren School's Business Officer in advance of the expenditure and approval is not guaranteed.*

Bren School Financial Unit

- The Bren School's Financial Manager is the primary contact for budget matters related to Eco-E Projects. The Financial Manager is Bridget Mastopietro (finance@bren.ucsb.edu; bridget@bren.ucsb.edu); Bren Hall 2516; 805-893-3540.
- The Bren School's Purchasing Coordinator processes purchase orders and reimbursements for items associated with Eco-E Projects (purchasing@bren.ucsb.edu) and paperwork related to travel (travel@bren.ucsb.edu) associated with Eco-E Projects.

Eco-E Project Financial Managers

Each team must designate one person to serve as the team's Financial Manager (FM). The list of student Financial Managers will be provided to the Bren School's Finance Team and an informational/training meeting for student Financial Managers will be scheduled to discuss policies and procedures.

A. Project Codes

Each Eco-E Project is assigned a unique Project Code. A Project Code is an account number in the School's internal accounting system designated to track expenses. Each Project Code number looks something like "GP087." Team members must use this Project Code to identify charges (Purchase Orders (PO), faxes, phone calls, petty cash receipts, lab fees, etc.) for appropriate allocation and/or reimbursement.

B. Expense Tracking

The student Financial Manager will use Concur to process reimbursements. The student Financial Manager also will receive login information for GUS, the school's internal accounting system used to track expenses. Students may log into GUS at any time to check their team's budgetary activity. The student Financial Manager will be responsible for tracking, managing, communicating about, and updating the team's budget. If expenses (phone, copies, travel, etc.) exceed the budgeted amount or do not conform to University policy, reimbursement requests will be returned and the team members will be responsible for funding the activity. Please note: There may be a delay from the time a team makes a purchase or submits a reimbursement request to when it is posted in GUS. It is important for the student Financial Manager to independently record and track all expenses for the team to avoid exceeding the project budget. Students are responsible for paying expenses above the project budget or not in compliance with UCSB and Bren School policies.

C. Printing

Each team receives up to $200 for printing on *Bren Hall* printers. These funds must be transferred to the individual printing accounts of Eco-E Project members. If teams require more than $200 for Bren printing, then teams must request a transfer of some of their project funds to printing accounts. If there are not adequate funds remaining and teams require more printing, they will have to pay for it themselves and the charge will be billed to students' BARC accounts.

D. Copying

Bren copiers are for staff and faculty use only. Copying may be done at Davidson Library or the University Center.

E. Visitor Parking Permits

Visitors may purchase short-term "ePermits" from Pay Stations in visitor parking lots. The vehicle's license plate will serve as the parking permit. Customers purchasing parking through a Pay Station are no longer required to display the "dispenser permit" on the vehicle dashboard.

The student host also may purchase a parking permit on behalf of their guest. Requests for VIP parking permits must be made **14 business days in advance as required by UCSB Transportation and Parking Services (TPS)** and must include the vehicle make, model, license plate number, and license plate state within the request. Requests for visitor ePermits made less than 2 weeks in advance cannot be guaranteed. "Guest permits" are $8.00 and give visitors access to visitor parking lots only (no access to Lot 1). "VIP permits" are $10.00 and give visitors access to both visitor and staff parking lots (access to Lot 1). Reserved parking (where a parking spot is designated for the visitor near Bren Hall) is more expensive ($30/day) and should be used only when the visitor is an extremely important individual with a time constraint.

