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1. INTRODUCTION

These guidelines define the Bren School’s expectations for student Group Projects. Included in these guidelines are explanations of the Group Project process, timeline, and required deliverables.

Group Projects are a unique and important component of the Bren School’s approach to environmental science and management. The School developed the Group Project process in direct response to prospective employer requests that Bren graduates possess “real world” skills. These skills include excellent academic training, but also the ability to successfully work and communicate as a member of a team and manage a professional project. The Group Project provides students an opportunity to work together to design, propose, conduct, and present professional interdisciplinary environmental research. Without exception, all students pursuing the Master’s of Environmental Science and Management (MESM) degree must successfully complete a Group Project.

Students are expected to collaborate with outside entities (industry, government, NGO’s) that have a problem that can be successfully addressed and solved by the group project.

All groups are encouraged, but not required, to present their Group Project findings in formal conferences outside the University. Participation in such conferences gives students valuable experience and increases the visibility of the Bren School and its students.

2. GENERAL INFORMATION

The number of Group Projects depends on the number of students in each incoming class. Generally there are 10 to 12 groups per class. Cooperation between groups is not required but expected. The product of each group and how well it serves the environmental problem at hand is should be the focus not competition between groups.

A. Group Project Timeline
Students begin their Group Project in the spring quarter of their first year of study and complete their project at the beginning of spring quarter of their second year of study. A detailed timetable is provided in Appendix I. Working with their advisors, groups will define their own deadlines for intermediate products.

B. Academic Units and Grading
Students obtain 12 units for their Group Project by enrolling in ESM 401A, B, C & D. Students must register for ESM 401A, B, C & D. Grading is on an “in progress” basis; i.e., the grade given the last quarter automatically applies to all quarters. In the meantime, an “IP” grade appears on the transcript. It is not necessary to give all students in a project the same grade, though advisors may choose to do so.

At the end of spring and fall quarters, the faculty advisors will prepare a written evaluation on the performance of the students on the group project. This can be one report for the group as a whole or reports may be done on individual group members, at the discretion of the advisors. These are unofficial evaluations, which do not appear on the UCSB transcript; however, they should provide valuable feedback on student performance. Furthermore, they reflect advisors’ assessment of
performance and thus may be reflected in the grade ultimately given at the end of the project.

Students must ultimately achieve a grade of B or better on their group project. The group project requirement for the MESM degree also requires faculty advisor signatures on the cover page of the report. Even if passing grades are assigned, advisors may withhold their signatures until the group project is fully completed, to the satisfaction of the faculty advisors.

C. Student Time Commitment
Students should expect to devote on average 12 hours a week to their Group Project. Progress on Group Projects should be allocated over the four quarters to avoid excess workload during winter and spring quarters.

D. Summer Group Project Work
Students are encouraged, but not required, to continue some level of work on their Group Projects during the summer. Groups should consult with their faculty advisors during spring quarter to develop a summer work plan. In addition, some Group Projects have summer internships associated with them.

E. Deliverables
The major deliverables for the group project are a proposal, a final report, a 4-page summary of the project, and a poster and oral presentation.

3. COMPOSITION OF THE GROUP PROJECTS

A. Group Members
Each group will be comprised of 4 to 6 students with complementary interests, skills, and backgrounds.

B. Faculty Advisors
Each Group Project is assigned 1-2 faculty advisors who monitor progress and provide technical assistance, expertise, and project evaluations. The faculty advisor(s) assign interim and final project grades. However, project leadership and management and the quality of the final product are strictly the students’ responsibility.

The group project faculty advisors play a role in the group project somewhat different than in other educational settings. Faculty advisors do not serve as project managers; their role is more similar to that of a consultant. The advisors will attend the regular weekly meetings of the group and be responsible for grading. The advisors may offer reactive advice, reacting to activities in the group and giving advice when asked. The advisors may also give proactive advice, though, only regarding gross deficiencies and deadline problems. It is important that students understand the role of the advisors and the limited, though important, role they play in directing the project.

Each faculty advisor will have his/her own unique approach. Students should expect variability in engagement, expectations, and feedback from one advisor to the next. Each group should work with their advisors during the first quarter to clarify how their advisors will interact with them and include this information in the management plan.

C. Group Project Faculty Supervisor
Starting in the fall of 2003, Group Projects will no longer have a Faculty Supervisor. The Group Project process will now be overseen by the MESM Committee. Any
questions or concerns regarding your group should be presented to the Coordinator (see below), who will forward the information on to the MESM Committee for discussion, as needed.

**D. Group Project Coordinator**
The Group Project Coordinator is a staff member who serves as a liaison between the students, faculty advisors, and the MESM Committee to assist all parties in facilitating the Group Project process.

**E. Room Scheduling Requests**
Requests for meeting rooms and media equipment should be directed to the Bren School’s Course and Event Support Assistant (Connie) connie@bren.ucsb.edu. Please note that requests must be received 48 hours in advance or there is no guarantee that they will be processed in time to meet your needs.

**F. Outside Advisor**
Interacting and networking with the professional community is a critical component of the Group Project process. Consequently, Group Projects are expected to obtain the counsel of outside advisors (individuals from government agencies, industry, non-profits, private citizens) who may have a considerable interest in the projects, data, or deliverables. Each Group will be responsible for identifying outside advisors and maintaining professional contact with them for the duration of the project.

**G. Stakeholders**
Some projects will involve stakeholders (government agencies, private citizens, industries, and so on) who will either have a considerable interest in the project and/or the resulting data. There may be confidentiality, proprietary data, legal, and intellectual property, and/or political issues that will need to be carefully addressed by the Groups. Students must respect the privacy of these stakeholders in a professional manner.

**4. PROJECT MANAGEMENT**

**A. Group Meetings**
Groups are encouraged to meet as often as necessary, but all groups must commit to meet at least once a week at a designated place and time. The faculty advisor(s) are expected to participate in the weekly meeting. However, it is the responsibility of the students, not the advisors, to schedule the meetings and make necessary arrangements. Advance notification of absences to the Group is expected as a matter of courtesy. Participation in the group meetings is a portion of each student’s grade; thus missing meetings may negatively affect the overall grade. Contact the staff Course Support Assistant (connie@bren.ucsb.edu) to schedule a meeting room when a time as been agreed upon.

**B. Conflict Resolution**
The primary responsibility for conflict resolution lies with the Group Project members. The faculty advisors should help resolve any issues that cannot be adequately addressed by the group members. If, after faculty arbitration, a Group is still unable to resolve a conflict, they may seek assistance from the Group Project Coordinator, who will consult with the MESM Committee. Students may also wish to contact the UCSB Mediation Program at 893-8571 for assistance. Trained mediators are available at no cost throughout the year. Their mediation techniques are informal, confidential, and impartial.
If students are having trouble with a member of their group, it is critical that they maintain written documentation of the problem. For example, if one member of a group is a "slacker", (not doing their share of work or not providing timely products or products of adequate quality), the rest of the group must document dates of specific incidences, what efforts were made to address the problem, and examples that support accusations. Only under these circumstances, will it be possible for Group Project administrative personnel to intervene and assist in crafting a solution or dispense a penalty.

