

# Information and Expectations for Your Senior Research Experience

Harvey Mudd College  
Department of Mathematics

The department of mathematics has adopted common requirements for our two senior research experiences, Clinic and Thesis.

The principal objective of your senior research experience, through either the Mathematics Clinic or Thesis programs, is to help you develop intellectually and improve your written and verbal communication skills. You will

- Conduct a thorough study and exposition of a body of mathematical or technical literature.
- Formulate and attack open-ended problems.
- Critique and evaluate technical presentations.
- Present your work in a public forum.

To this end, the department of mathematics has established a number of obligations that students engaging in research—whether working on a Clinic project or an individual thesis—are required to meet. Some of these obligations follow from the fact that both Clinic and Thesis are official, graded courses worth three units of credit each semester, and therefore fit into the larger framework of the curriculum. Other obligations follow from the nature of the enterprise of research itself.

- Devote at least *nine hours per week* to your project, starting from the first week of each semester. This figure is based on the nominal college standard of three hours of work per week for each hour of credit.
- Meet weekly with your faculty advisor.
- Attend the regular course meetings and give oral and written progress reports on your work. Part of your course grade will be influenced by the quality of your participation in this activity. You are expected to attend all of these sessions unless your absence has been previously approved by the Thesis Coordinator or your Clinic advisor or project manager.
- Maintain an approved system of record keeping, such as research notebooks, to document progress on your project. These records should be updated at least weekly. Your records will be a factor in deciding your grade.
- Write a substantial thesis or Clinic report (normally at least 40 pages). This report must include a thorough literature review and an exposition of the mathematical or technical area of the research. Your literature review should be completed by the end of the first semester as part of your midyear progress report.
- Give a final oral report on your project during Presentation Days. Your report must meet professional standards for organization and presentation. Your presentation should be accessible to a knowledgeable audience that may include people from outside the college.
- Construct a poster describing the project that meets professional standards of presentation and communicate your work in a public poster session, with an audience that will include nonexperts.

I, \_\_\_\_\_, have read and understood the expectations in this document and agree to conform to those expectations to the best of my ability.

Signature \_\_\_\_\_ Date \_\_\_\_\_