HNRS 200 Syllabus

Special Problems for Undergraduates (CR/NC, 1 or 2 units)
Spring 2008 Honors Research Groups

Instructor (Director of Honors Program)

Dr. Sema Alptekin
Phone: (805) 756–7029
Email: salpteki@calpoly.edu
Office hours: By appointment

Research Assistant (Please direct questions here first)

Jennifer Merriam
Phone: (408) 313–1407
Email 1: jemerria@calpoly.edu
Email 2: wwjd114@hotmail.com

Prerequisite

Good standing in the Honors Program, and consent of the Director of the Honors Program.

Course Description

Interdisciplinary research projects are conducted under the supervision of Cal Poly professors from various fields and incorporate hands-on research experience for Honors students. Select projects will continue in future quarters.

Course Requirements

- Contact lead research professor by the end of the first week to discuss initial or continuing involvement in specific research projects.
- Spend at least three hours per week on project.
- Turn in poster, progress report, and final report at dates specified.
- At the end of the quarter, students will be asked to provide feedback on all research projects, and contributions made by members of your team. These assessments will be considered in forming research teams in the future.

Timeline

Week	HNRS 200 Events
1	Contact Lead Professor
2	
3	Open House Poster Due Wednesday, April 16th
4	
5	
6	Progress Report Due Wednesday, May 7th
7	
8	
9	Present at Honors Research Day, Thursday, May 29th
10	Final Report Due Friday, June 6th

Assignments

Guidelines

- All reports should be submitted to the Digital Dropbox on Blackboard by the specified due date. They will be recorded in the "My Grades" section of Blackboard as soon as they are received.
- Please submit reports as PDFs or Microsoft Word files. If you submit a Word file, please make sure it is your final version, free from editing marks.
- All reports should be worked on as a team if there is more than one member in your group, and should be submitted to your professor for approval prior to the due date.
- Please keep a log of all time spent on research and proposals. You can use the time log located on Blackboard.
- To make sure you receive credit for your work on time, please make sure your files include your last name or group name, such as Robots_finalreport.pdf, so that I don't receive 24 files just called finalreport.pdf.

Open House Poster — Due Wednesday, April 16, 2008 to the Honors Office, Library Room 510

The poster should be 20x30 inches and mounted to foam core or comparable board ($3.95 at El Corral). You may create it in the program of your choice (Microsoft Word, PowerPoint, Quark XPress, Adobe InDesign, etc.) or assemble it neatly by hand. You can print your poster at PonyPrints in the library. This poster will be on display in the Honors Research Program booth at Open House, and should therefore be geared toward the general public, not a technical audience. Consider including the following information:

- Research Title
- Background information on topic and research methods
- Your basic findings
- Significance of the findings to the real world/real life
- Photos, diagrams, etc.

Keep in mind that people will be browsing through many posters, so you want yours to be attractive and informative without including an overwhelming amount of text.

Progress Report — Due Wednesday, May 7, 2008 to Blackboard's Digital Dropbox

The purpose of the progress report is to demonstrate that the team has achieved a substantial level of understanding of the theoretical and/or experimental background of the project, is making appropriate progress in obtaining results, and can discuss their ongoing work in a clear and professional manner. The report should be about two pages long. The report should provide a summary of your progress, including:

- Research Title
- Names and majors of the team members
- Introduction
- Overview of the relevant theoretical and/or experimental literature
- Methods, results and discussion of work to date
- A brief discussion of possible future directions for the research
- Each team member's role in the ongoing project (if changed since the submission of the research proposal)

Final Report — Due Friday, June 6, 2008 to Blackboard's Digital Dropbox

The final report should be about five pages long and should be worked on as a team. If you are continuing an existing project, you can edit and modify your final report from the previous quarter, but if doing so, perfection is expected. Please include the following sections in your final report:

- Executive summary
- Introduction
- Background
- Design (or Theory)
- Methods (or Experimentation)

- Conclusions
- Acknowledgements (if appropriate)
- Bibliography
- Appendices (if appropriate)

See the Honors Research website for examples of past student final reports: http://honors.calpoly.edu/research_showcasespring2007.htm.