5. PROJECT DELIVERABLES

Refer to Appendix I for a summary of the deadlines and deliverables

ESM 401A (Spring Quarter)

Students begin their Group Projects in spring quarter of their first year of study. At this time, students must register for ESM 401A (Group Project in Environmental Science and Management). Students will earn 3 academic units upon the successful completion of the course. The School expects students to be actively involved with their group throughout the duration of the yearlong project.

A. Project Proposal

During spring quarter, each group prepares a written project proposal, limited to 15 single spaced pages,\(^1\) that contains the following information:

- Title Page
- Abstract (not to exceed 200 words)
- Executive summary (not to exceed two pages)
- Clearly stated objectives. Be concise regarding the specific objectives
- Significance of project. Why does anyone care?
- Background Information
- Approach. This section lays out the specific technical approach you will take to the problem. Include specific tasks and subtasks necessary to accomplish your objectives.
- Management Plan (see Section 5B below)
- Deliverables. Be specific on the nature of what you will produce
- Milestones. Include dates when you initiate and complete tasks and subtasks
- Opportunities for links with outside advisors and professional environmental community
- Budget justification
- References cited
- Budget (see Section 7 and example in Appendix VI)

The draft project proposal is submitted to each Group’s faculty advisors by mid-May. The group’s faculty advisors review the plan within 10 days and return it to the group with their comments. A finalized project proposal is due to the faculty advisors before the external review and the end of the first spring quarter.

\(^1\) The page limit does not include the title page, abstract, executive summary, references cited and the budget.
B. Management Plan
The Management Plan is a section of the project proposal that outlines a Group’s management structure and general plan for the form and function of their Group. It should specifically include:

- **Group structure and management** (an organization chart is useful). This includes a definition of the various "jobs" necessary to execute the project (e.g., publications manager, data/computing manager, financial manager, project director, etc.).
- **Meeting structure**: How will meetings be run? Who calls meetings? Will some meetings include advisors and others not? Will minutes be taken and if so, by whom?
- **Responsibilities of group members** (including duration of positions in the case of rotating roles)
- **Systems to ensure deadlines are met**
- **Conflict resolution process** Groups are sometimes challenged by conflict within the group. A common problem in groups is the problem of the "slacker" -- someone who does not carry his or her share of the workload. It is better to decide on ways to deal with slacker before anyone becomes a slacker. The starting point for dealing with a slacker is for the group to assume all or some of the responsibility for the problem. If there is a slacker, then it is likely that the group is failing in some way to motivate that individual. The group’s plan should first focus on motivating the individual. Methods for dealing with this problem includes peer reviews, division of responsibilities, documentation of slacking behavior, and even the “firing” of a person from the group project (though this later action would need to be taken in concert with the Bren School Administration).
- **Procedures for documenting, cataloging, and archiving information** (e.g., documents, contact information, messages, calendar, web site, budget projections, and expenditures). This is an important task. If there are delays or failures, the entire project can be adversely affected.
- **Guidelines for interacting with faculty advisors, external advisors, clients, customers, or consultants** What role will the advisors play? Do they want written progress reports? Do they want drafts of sections of the report? How much time do they require for document require? How frequently will you meet with your client? How will you keep your client informed of your progress? How will you deliver your product to advisors and clients, electronically or in hardcopy?
- **Overall expectations of group members and faculty advisors**. It is strongly recommended that you discuss with your faculty advisors your and their expectations. It will be useful to include in the management plan the expectations of faculty, the expectations of students with regard to faculty involvement, and the grading criteria.

C. External Review
By early June (refer to Appendix I), groups are required to schedule, organize, conduct and document an external review of their project. The purpose of the external review is for the groups to gain critical feedback regarding their project scope, the importance of the project, their proposed plan of work and the potential implementation implications of their results. We expect that this review process will improve the real-world nature of the problems and solutions group projects pursue. The attendees at the external review must include: all group project participants, the assigned faculty advisors, two other Bren School faculty, and at least two project stakeholders. It is important that reviewers are lined up well in advance (at least 2 weeks) since participants are likely to have very full schedules! The group is required to work with the faculty advisors in planning the external review; however, the group...
will conduct the meeting with the advisors as a participant and will have primary responsibility for making necessary arrangements. Issues that must be fully addressed and agreed upon by the group and advisors include: attendees, agenda, and schedule.

The spring quarter performance evaluation will, in part, be based on how well the students plan, conduct, and document this meeting. Bren School administrative staff will assist in scheduling a meeting room on campus for the review session (see Section 3E). Be sure to accurately document the feedback so it can be incorporated in the updated proposal fall quarter. Groups should be sure to send a written thank you to all their external reviewers.

**D. Web Update**
By the end of spring quarter, each group is required to create and maintain a public website through the Bren School. At a minimum, the following information is required to be accessible through this site:

- Names and email addresses for all group members
- Faculty Advisors names
- Project title and abstract
- The final project proposal document, as accepted by the Group Project Selection Committee

**ESM 401B (Fall Quarter)**
Students must enroll in ESM 401B (Group Project in Environmental Science and Management) for 4 units, and generate the following products adhering to the published deadlines.

**A. Fall Presentations**
In the middle of fall quarter, each group will present their project to faculty, staff, and students of the Bren School. Each group’s oral presentation should take 15 minutes followed by 5-7 minutes of discussion. The Bren School administrative staff will make all arrangements for the fall presentation event including setting the presentation schedule.

The oral presentation should be a condensed version of the full project proposal and should contain the following information:

- Clearly stated project objectives
- Importance of research
- Plan for executing research
- Expected results
- Progress so far

The purpose of the oral presentation is to provide the Group with an opportunity to gain feedback intended to strengthen their research agenda.

**B. External Review**
By the last week of the quarter, groups should arrange an external review of their draft Progress Report (see below). The purpose of this external review is, again, to gain critical feedback on the groups progress to that point. Feedback gained from the review should incorporate into the final Written Progress Report.
C. Written Progress Report
At the end of fall quarter, each group submits a written progress report to their faculty advisors. This is not just a revised version of the proposal submitted in spring quarter for ESM 401A, but focuses instead on progress and changes since the end of spring quarter, and includes a plan for the final quarter.