F. Purchasing

All purchasing must be processed through the Bren School Purchasing Coordinator. The preferred purchasing method is to email purchasing requests and the team's project code to purchasing@bren.ucsb.edu so the Purchasing Coordinator can place the order. Another method of purchasing is to use personal funds to purchase the item and then submit a reimbursement request. Original receipt(s) are required for all expense claims. Student Financial Managers should understand purchasing policies and procedures (https://bren.ucsb.edu/purchasing) and ensure that their team abides by these rules. ***Please note:*** **Any non-consumable items purchased by the team with project funds are the property of the Bren School and must be returned to the school at the close of the project (e.g., an external hard drive). Purchase of clothing for Master's Project Final Presentations or other project-related activities is not allowed.**

G. Reimbursement

If a vendor doesn't allow online payment through FlexCard or through a Gateway PO, team members may use personal funds and then submit a receipt to the Purchasing Coordinator to be reimbursed. **Please note: Business Expense Reimbursements should always be a last resort, and your Department should direct everyone to use Gateway or use your Department Flexcard for these kinds of purchases.** There is a new process for submitting reimbursement requests through Concur. If you are a UC employee, please refer to https://bren.ucsb.edu/purchasing for detailed guidelines on how to complete a Business Expense Report and an Entertainment Report. If you are not a UC employee, please contact purchasing@bren.ucsb.edu for reimbursement requests. Teams have access to their Eco-E Project funding until the last day of Spring Quarter of the second year of study. Receipts should be submitted at least two weeks before the end of Spring Quarter to ensure sufficient time for processing.

H. Travel

All travel must be processed through the Bren School Financial Office. Student Financial Managers should familiarize themselves with the Bren School Travel Regulations. Questions regarding travel should be sent to

travel@bren.ucsb.edu. All travel reimbursement claims must be submitted to the Bren School Travel Coordinator no later than 30 days upon completion of travel to allow time for internal processing and transfer to the UCSB Central Accounting Office in time for the 45-day UCSB processing deadline. More information on travel can be found on the Bren website here: https://bren.ucsb.edu/travel

I. Outside Funding

Most Eco-E Projects do not require outside funding and are able to fully complete the scope of work within the budget provided by the Bren School.

Gifts

In limited circumstances an external funding source may wish to make a contribution to support an Eco-E Project. In this case, please contact the Bren School's Assistant Dean for Development, Lotus Vermeer, lvermeer@bren.ucsb.edu. It is imperative that individuals and organizations are NOT solicited for gifts. **Active fundraising by students without guidance from the Assistant Dean for Development is NOT appropriate.** Any discussion about potential gifts to the Bren School should be directed to the Assistant Dean for Development. A gift cannot have deliverables of any kind. If there are deliverables, or if there is paperwork to be signed, it is highly unlikely that it is a **gift**. No Bren student or faculty member has the authority to sign paperwork related to the acceptance of money.

If a gift is received to support a particular Eco-E Project, then a special Project Code will be created for the team to access these funds. If there are funds remaining at the end of the project, they will return to the Bren School general fund.

Keep in mind that federal agencies, other governmental agencies, and many non-governmental organizations cannot give money in the form of a gift. In this case, any funds contributed toward Eco-E Projects should either be managed by the agency or organization (strongly recommended) or directed to UCSB as a contract or grant.

Grants/Contracts

A contract or grant is used when money is given to the University for a specific deliverable(s). Given the complexities of submitting proposals for contract and grant funding, the length of time it tends to take to process proposals and ultimately receive funds, and the high overhead rate, it is far better if the Bren School receives funding to support Eco-E Projects in the form of a gift or, better yet, if the client manages the funds directly. Please note that grants and contracts are required to provide for indirect (overhead) costs, which are 55.5% of the award, to be paid to the university; gifts are assessed at 6% overhead. If an Eco-E Project external advisor would like to provide a grant or contract to the school, please direct them to the Business Officer. No Bren student or faculty member has the authority to sign agreements related to the acceptance of money.

7. COMPUTER RESOURCES

The following describes computer resources available for each Eco-E Project and recommended management practices. Most of these suggestions do not require any special privileges; those that require the involvement of the Bren School Compute Team are clearly noted.

A. Data Manager and Communication Manager

Each team should designate a Data Manager (DM) who will have primary responsibility for maintaining the team's shared online information and adhering to the team's Data Management Plan. Designating a single Data Manager ensures that a team's information is consistent by allowing only the manager to modify it (except as specifically described below). The Data Manager should also be responsible for briefing team members on the use of directory and file permissions and managing information within the team's information architecture.