Final Presentation Due Thursday, May 29, 2008 during Honors Research Day, 2-8 pm

Your final presentation will be given in the afternoon during Honors Research Day. You will be presenting with your group members to other HNRS 200 students, faculty and campus community members. The content of your presentation will be similar to your final report, but in PowerPoint format, and simplified for an audience who probably knows nothing (or almost nothing) about your topic. This means leaving out all that "jargon" and technical details. Instead, focus on the following:

- Who was on your team, including students, faculty, and any participating community members? Include everyone, even if they are not enrolled in HNRS 200.
- What was your original research question? What were you trying to find out, and why is it important?
- Was this a new project, or ongoing? If ongoing, were you continuing other people's research or have you been working on it all along?
- How did you conduct your research? Briefly describe your research procedures. Remember to keep this simple, such as "We took pieces of sea sponge our professor had gathered in the Caribbean, and performed a series of chemical tests on them to see what kinds of effects they had on tissue samples."
- What did you find? Briefly describe your results, again keeping it as un-technical as possible.
- What is the significance of your results? What will your findings be used for?
- Is this topic being researched elsewhere, or is it special to Cal Poly?
- Are you working with or for a company, or is this purely academic research?
- Will this research continue in the future, either with you or with other students?
- Finally, be prepared for questions from the audience.
- You should take photos of your research throughout the quarter, and include these photos in your final report and your final presentation. Photos add visual interest, and help your audience to understand your research. Graphs, diagrams and charts can also be helpful.

Honors Research Day will run all afternoon and will include your HNRS 200 presentations, an awards ceremony for graduating seniors, and food and music. Dress is business casual; more details to follow.

Student Responsibilities

- You are expected to communicate with your lead professor and team members regularly throughout the quarter. Feedback from past groups indicates strongly that regular weekly face-to-face meetings were the critical factor in many groups' successes, so consider establishing a regular meeting time. Some groups have established wikis or other virtual communication tools as well, but these are no substitute for regular personal interaction. If you would like a "Blackboard group page" (private discussion board) to be established for your group, please contact me at jemerria@calpoly.edu and I will be happy to set one up for you. There is no required communication log for this course – it is your responsibility to communicate on your own with your team members and professor – but be aware that a lack of regular communication has been the single biggest problem for groups that have struggled in the past.
- You are expected to submit your reports to Blackboard by 9:00 PM on the listed due date. I will check Blackboard daily, and will record your report submission in your gradebook page on Blackboard as soon as I receive it. If you submit a report and don't see confirmation on your gradebook page, it is your responsibility to contact me by phone or email as soon as possible.

- You are expected to be reachable. The best option is to provide an alternate email or phone number so I can contact you in case of a problem. You have the right to privacy, so you are not required to provide an alternate contact, but if you choose to use only your myname@calpoly.edu email, you are required to make sure it has enough room that incoming messages will not bounce. If there is a technical problem with your report submission and I cannot reach you, it will be considered late, so please make sure you are reachable.

Honors Undergraduate Research Journal

The first edition of the Cal Poly Honors Undergraduate Research Journal is already in the process of publication, but your work may be eligible for the upcoming second edition. When you submit your final report, please make sure it is ready for publication, meaning that it is written at a professional level, thoroughly edited, and has been cleared with your professor. (This is an important professional courtesy to your professors, since their names are included in the reports and they supported you throughout your research. Reading it in the journal should never be the first time they see your report.) When you submit your final report on Blackboard, please use the "Comments" space to state whether or not you would like your paper considered for the next journal.

Conferences

Your research project may be eligible for presentation at a state or national conference. There are many such conferences throughout the year (details on Blackboard) – CSU Honors conferences, undergraduate research conferences, conferences specific to your major, and many more – and all are wonderful opportunities for learning, networking, and personal growth. (They look great on a resumé too!) Some funding may be available to help cover your travel costs, so please contact me (jemerria@calpoly.edu) or drop by the Honors Office (Library 510) if you are interested in attending one of these events.

Other Opportunities

- Some projects may be continued in future quarters, so talk to your lead professor or drop by the Honors Office to voice your interest in continuing your work.
- Feel free to count this research for credit in your major as well, if your major allows it.

At any point in the quarter if you are not sure what's required, are having difficulties communicating with your team, or have any other questions, comments or concerns, please feel free to contact me and I will be happy to help. Above all, good luck in your research and enjoy your quarter!

Peace,
Jennifer Merriam
HNRS 200 Research Assistant
jemerria@calpoly.edu
408-313-1407