ESM 401C (Winter Quarter)
During winter quarter of their second year of study, students must enroll in ESM 401C for 4 units. At the end of this quarter, each group must complete their project and all deliverables, with the exception of the final oral and poster presentation, which occur at the beginning of spring quarter. If students have not completed a final report by the end of winter quarter that is satisfactory from the view of the advisors, their grade will likely be compromised and faculty will withhold signature until the report is acceptable.

Advisors have no deadline for approving final reports; the only criterion is whether the report is satisfactory from the point of view of the advisors. Once approved, each Group must provide one bound hard copy (spiral bound from a copy shop is acceptable) and an electronic copy of the final report (in .pdf format) to the Group Project Coordinator.

A. Final Report
Drafts of the final report are due to your advisors by the middle of February. Your external review committee should also review the draft report, including additional iterations before the final product, to obtain feedback.

By the end of winter quarter, students must submit a final report of their group project. The deadline for the final report is firm and there will be potentially serious consequences if a group fails to meet this deadline. The final report will provide a complete discussion of the project’s goals, objectives, methodologies, and accomplishments, and must be approved by each group’s faculty advisors.

Students should bear in mind that it is doubtful that they will be able to complete their reports by the end of winter quarter if they do not present a high quality draft to the advisors by the middle of the quarter. Some advisors will expect drafts earlier and require longer periods for review and comment than others. In general, students should expect that their advisors will require at least one week, but as much as two weeks, to complete a review. It is likely that more than one iteration will be necessary before the advisors find the report to be acceptable. Thus, it is critical that students and advisors discuss and agree upon a realistic timeline and have consistent expectations in terms of turn-around time etc.

The final report should not include information restated from the group’s Management Plan. The final report will typically include the following information:

- Abstract (not to exceed 200 words)
- Executive summary (not to exceed 4 pages)
- Discussion of project objectives and their significance
- Background information, including references to similar projects or research
- Discussion of methods used
- Results
- Discussion of results
- Conclusions
- Recommendations for future research
- References
Final reports must not exceed 200 pages, and must be free of typographical, formatting, and other errors. Any deviations from the above format guidelines must be approved by the faculty advisors prior to submission of the final report.

B. Quality Standards for Final Report
The final report is expected to reflect the group members having achieved a sufficiently deep understanding of the problem. The depth of understanding expected is that which will result in the group project members having: 1) the ability to clearly articulate the problem verbally and in writing; 2) the ability to clearly articulate the scope of their work; 3) the ability to clearly articulate how their work is related to larger related issue(s); and 4) the generation of original interpretations of the work of others and/or the generation of original data that leads to original interpretations.

Conclusions and recommendations in the report are to be based only on either 1) original interpretation and synthesis of the work of others; 2) original data and interpretations of that data; and/or 3) a combination of the previous 1 and 2. The unsupported expression of opinion in the final report is contrary to expected development in thinking and ability that is expected to take place for each member on the group project topic and as a result of the group project process. Thus, the unsupported expression of opinion in the final report is highly discouraged and may warrant refusal by the advisor(s) to give final written approval on the document.

Acknowledgements must be made to individuals and/or organizations for their monetary support of the project where monetary support has been provided. Individuals or organizations that have contributed non-monetary support in the form of time, information or useful advice, should also be acknowledged if the group project members and advisors agree that it is warranted. It is highly recommended that group project members inform such individuals and organizations of their intent to acknowledge prior to doing so; the individuals and organizations proposed to be acknowledged have the right of refusal.

Adherence to accepted rules of citation is required. Only readily retrievable sources are acceptable.

C. Final Report with the Bren School
Once approved, each Group must submit one bound copy of its final report and an electronic copy of the final report (in .pdf format) to the Group Project Coordinator. Bound copies can be made at any local copy shop, such as Kinko’s or The Pulse. All final reports must be formatted to be in compliance with“ Bren School Filing Guidelines” (see Appendix III).

D. Project Brief
Each group must prepare a four-page brief summary of the project by the end of winter Quarter. This summary will be widely distributed and will be the primary visible product of the project for many. Thus, care should be taken to be sure it is readable, attractive and complete. Pictures and diagrams are encouraged, as is the use of color. Summaries should adhere to content and formatting guidelines detailed in Appendix VII and be delivered in both electronic and paper copy to the Group Project Coordinator. The deadline (end of winter quarter) for the project brief is also firm and there will be potentially serious consequences if a group fails to meet this deadline.
E. Contact List
Each group must email the Group Project Coordinator a list of stakeholder invites for the final presentation by the beginning of March. This list should contain their complete contact information, including job titles.

ESM 401D (Spring Quarter)

A. Oral Presentation
At the beginning of spring quarter during the last year of study, each group participates in a Bren School Symposium featuring formal public presentations of the Group Projects. Each group’s presentation will be 25 minutes in total length, including at least 7 minutes for questions. All members of the group must be in attendance, though, only one person should present. In preparation for the presentation, a title and 200-word abstract must be delivered to the Group Project Coordinator by the beginning of March (see timeline for specific date).

The Bren School is akin to a professional society. Meetings of professional societies are conducted such that oral presentations are brief and by one representative, no matter how large the project or the number of participants. Also, organizers of the society set the schedule of presentations and presenters are expected to accept the schedule.

The School will invite academics from other departments and other Universities, environmental professionals, and the Bren Advisory Committee to the event. Students can invite personal guests if they wish. This is an excellent opportunity to get to know potential employers, so students are strongly encouraged to provide the Group Project Coordinator with ideas for the guest list. The importance of this event cannot be overstated. Impressive presentations by Bren students will have a huge impact on the reputation and prestige of the School and hence, on the value of the students’ degrees.

Students are encouraged to present their work in other forums, especially at regional or nations meetings of societies.

B. Project Poster
Each group must prepare a professional poster that summarizes their project. The posters will be displayed at the public oral presentation during spring quarter. The School will keep the posters for future display in Bren Hall. The posters should be at least 4’x3’ but no larger than 4’x6’, including borders. It is expected that the poster will be completed by the end of winter quarter. See the Computing Section 9J below for more information on how to create and print the poster.

6. PROJECT EVALUATION

A. Faculty Evaluation
Students must take ESM 401A, B, C & D for a grade. You will receive an “IP” grade for 401A, B & C and a letter grade is assigned for 401D at the end of spring quarter. That grade automatically applies to 401A, B & C. Each student will receive a separate grade. If a group performs well together, it is likely that all group members will receive the same grade, but this is not guaranteed.
Student performance in a Group 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. **A working understanding of the published literature and facts immediately relevant to the project.** A literature review should be at least 50% accomplished by the end of spring quarter of the first year and be essentially completed by the beginning of fall quarter of the second year.

2. **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% accomplished by the end of spring quarter of the first year and fully demonstrated by the beginning of winter quarter of their second year.

3. **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 spring quarter of the first year and at a level of 100% by the beginning of winter quarter of the second year.