Each team should also designate a Communication Manager (CM). The CM will manage public communications on behalf of their team. CM responsibilities may include writing the short project summary for the Bren GP website in Spring Quarter of the first year, preparing educational materials about the project, maintaining a public blog or social media posts, presenting a Flash Talk presentation for the MESM class at the beginning of Fall Quarter of the second year, and taking the lead to draft the 1-2-page executive summary in Spring Quarter of the second year. The CM is responsible for attending relevant training workshops, ensuring the team's research narrative is strong in both the Final Presentation and Final Report and is the team's primary editor on all final deliverables to ensure these materials are presented in a cohesive and professional voice. The CM also serves as the lead in discussing outreach options and working on any required outreach materials for their project (not mandatory, variably applicable).

B. Project Alias

Each team chooses a short alias (less than 20 characters) for their project. The alias is used to label the project's online artifacts (directories, mailing lists, etc.) and identify the project in shorthand. The alias should be professional and should reflect some aspect of the team's research topic.

C. Team Email List

Each team will be added to an email list for their project; the email is gp-alias@bren.ucsb.edu. This will be used as a contact email for the entire team and is accessible to Bren staff and outside parties. Teams can also make an internal list for only team members and/or their advisors as necessary. Directions for setting up a Google Team are located here: https://bren.zendesk.com/hc/en-us/articles/115002102646-How-do-I-get-an-email-list-for-my-group-project.

D. Shared Directory

The Bren School Compute Team will create a directory on the shared drive for each Eco-E Project. The shared directory will be named "[alias]," and will be housed on a Bren School Windows server (esm.ucsb.edu). This shared directory will be accessible from all Windows systems in the ESM domain via \\esm.ucsb.edu\groupsprojects\GroupProjects2026**[alias]**. For Eco-E Project members, this will be mapped to G:\. The pathname **"**gpshare" in the remainder of this document refers to this shared directory.

E. Team Access Permissions

The Bren School Compute Team will create a Windows team for each Eco-E Project, named "[alias]." The members of these Windows teams will be the student members of each team, and if requested other parties, such as faculty advisor(s). Unless otherwise specified, all files and directories discussed in these guidelines will be owned by the team's Data Manager. The Data Manager has the ability to modify team access permissions, while other members do not. The Data Manager and all team members are responsible for ensuring that the Windows team "EsmSystemAdmins" retains "full control" permissions on all directories within the Eco-E Project's directory structure that the team wishes to be backed up. Without appropriate permission, regular backups of a team's electronic files will not occur, and lost files will not be recoverable. Students can access the permissions for a folder or files by right-clicking on it → Properties → Security.

F. Working Documents (Recommended)

Each team's Data Manager may create a team-writeable directory GPSHARE\workdocs, under which each project member may create their own subdirectory GPSHARE\workdocs\member. These subdirectories should be readable by a team's Windows team, but writeable only by the owner and the Data Manager. The protocol for collaborating on a document is as follows: Each collaboratively authored document should be assigned a lead author who is responsible for maintaining the master copy. Each collaborator should be free to place components or edited versions in their own GPSHARE\workdocs\member\document subdirectory, where the document has a unique name, assigned by the document's lead author. It should be the lead author's responsibility to synthesize the final version of the document for submission to the Data Manager to post for the team members to read.

G. Library (Recommended)

Each team's Data Manager may create a team-writeable directory GPSHARE\library, in which team members can place static (i.e., read-only) documents for the project to share. Team members should give the Data Manager the files that they would like to house in the Library. This directory should be "read-only" for all team members with the exception of the Data Manager.