4. **Originality of analysis, problem formulation, and scope of work.** This should be demonstrated throughout the project.

5. **Formation of working relationships with environmental professionals outside of the Bren School.** In some cases, outside advisors will be identified when the group project is proposed. In other cases, the students will have to identify stakeholders, sources of information, outside consultants, and/or experts who can provide benefit to the group project. This should be demonstrated at a 50% level by the end of spring quarter of their first year and demonstrated 100% by the end of fall quarter of their second year.

6. **Resourcefulness.** Throughout the project, students are expected to demonstrate initiative in finding information, identifying tools necessary to achieve their scope, seeking outside advisors, acquiring necessary funding, and establishing internships for themselves as appropriate.

7. **Punctuality.** Students are expected to deliver intermediate and final products on schedule.

8. **Communication skills.** Oral presentations and written reports are expected to be well organized, scholarly, and well communicated.

9. **Participation.** Students are expected to participate and actively contribute in meetings, training sessions, and events.

**B. Student Evaluation of Faculty Advisors**

At the end of each quarter, all Group Project members submit evaluations for each Faculty Advisor to the Group Project Coordinator (see Appendix II). The Coordinator summarizes the groups’ assessments and distributes anonymous comments to each Faculty Advisor at the end of the project, **after all group project grades are assigned.**
7. **Creating a Project Budget**

Each Group Project is allotted $1,300 as a base budget. Students are strongly encouraged to seek extramural funding from other sources such as private, corporate, and campus agencies to augment their budget. At the beginning of spring quarter, the Bren School will assign a Cost Center, a copy code, and a phone authorization code to each group. In addition, each group will have the option of purchasing a library copy card and signing up for voicemail. Each group must create a budget for their project, estimating expenses to the best of their ability given the following costs:

1. **Phone calls:** ($1/month for 12 months, plus calls) $12 + calls (optional); The phone and voicemail are accessible through the phone in the Bren School Commons

2. **Printing from the Computer Lab:** $200 (this amount is automatically charged to each project and is fixed)

3. **Copy Card:** $25 (optional)

4. **Final poster printing (approximate):** $200

*Please note that each group’s “real” working capital, after the above costs will be approximately $800.00.*

In addition to the above fixed costs, each group must consider appropriate additional expenses such as travel, software, laboratory fees, business cards, reference books, poster production, presentation materials, photocopying, and publication expenses when preparing their budget. Furthermore, the funds are for reasonable expenses related to your group project. Group Project funds provided by the School CANNOT be used to pay for: entertainment, food and beverages, gifts, awards, and donations. There are no exceptions to this UC policy.

For more information on procedures, please refer to:

**Bren School Purchasing Procedures**
www.bren.ucsb.edu/services/admin/purchasing_procedures.asp

**Travel Regulations and Procedures**
www.bren.ucsb.edu/services/admin/travel_regulations.asp

8. **Group Project Budgets**

A. **Bren School Financial Manager**

The Bren School’s Financial Manager, Kathy Murray ([kathy@bren.ucsb.edu](mailto:kathy@bren.ucsb.edu); x 6114) is the primary contact for budget matters related to Group Projects. Groups will need to contact her at the beginning of spring quarter to arrange cost centers etc. discussed below.

B. **Cost Centers**

Each Group Project is assigned a Cost Center. A Cost Center is an account number within the School’s internal accounting system designated to track expenses. Each Cost Center number looks something like: ES600/7/MIS. Group members must use this Cost Center to identify charges (Purchase Orders [PO], faxes, phone calls, petty cash receipts, lab fees, etc.) for appropriate allocation and/or reimbursement.
**C. Expense Reports**
Each group should identify one member to receive the monthly expense report indicating the budgetary activity within the group’s cost center. This member will be responsible for tracking, managing, communicating, and updating the group’s budget. If expenses (phone, copies, travel, etc.) are incurred exceeding this amount, the reimbursement requests will be returned, and the group will be responsible for funding the activity. After the groups receive their monthly expense reports, care should be taken to reevaluate the budget to ensure that the project can be successfully completed within the given budgetary constraints.

**D. Copy Machine Code**
Each Group Project receives a 5-digit copy code for the copy machine in the Bren School Student Mail Room (Bren Hall, Rm. 2406). Once group members enter their code into the copy machine, they will be able to make copies for their research and/or group meetings. The copy expenses will automatically be allocated to each group’s Cost Center.

**E. Optional Voicemail**
An optional voice mailbox for each group can be installed on the Bren Commons telephone. Students may access this voice mailbox from home. Groups may request a voicemail through the Financial Manager. A monthly fee will be applied to the group’s account for the voicemail.

**F. Phone Authorization Code**
Each Group Project also receives a 5-digit phone authorization code, which will allow members to make phone calls from the Bren School Commons. Again, all phone expenses will automatically be allocated to each group’s Cost Center. All phone calls should be made from the Commons; the telephones in the administrative offices are not available for student use.

**G. Instructions for making Group Project Phone Calls**
(Please use the phone in the Bren School Commons).

1. Pick up the phone handset
2. Dial #55
3. Dial your 5 digit phone authorization code
4. Dial 9 (to get outside dial tone)
5. Dial the number you wish to call

**H. Conference Calls**
The Bren School has a special phone for conference calling. This phone, along with a specific meeting room that has as an outside phone line, can be scheduled by contacting the Course Support Assistant at connie@bren.ucsb.edu. When dialing the number, please use the phone call instructions above (Section 8G), so the calls you make on this phone will be charged to the appropriate group account.

**I. Library Copy Card**
Each Group Project can purchase a $25 library copy card to facilitate the group’s research. The copy cards can be used in the copy machines at the Davidson Library. The expense for this card is automatically charged to each group’s Cost Center. Library Copy Cards can be requested through the Bren School’s Purchasing Assistant at x7979 and will be charged to the appropriate project Cost Center.

**J. Visitor Parking Permits**
Parking permits are available for your stakeholders, external reviewers, etc. to park on the UCSB campus and attend Group Project meetings. To obtain a permit,
contact the Senior Events Coordinator at  bjdanetra@bren.ucsb.edu  at least 72 hours before your visitor’s arrival, and give her: 1. the name of your Group Project; 2. your Group Project budget number; 3. the name of your visitor and his/her affiliation; 4. the date and time of arrival; and 5. the location of your meeting (building and room number). Each permit costs $7.00 and will be charged to your Group Project budget. Reserved parking (where a parking spot is designated for the visitor near Bren Hall) is more expensive and should only be used when the visitor is an extremely important individual with a time constraint. Your group budget will be charged $27.00 per space per day for reserved parking.

K. Purchase Orders
Groups are encouraged to use a Purchase Order (PO) for purchasing group project supplies and services, as opposed to paying out-of-pocket and being reimbursed (see below). If a group needs to purchase any supplies or services (i.e. laboratory fees, poster, etc.), POs may be obtained from the Purchasing Assistant (x7979 or Julia@bren.ucsb.edu) in Bren Hall Rm. 2512.

L. Reimbursement
Group members may use personal funds, and then submit a receipt to the Purchasing Assistant to be reimbursed for their expenses, if a vendor does not accept a purchase order. Purchases with a PO are always encouraged over reimbursement. When submitting receipts for reimbursement, please include the following information:

1) Original receipt with name of vendor, date, and description of what was purchased
2) Cost Center
3) Name of person to be reimbursed
4) Original Signature

The use of personal funds is not recommended or encouraged.

M. Cost of Copying the Final Report
Personal copies of Group Project final reports will be made at the students’ expense. If outside advisors request a copy or copies of the final report and the group cannot cover the cost with their group budget, students may submit a request to the Group Project Coordinator, and, if approved, the Bren School will cover copying expenses.

N. Outside Funding
Groups are encouraged to seek outside funding for their projects. If groups need more than the funded $1,300, they should confer with their faculty advisors and the Group Project Coordinator to discuss possible sources of outside funding. Outside funds received through grants/contracts are run through the Office of Research. Be advised that the University overhead rate charged on all extramural funds is 47.5%. Please communicate with Kathy Murray before you accept any extramural funding.

In order to receive an award, a group must first submit a proposal to a prospective agency. Once a group decides to submit a proposal, its members should contact the Proposal Coordinator (x7979 or  briny@bren.ucsb.edu) so that she can guide them through the process. Typically, the Bren School can process a proposal within five days. The final processing by the Office of Research requires an additional 5 working days to complete. The Office of Research must process all proposals before they can be considered for funding. The Proposal Coordinator’s role in this process will be to ensure that a group’s documents are properly prepared to meet the guidelines of both the Agency and the University.
9. COMPUTER RESOURCES

The following is a description of the computer resources available to each Group Project. Included in this description are recommended information management practices for Bren School group projects. Most of these suggestions do not require any special privileges; those that do require the intervention of the Bren School Compute Team are clearly noted.

A. Data Manager
Each group should designate a Data Manager who will have primary responsibility for maintaining the group’s shared online information. The reason for designating a single manager is to ensure that a group’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 group members on the use of directory and file permissions and managing information within the group’s information architecture.

B. Project Nickname
Each group should select a short nickname (approximately 8 alphanumeric characters; no spaces or other special characters; dashes and underlines are o.k.), which can be used to identify the projects online artifacts (directories, mailing lists, etc.). The word nickname, wherever it appears in the remainder of this document, refers to this project nickname.

C. Group Email Alias
The Bren School Compute Team will create an email alias, named nickname@bren.ucsb.edu, for each Group. The recipients of each alias will be the group’s student members and faculty advisors. Each group’s email traffic will be post-processed (e.g., by “mailman”) into threaded HTML files Group members may access the threaded mailing list log by following the “Nickname Archives” link from http://www.list.bren.ucsb.edu/mailman/listinfo/nickname.

D. Shared Directory
The Bren School Compute Team will create a “shared directory” for each Group Project. The shared directory will be named nickname, and will be housed on a Bren School Windows server, probably Babylon. This shared directory will be accessible from all Windows systems in the ESM domain via \babylon\GroupProjects2004\nickname. For group project members, this will be mapped to G:\nickname. The pathname \nickname in the remainder of this document refers to this shared directory.

E. Group Access Permissions
The Bren School Compute Team will create a Windows group for each Group Project, named nickname. The members of these Windows groups will be the student members of each group and their faculty advisors. Unless otherwise specified, all files and directories discussed in these Guidelines will be owned by the group’s Data Manager. The Data Manager should assign read and execute permissions to the remainder of the Group Project’s group. The Data Manager and all group members are responsible for insuring that the Windows group “ESM – System Admins” have “full control” permissions on all directories within the Group Project’s directory structure that the group wishes to be backed up. Without appropriate permission, regular backups of a group’s electronic files will not occur and files may be lost. You can access the permissions for a folder or files by right-clicking on it -> Properties -> Security.
F. Working Documents (Recommended)
Each group’s Data Manager may create a group-writeable directory G:\nickname\workdocs, under which each project member may create their own subdirectory G:\nickname\workdocs\member. These subdirectories should be readable by a group’s Windows group, but write able only by the owner and the Data Manager. The protocol for collaborating on a document should be 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 \nickname\workdocs\member\document subdirectory, where document is a unique name for the document, 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 group members to read.

G. Library (Recommended)
Each group’s Data Manager may create a group-writeable directory \nickname\library, in which group members can place static (i.e. read-only) documents for the project to share. Group members should give the Data Manager their files that they would like to house in the Library. This directory should be “read only” for all group members with the exception of the Data Manager.

H. Calendar (Optional)
Each group’s Data Manager, and/or other specified group members, may maintain a Corporate Time calendar for project events and deadlines. While each student will have an individual Corporate Time account, it is recommended that the Data Manager request a Corporate Time Resource for the Group Project. Using individual accounts, only the person proposing a meeting and inviting others to it, may make changes to the meeting. By using a Resource, anyone with Designate Access to the Resource may make changes. When requesting the Resource, be sure to indicate which group member(s) will be Resource Designates.

I. References (Optional)
Each group’s Data Manager may maintain a shared file of bibliographic references that will be incorporated into project reports, papers, etc. The Bren School currently supports EndNote bibliographic software via the Windows 2000 Terminal Server. To access the EndNote application, go to http://snoop.bren.ucsb.edu and set up your Internet Explorer browser, according to the directions on the left-hand side of the page, if you’re a first-time user. In the middle of the page where it says “Application,” choose “Full Desktop,” and log in.

Double-click on the EndNote icon to open it. It may take longer to open than usual. Create a new reference library by going to File: New. A reference library dialogue box will open. Enter the name of the new library and browse to the Group Project shared network folder where it will be stored. More information on this product will be provided during fall quarter. If you would like to post references on the web page, it is recommended that the formatted bibliography created in Word be converted to .pdf format and then saved to the web, to preserve formatting.

J. Project Poster
Each group will create a Poster Presentation of their project. Color enlargements and printing can be done professionally at Production Services in Room 1120 of Kerr Hall, for a fee (please see the Purchasing Assistant for a “recharge number”), or you are welcome to use Kinko’s or other external services if cheaper or easier. An additional printing location is the Research Training Grant (RTG) group in the Marine Science Institute – they recharge your budget at a rate of $0.79 per square foot – for more information email Keith Seydel at seydel@lifesci.ucsb.edu. (Please CHECK THE
VENDOR’S INFORMATION about acceptable software, formats, and file types BEFORE beginning the poster. Resolution should be from 100-300 dpi, minimum of 4 feet x 3 feet but no larger than 4 feet x 6 feet (including borders). More information on creating the poster can be found on the Bren web site under Services/Computing/Scientific Applications.