We suggest that Data Managers follow the recommendations below while preparing files and organizing their project folder(s):

- Data licensing
- File formats
- File naming
- Project folder organization
- Code documentation
- README

H. Calendar (Optional)

Each team's Data Manager and/or other specified team members may maintain a project calendar for project events and deadlines, Google Calendar, etc. Each student has an individual Google Calendar account, which can be used to propose Eco-E Project meetings, etc. Please remember that when using individual accounts, only the person proposing the meeting may make changes to the meeting. Therefore, one person should be selected to schedule meetings. For more Google Calendar information, visit: https://bren.zendesk.com/hc/en-us/sections/201311245-Google-Calendar

I. References

Each team's Data Manager may maintain a shared file of bibliographic references that will be incorporated into project reports, papers, etc. Some teams choose to use an online citation manager; basic accounts are often free.

Appendix I

Evaluations

Peer & Self Evaluation:

The team evaluation form will be submitted via Canvas. The form template will be posted on Canvas near the end of each quarter. Results will be send to the faculty advisors.

Faculty Evaluation:

The faculty evaluation will be submitted via Qualtrics. The Bren Projects Team will send a link to the survey in Week 5 of Spring Quarter of the second year of study. Survey results will be kept anonymous, compiled in summary format, sent to advisors after Spring Quarter grades are issued, and recorded in personnel files.

Appendix II

Formatting & Filing Requirements for MESM Eco-E Project Final Reports

Responsibility for the content of the Final Report

The team members and faculty advisor(s) are responsible for the content of the final report. The faculty advisor must review the entire draft report before giving final approval. This review includes:

- All preliminary pages or front matter (e.g., preface, dedication, acknowledgments, etc.)
- The main body of the report (including figures, charts, or other inserted matter)
- The back matter (e.g., notes and bibliography, appendices, etc.)

In general, no changes may be made to the final report after the faculty advisor(s) have signed the signature page. If changes are necessary after the faculty advisor(s) has approved the report, the team must have their advisor sign a new signature page.

The organization, presentation, and documentation of each Eco-E Project must meet the standards set by the faculty advisor(s) and the Bren School. For general information, students may consult a standard style guide; The University of Chicago Manual of Style is recommended as an authoritative source. Students who have discipline-specific questions should consult their faculty advisor(s).

Eco-E Project title and signature page requirements

Title page requirements

Each Eco-E Project final report must include a title page with the following information:

- Title of the Eco-E Project
- "Master of Environmental Science and Management" as the students' degree objective
- Bren School of Environmental Science & Management, University of California, Santa Barbara
- Names of team participants (alphabetical order recommended) and faculty advisor(s)
- Month and year the final report is signed by the faculty advisor(s)

Bren staff will link each Master's Project on the Bren School website by graduating year.

Signature page requirements

The format of the signature page is displayed in Appendix IV. The signature page should be placed immediately following the title page. The signature page should not be numbered but should be counted toward subsequent numbering.

Due to concerns over privacy, if an Eco-E Project final report will be posted to the Bren website, students should include an unsigned signature page in the .pdf of their final report. The unsigned signature page must include the typed names of students, in alphabetical order, followed by a section with names of faculty advisors, also in alphabetical order. "This Eco-E Project is approved by:" must appear immediately above the faculty advisor(s)' names. The approval page must contain the month and year the project is signed by the faculty advisor(s).

Eco-E Project faculty advisors and project members must sign a stand-alone copy of the signature page and submit it to the Bren Projects Team. All signatures must be by digital signature (e.g., DocuSign) or black or blue ink (no other

color ink is acceptable). The typed name of the person signing must appear immediately to the right of or below the signature.

Standards for Eco-E Project title

The Eco-E Project title should use specific, unambiguous, descriptive words that will ensure electronic retrieval. Do not use formulae, symbols, superscripts, Greek letters, or other non-alphabetical symbols in the title. Eco-E Project titles should represent a summary of the research and not be lengthy. Titles that contain more than 10 words are considered wordy. Subtitles should be used only when absolutely necessary.

Dates on title and signature pages
The approval/signature page and the title page must have the month and year the project is signed by the faculty advisor(s).

Table of Contents
A table of contents is required. The table of contents should include the major chapters, subchapters, figures, and tables.

Other preliminary pages, such as those for acknowledgments or lists of figures and charts, are optional.

Abstract
An abstract is required. It should provide a brief synopsis of the research and be succinct (225-250 words). The abstract should be placed following the table of contents and any optional preliminary pages (i.e., acknowledgments).

The table of contents, other preliminary pages, and abstract must meet all formatting requirements delineated below. All preliminary pages, with the exception of the title page and approval (signature) pages, must be numbered with lower case Roman numerals beginning with Roman numeral iii; see below for additional information on pagination and placement of page numbers.

Key Words
Select up to **10 keywords** to describe the project.

Legibility and appearance
The final report must be produced using a font that is highly legible and dark enough that it can be reprinted clearly.

Dimensions
The final report must be formatted to letter size (8.5 x 11 inches).

Margins
The following are minimum margin dimensions. The team may set larger margins but must be sure that the final text is well within these guidelines.

LEFT = 1.25 inches (this margin is wide for binding requirements)
TOP = 1 inch from the top of the paper
RIGHT = 1-inch
BOTTOM = 1 inch from the bottom of the paper

Aside from page numbers, nothing must intrude into the margins. These minimum specifications also apply to all figures, charts, graphs, illustrations, and appendices. When oversize pages are used, the same margin measurements must be maintained.

Page Numbers

Page numbers should be centered on the page 0.75 inches from the bottom edge of the page. The placement of page numbers must be consistent throughout the final report. Provide space between the text and the page numbers.

Pagination

Every page must be numbered consecutively. Except where noted below, each page of the entire final report must be numbered in accordance with the following standards:

Neither the title page nor the signature page is to be numbered; however, these two pages are counted when numbering the following preliminary pages even though they are not numbered.

The preliminary pages following the title and signature pages must be numbered sequentially beginning with the lower case Roman numeral "iii." All preliminary pages are to be numbered using lowercase Roman numerals (iii, iv, v, vi, etc.). This includes dedications; table of contents; lists of figures, tables, symbols, illustrations, and photographs; prefaces; acknowledgments; and abstract.

The main body of the text and any back matter must be consecutively numbered with Arabic numerals (1, 2, 3, etc.), including text, illustrative materials, bibliography, notes, and appendices.

Correct pagination is required for the final report to be acceptable: no missing pages, blank pages, or duplicate numbers or pages.

Line Spacing

The final report should be single-spaced with double spacing between paragraphs and sections.

Single spacing also should be used in those places where conventional usage calls for it, i.e., title page; figure, table, and photo captions; footnotes; indented quotations; and bibliography. When individual footnote or bibliographic entries are single-spaced, there must be double spacing between entries.

Fonts and Font Sizes for the Text and Notes

A font size of at least 12-point must be used for the basic report text. Standard fonts such as Arial, Century Gothic, Helvetica, Verdana, Tahoma, or Times are recommended.

A font size of at least 10-point must be used for footnotes and captions. Script, calligraphy, and specialized art fonts are not acceptable for the main body of the text.

Italics may only be used for quotations, headings, labels, book titles, foreign words, scientific names, or occasional emphasis. Fonts for appendices, charts, drawings, graphs, and tables may differ from that used for the text. The print should be letter quality with dark black characters that are consistently clear and dense.

Filing the Eco-E Project Final Report

Once the faculty advisors approve and sign a team's project, no changes can be made to the final report. The final report, including the completed signature page, must be submitted in electronic (.pdf) format to the Bren Projects Team by the end of Winter Quarter. A petition is required for late submissions. The final report will not be linked on the Bren School website unless the team has given permission to the Bren School to make the final report available online. Please contact the Group Coordinator with any issues or questions about these guidelines.

The Bren Projects Team will review each final report to verify that it meets the filing standards and will notify each team if corrections are necessary.