K. Oral Presentation
The multi-media format for the oral presentation recommended and supported by the SCF is Microsoft PowerPoint. A final copy of this presentation will be submitted on a Zip disk, which you will provide.

L. Public Web Site
Each group will be able to create a public web site. The SCF staff will support Microsoft FrontPage, though you may create it using another web design application at your discretion. However, it is critical that you only edit it with the same program used to create it. If you create a web page with FrontPage, and open it with FrontPage Express elsewhere, it will almost certainly be undesirably altered. Any modifications to a web page created in unsupported software should be edited with that same software, then copied again into your web directory. The Bren School Compute Team will place a template home page for each Group Project in the Data Manager’s Unix directory at

U:\nickname_html

The index or home page must be named default.htm and will display at http://www.bren.ucsb.edu/~nickname. The group’s Data Manager will be free to modify this page and additional content, subject to any formal Bren School policies regulating Bren School public web formats and content.

The web content will be publicly viewable at

http://www2.bren.ucsb.edu/~nickname

You can also advertise your group project site as www instead of www2

http://www.bren.ucsb.edu/~nickname

The www location will get redirected to www2.

The School requests that only one or two group members be responsible for maintaining the Group Project web site to eliminate confusion, ensure timely posting of information, and facilitate training efforts. Be sure to verify all links on your web pages when editing or adding information to them.
Appendices
APPENDIX I
TIMETABLE 2003-2004

Spring Quarter 2003

Wed. May 14th
Draft of Project Proposal due to Faculty Advisors

Fri. May 23rd
Review of Project Proposal completed by Faculty Advisors

Before External Review
Final Project Proposal must be completed before holding the External Review (distribute to participants in advance)

Fri. June 6th
External Reviews must be completed by this date

Fri. June 6th
Website created and up-to-date

Mon. June 9th
Report on external review due to advisors

Wed. June 12th
Faculty Advisors & Peer Evaluations due to Group Project Coordinator

Fall Quarter 2003

Fri. October 31st (tentative)
Fall Presentations - Session I

Fri. November 7th (tentative)
Fall Presentations - Session II

Wed. December 3rd
Draft report due (project progress through fall)

Wed. December 3rd
Faculty Advisors & Peer Evaluations due to Group Project Coordinator

Winter Quarter 2004

No later than...

Wed. February 18th
Draft of final report due to Faculty Advisor(s)

...But earlier if advised
This should be a high-quality document, presumably preceded by earlier drafts, that only requires minor editing

Fri. Mar 6th
Submit information for group project presentation program: project title, 200 word abstract, and names of individuals to be acknowledged

Fri. Mar 6th
Submit invitation list to Group Project Coordinator
Fri. March 13\textsuperscript{th} Final Report due to Faculty Advisors
***This is a FIRM deadline***

Fri. March 13\textsuperscript{th} Project Brief due to Faculty Advisors AND Group Project Coordinator
***This is a FIRM deadline***

\textbf{Spring Quarter 2004}

One week before presentations It is recommended that the poster be completed and a draft Power Point Presentation be submitted to the Faculty Advisors by this date as well (some advisors may require this). There is no assignment of units for Group Project during spring quarter. The expectation is that except for the final presentation/poster session all deliverables will be completed by the end of winter quarter.

Wed. April 21\textsuperscript{st} Project final oral presentation and poster display.

One week after presentations Final reports must be archived in the Bren School office. Submit final copy in .pdf format via email and one bound hard copy to the Group Project Coordinator.

One week after presentations Faculty Advisor & Peer Evaluations due to Group Project Coordinator.
APPENDIX II
FACULTY ADVISOR EVALUATION

FACULTY ADVISOR ______________________________

GROUP PROJECT ______________________________

The purpose of this evaluation is to provide feedback to your faculty advisor(s) and to the Bren School about the Group Project experience.

1. Please comment on faculty advisor knowledge and technical expertise of the Group Project topic

2. Were the Group Project objectives clearly explained and carried through by the faculty advisor(s)?

3. If applicable, is there effective coordination between the faculty advisors? Please explain.

4. How did the faculty advisor(s) monitor the progress of the group? What improvements could be made?

5. Was (were) the faculty advisor(s) adequately involved in the evolution of the Group Project during the quarter?

6. Did the faculty advisor(s) provide appropriate and timely feedback to the group?

7. What one thing would you change about the faculty advisor’s (s’) participation in the group?

8. Any additional comments regarding the faculty advisor(s)?
APPENDIX III

FORMATTING & FILING REQUIREMENTS FOR MESM GROUP PROJECTS

Group project required for MESM degree
Students seeking the Master of Environmental Science and Management (MESM) degree are required to submit their final Group Projects reports to the Group Project Coordinator by the end of the first week of spring quarter. Group project participants must produce two copies (one hard copy and one electronic pdf version) of the complete project, including the title page, approval (signature) page, and abstract.

Responsibility for the Content of the Manuscript
Students and their faculty advisors are responsible for everything contained in the manuscript; the students’ faculty advisors must review the entire content of the manuscript in order to give final approval. This includes all preliminary pages or front matter (e.g., the preface, dedication, acknowledgements, etc.), the main body of text (including any charts or other inserted matter), and the back matter (e.g., the notes and bibliography, any appendices, etc.). Nothing can be added to the manuscript once the faculty advisors have given final approval as indicated by their signatures on the approval page. The organization, presentation, and documentation of the MESM group project must meet the standards set by their faculty advisors 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 advisors.

MESM group project title and signature page requirements
Title page requirements: Each group project report must include a title page with an alphabetical listing of the group participants and faculty advisor. In addition, the title page should reflect (1) the title of the group project; (2) the names of group participants and faculty advisors; (3) the Master of Environmental Science and Management as the students’ degree objective; (4) the Donald Bren School of Environmental Science & Management; and (5) the University of California Santa Barbara. The Bren School will link each group research project on the Bren School web site by graduating year, with the authors of each project listed alphabetically. See Appendix IV.

Approval (signature) page requirements: A MESM group project is supervised by one to two faculty advisors—one or both faculty signatures and the group project participants are required on the signature page. The signature page will include a separate set of lines for the signatures of the students and a set of lines for the signatures of the faculty advisor, to be listed alphabetically. In all cases, the name of the person signing should appear in printed form immediately to the right of or below the signature.

The following words must appear immediately above the faculty supervisors’ signature lines, “The group project is approved by:” Faculty signatures on the signature page must be in black or blue ink; no other color ink is acceptable. Black ink is preferred over blue ink, since blue ink fades over time. See Appendix V.

Standards for group project titles
The group 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; word substitutes must be used. Group project titles should represent a summary of the research and not be
overly lengthy. Titles that contain more than 50 words are considered overly wordy. Subtitles should be used only when absolutely necessary.

**Dates on title and signature pages**
The approval (or signature) page and the title page should reflect the month and year the project is signed by the faculty supervisors indicating their approval.

**Abstract required; preliminary page requirements**
An abstract is required; it should provide a brief synopsis (200 words) of the research and be succinct. The choice of other preliminary pages such as those for acknowledgements, a table of contents, or list of figures and charts is at the option of the participating group members. The abstract and any other preliminary pages meet all the formatting requirements spelled out below. All preliminary pages except the title page and approval (signature) pages must be numbered with lower case Roman numerals starting with Roman numeral iii for the abstract; see below for additional information on pagination and placement of page numbers. The abstract should always be placed following any optional preliminary pages (i.e., acknowledgements or a table of contents). See samples of preliminary pages at the end of this document.

**Executive Summary**
The executive summary should be have more detail that the abstract, but should be no longer than 4 pages. This is where most readers will go instead of reading the entire report, so there should be enough background information, including recommendations, to stand on its own. However, the executive summary should be text only and not include graphs or photos.

**Legibility and appearance**
The original manuscript must be produced using a font that is highly legible and dark enough to reproduce clearly. The document must be free of streaks, smudges, or any extraneous marks. Whiteout and correction tape are not allowed because they flake off over time. Interlineations and hand corrections are not acceptable.

**Paper**
Students must produce one copy of the manuscript, including the title page, approval (signature) page, and abstract, on white, letter-sized paper (8 1/2 x 11 inches). Students may file photocopies as long as they are free of copier (or printer) streaks. For information on handling oversize materials such as maps, please consult with the Group Project Coordinator.

**Margins**
NOTE: Copy machines may shift text on a page. Therefore, the following are minimum margins. The student may set larger margins but must be sure that the final text lies well within these guidelines.
LEFT = 1.5” (this margin is wide for binding requirements)
TOP LINE OF TYPE = 1.25” from top of paper
RIGHT = 1.25”
BOTTOM LINE OF TYPE = 1.25” from bottom of 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 .75 inches from the bottom of the edge of the page. Placement of page numbers must be consistent throughout the
manuscript. Students should be careful to 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 manuscript must be numbered; pages should be counted or numbered in accord with the following standards:

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

The preliminary pages following the title and approval pages must be numbered sequentially beginning with lower case Roman numeral “iii.” All preliminary pages are to be numbered using lower case Roman numerals (iii, iv, v, vi, etc.). This includes the abstract, dedications, tables of contents, lists of figures, tables, symbols, illustrations, photographs, prefaces, introductions, acknowledgments, and vitae (required for dissertations).

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 — no missing pages, blank pages, or duplicate numbers or pages — is required for the manuscript to be acceptable.

**One-sided Printing Optional**

Though we encourage groups to double-side their final reports in order to limit the use of paper needed, the manuscript may be printed on one side of the page if your group prefers it.

**Line Spacing**

The manuscript may be single or double-spaced depending on your group’s preference.

Single spacing should be used in those places where conventional usage calls for single spacing for example, the title page; figure, table, and photo captions; footnotes; indented quotations; and the 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 must be used for the basic manuscript text. Standard fonts such as Arial, Century Gothic, Helvetica, Verdana, Tahoma, or Times are recommended. A font size of at least 10 must be used for footnotes and captions. Script, calligraphy, italics, and specialized art fonts are not acceptable for the main body of the text although italics may be used appropriately for setting off titles of other works, in scientific names, etc. as explained below. Legibility is the goal.

Italics may be used for quotations, headings, labels, book titles, foreign words, or occasional emphasis. Fonts used 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.

**Please note: Any deviations from the above guidelines must be approved by your faculty advisor in advanced.**
Filing the Group Project

Once the faculty advisors sign off on a group’s project, there may be no changes made to the content of the final report. The final report, including the original signature page, must be submitted to the Group Project Coordinator by the end of the first week of spring quarter (or when the faculty advisors approve the final paper, but no later than the last day of the spring quarter). An electronic pdf version of the report must also be sent to the GPC at projects@bren.ucsb.edu. This is the version that will be linked on the Bren School web site.

The GPC will review each of the final reports to verify that they meet the filing standards and notify each group if it is acceptable or not via the group’s email alias.

<table>
<thead>
<tr>
<th>CHECKLIST AREA</th>
<th>BREN REQUIREMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>legibility</td>
<td>Font must be used which is clear and legible.</td>
</tr>
<tr>
<td>appearance</td>
<td>No streaks, smudges, or extraneous marks; no whiteout or correction tape.</td>
</tr>
<tr>
<td>paper</td>
<td>White, 8.5 x 11 inch paper (exceptions made for oversize or special materials).</td>
</tr>
<tr>
<td>number of copies</td>
<td>Two copies of entire manuscript to submit to Bren School (one hard copy, one electronic pdf version)</td>
</tr>
<tr>
<td>margins</td>
<td>Left margin at least 1.5&quot; inches from edge of paper; top line of type, right margin, and bottom line of type at least 1.25 from edge of paper; other than page numbers, nothing is to intrude into margins.</td>
</tr>
<tr>
<td>page number placement</td>
<td>Page numbers should be placed .75 inches from bottom edge of pages and consistently placed throughout the manuscript.</td>
</tr>
<tr>
<td>pagination standards</td>
<td>Except title and approval pages, each page of manuscript must be numbered—no missing, blank, or duplicate numbers or pages; use lower case Roman numerals to number preliminary pages; use Arabic numerals to number text and back matter.</td>
</tr>
<tr>
<td>numbering of preliminary pages</td>
<td>Title and approval pages are counted but not numbered; subsequent pages (e.g. the abstract) are numbered beginning with Roman numeral iii.</td>
</tr>
<tr>
<td>one-sided printing</td>
<td>One-sided printing of all pages of the manuscript is optional.</td>
</tr>
<tr>
<td>spacing between lines</td>
<td>Text may be single or double-spaced, except where conventional usage calls for only single-spacing (title page, long quotations, etc.).</td>
</tr>
<tr>
<td>fonts &amp; font sizes</td>
<td>A font of at least 12 for preliminary pages and text; a font size of at least 10 for footnotes and captions; Use of standard font recommended.</td>
</tr>
<tr>
<td>dates used on approval and title pages</td>
<td>Use the month and year the faculty members will sign on approval and title page.</td>
</tr>
<tr>
<td>abstract</td>
<td>Abstract not to exceed 200 words is required</td>
</tr>
<tr>
<td>executive summary</td>
<td>More detailed than the abstract, no more than 4 pages</td>
</tr>
<tr>
<td>standards governing manuscript titles</td>
<td>Use concise manuscript titles (not to exceed 50 words) with easily identifiable keywords that summarize research; use word substitutes in place of non-alphabetical symbols in scientific titles.</td>
</tr>
<tr>
<td>faculty signatures on approval pages</td>
<td>All faculty advisor(s) must sign in black or blue ink.</td>
</tr>
<tr>
<td>responsibility for content</td>
<td>Students and faculty advisor(s) are responsible for everything in the manuscript; faculty advisor(s) must review entire manuscript before signing.</td>
</tr>
</tbody>
</table>
A Group Project submitted in partial satisfaction of the requirements for the degree of Master’s in Environmental Science and Management for the Donald Bren School of Environmental Science & Management