FORMATTING & FILING CHECKLIST

CHECKLIST AREA	BREN REQUIREMENT
Legibility	Clear and legible font used.
Dimensions	8.5 x 11 inches (exceptions made for oversize or special materials).
Number of copies	One electronic (.pdf) copy of final report for Bren School
Margins	Left margin at least 1.25 inches; top line of type, right margin, and bottom line of type at least 1 inch from edge. Other than page numbers, nothing intrudes into margins.
Page Number Placement	Page numbers placed 0.75 inches from bottom edge of pages and consistently placed throughout the report.
Pagination Standards	Each page of the final report numbered (except title and approval pages). No missing, blank, or duplicate numbers or pages. Lower case Roman numerals used on preliminary pages. Arabic numerals used to number text and back matter.
Numbering of Preliminary Pages	Title and approval pages counted but not numbered. Subsequent pages (e.g. the table of contents) numbered beginning with Roman numeral iii.
Spacing Between Lines	Text single spaced, except where conventional usage calls for only single spacing (title page, long quotations, etc.) or double spacing (between paragraphs and sections).
Fonts & Font Sizes	A font size of at least 12-point for preliminary pages and text. A font size of at least 10-point for footnotes and captions. Use of standard font recommended.

Dates Used On Approval and Title Pages	Month and year the faculty members will sign the approval and title page.
Abstract	Not to exceed 225-250 words
Standards Governing Titles and Taglines	Concise titles and taglines (strive for no more than 10 words). Easily identifiable keywords that summarize research. Word substitutes replace non-alphabetical symbols in scientific titles.
Faculty Signature on Approval Pages	Faculty advisor(s)' signatures either electronic via DocuSign or in black or blue ink.
Responsibility for Content	Students and faculty advisor(s) responsible for all content of the final report. Primary faculty advisor(s) must review the entire final report before signing.

Appendix III

Sample Final Report Title Page

UNIVERSITY OF CALIFORNIA

Santa Barbara

PROJECT TITLE

A Eco-E Project submitted in partial satisfaction of the requirements for the degree of

Master of Environmental Science and Management

for the

Bren School of Environmental Science & Management

by

MEMBER NAME
MEMBER NAME
MEMBER NAME
MEMBER NAME
MEMBER NAME

Committee in charge:
ADVISOR NAME
ADVISOR NAME
(if more than one)

MONTH AND YEAR OF FILING

Appendix IV

Sample Final Report Signature Page

PROJECT TITLE

As authors of this Eco-E Project report, we archive this report on the Bren School's website such that the results of our research are available for all to read. Our signatures on the document signify our joint responsibility to fulfill the archiving standards set by the Bren School of Environmental Science & Management.

_____
MEMBER NAME

_____
MEMBER NAME

_____
MEMBER NAME

[The faculty advisor may change this statement prior to submitting this report].

The Bren School of Environmental Science & Management produces professionals with unrivaled training in environmental science and management who will devote their unique skills to the diagnosis, assessment, mitigation, prevention, and remedy of the environmental problems of today and the future. A guiding principle of the Bren School is that the analysis of environmental problems requires quantitative training in more than one discipline and an awareness of the physical, biological, social, political, and economic consequences that arise from scientific or technological decisions.

The Eco-E Project is required of all students in the Master of Environmental Science and Management (MESM) Program. The project is a year-long activity in which small teams of students conduct focused, interdisciplinary research on the scientific, management, and policy dimensions of a specific environmental issue. This Eco-E Project Final Report is authored by MESM students and has been reviewed and approved by:

_____
ADVISOR

_____
ADVISOR

_____
DATE

Appendix V

Sample Eco-E Project Budget

ITEM	COST
Conference Calls	$30
Review Meeting Refreshments (permitted only with non-UCSB personnel present)	$50
Software	$340
Presentation expenses	$50
Conference attendance	$260
Administrative supplies	$20
Business cards	$60
Travel / Site visits	$190
TOTAL	$1,000
Printing*	$200

* Printing budget is fixed at $200 to an individual in the Eco-E Project.