by

MEMBER NAME
MEMBER NAME
MEMBER NAME
MEMBER NAME
MEMBER NAME

Committee in charge:
ADVISOR NAME
ADVISOR NAME

DATE
Appendix V
Sample Final Report Signature Page

Project Title

As authors of this Group Project report, we are proud to archive it on the Bren School’s web site 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 Donald Bren School of Environmental Science & Management.

________________________________________
MEMBER NAME

________________________________________
MEMBER NAME

________________________________________
MEMBER NAME

________________________________________
MEMBER NAME

(The Faculty Supervisor prior to submitting this report may change this statement). The mission of the Donald Bren School of Environmental Science & Management is to produce 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 principal of the 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 Group Project is required of all students in the Master’s of Environmental Science and Management (MESM) Program. It is a three-quarter activity in which small groups of students conduct focused, interdisciplinary research on the scientific, management, and policy dimensions of a specific environmental issue. This Final Group Project Report is authored by MESM students and has been reviewed and approved by:

________________________________________
ADVISOR

________________________________________
ADVISOR

________________________________________
DEAN

DATE
## APPENDIX VI
### SAMPLE GROUP PROJECT BUDGET

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telephone ($1/mo, 12 months) Voicemail has an additionally charge</td>
<td>$12</td>
</tr>
<tr>
<td>Estimated calls per month $15 for 9 months)</td>
<td>$135</td>
</tr>
<tr>
<td>Photocopies</td>
<td>$93</td>
</tr>
<tr>
<td>Copy Card</td>
<td>$20</td>
</tr>
<tr>
<td>Printing*</td>
<td>$200</td>
</tr>
<tr>
<td>Software</td>
<td>$100</td>
</tr>
<tr>
<td>Presentation expenses</td>
<td>$50</td>
</tr>
<tr>
<td>Final poster production</td>
<td>$240</td>
</tr>
<tr>
<td>Conference attendance</td>
<td>$170</td>
</tr>
<tr>
<td>Administrative Supplies</td>
<td>$20</td>
</tr>
<tr>
<td>Business Cards</td>
<td>$60</td>
</tr>
<tr>
<td>Field Trips</td>
<td>$200</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$1300</strong></td>
</tr>
</tbody>
</table>

* Indicates fixed costs.
APPENDIX VII

GROUP PROJECT BRIEF GUIDELINES

The importance of communicating the results of work is difficult to overstate. After a full year of work on your group project, you are understandably exhausted and perhaps tired of the effort. But one of the most important phases occurs at the end: preparing your report, oral presentation, poster and brief. The brief, a short synopsis of your work, is particularly important since it is likely to be the one product of your work that is widely read and widely accessible.

CONTENT OF THE BRIEF

The brief is intended to be a concise summary of your project, accessible to an intelligent generalist audience. It is important that the brief be polished, eye-catching, self-supporting (not requiring the full report), substantive, technically impressive, easy to read and readable at multiple levels (a skim, a casual read, a careful read).

Use graphics, tables, summary boxes, headings and whatever works to convey the sense of the importance of your group project, the problem you tackled, and the solutions you are recommending. Color is also appropriate, although keep in mind that some people may print the Brief in black and white; color must still be readable and intelligible when rendered in black and white.

A successful brief is one where some readers are tempted to read the full report and most readers come away impressed with the effort and with a better understanding of the problem and its solution. Keep in mind that it is important to not only convey a sense of what your group project entailed but also to impress the reader with the importance, significance and accomplishment of your group activities. This is not a book report. Although it is short, it should not be superficial.

In composing a brief, be cognizant of conveying the main points of your group project:

- Problem statement and goals
- Significance
- Background information
- Approach to your analysis
- Results and discussion of results
- Conclusions and findings

It is also advisable to “wrap” your brief with an introduction that conveys the sense of the problem, its importance, and your results. The conclusion repeats much of this information.

Keep in mind that some people first skim the brief very quickly. Catchy figures or boxes that quickly summarize main points help lure the reader into carefully reading the entire Brief. Think of yourself as having about 10 seconds to sell a potential reader on your project, 10 seconds in which your goal is to get the person to spend five minutes reading and digesting the entire brief.

Carefully edit every sentence and paragraph of your brief. Ask of each sentence: “What does this add to my brief?” and “Can it be written more concisely?” Ask of the layout and flow of your brief, “Is this the easiest and most logical way to take the reader through our project?”
**TECHNICAL GUIDELINES**

Briefs should be prepared in Word, using the template on the web at [http://www.bren.ucsb.edu/services/student/index.asp](http://www.bren.ucsb.edu/services/student/index.asp). The template basically contains Bren banner material on the first page and provides a consistent look to all of the briefs. For the body of the text, single space, using 11 point Garamond type, double columns, 0.75” margins, flush left and right, and 0.5” between columns. Section headings may be in larger type. References and footnotes are 8-point type and occur at the end of the brief. For references and footnotes, use the style found in *Science* Magazine. On the title page, identify the student authors; in a footnote, indicate the faculty advisors.² The length is four pages, 8.5” x 11”.

**EXAMPLES**

It can be very instructive to examine how others have constructed briefs on a variety of topics. Please review briefs from past group projects on the web. There are a zillion other briefs on the web, some of whose links are below. These are simply examples, not necessarily good ones.

- [http://www.brook.edu/comm/policybriefs/archive.htm](http://www.brook.edu/comm/policybriefs/archive.htm)
- [http://www.rand.org/labor/popmatters/](http://www.rand.org/labor/popmatters/)
- [http://danr.ucop.edu/calag/ND00/pdfs/eucalpts.pdf](http://danr.ucop.edu/calag/ND00/pdfs/eucalpts.pdf)
- [http://www.sardc.net/IMERCSA/NETCAB/soebrief/](http://www.sardc.net/IMERCSA/NETCAB/soebrief/)
- [http://www.forumsinstitute.org/publs/](http://www.forumsinstitute.org/publs/)
- [http://www.ciaonet.org/pbel.html](http://www.ciaonet.org/pbel.html)

² Try not to use too many footnotes.