THE SENIOR EXERCISE IN MATHEMATICS

The senior exercise in mathematics consists of a written paper and an oral presentation related to the paper and enrollment in Math 190 and Math 191. The subject is chosen by the student; it may be any advanced mathematical topic for which the student has adequate background. The topic will frequently be related to material covered in a course, but it can also be from an area that is completely new to the student. The topic may be expository, or it may be based on original research that the student has carried out at Pomona College or elsewhere. Work which was done for a course may not also be used for the senior exercise unless it is extensively augmented and revised.

The work for the senior exercise must be of high quality and show the student's ability to learn independently. The paper and presentation must demonstrate the student's understanding and mastery of the topic at hand. It is better to thoroughly master a more modest project than to incompletely master an overly ambitious project.

Each student will choose a faculty member in the department to act as an advisor. With the permission of the department, the student may choose any faculty member at the Claremont Colleges as an advisor. Ideally, a student will contact an advisor and choose a topic in the second semester of the junior year. It’s important to select an advisor early because no faculty member can supervise more than 3 senior theses. As the schedule shows, the topic and advisor must be chosen no later than the beginning of the first semester of the senior year.

All seniors must enroll in Mathematics 190, Seminar in Mathematical Exposition, in the first semester, as well as Mathematics 191, Senior Thesis, in the second semester. Both half-credit courses must be taken in the senior year. The Seminar in Mathematical Exposition, offered in the fall, will focus on the mechanics of researching and writing the senior thesis. The Senior Thesis, offered in the spring, will focus on the completion of the thesis and its oral presentation. At each of the spring thesis meetings, two students will give their presentations. Attendance is required for seniors; other mathematics majors are encouraged to attend. Any seminar which you miss must be made up by attending a math colloquium and writing a brief summary of it.

The schedule applies to seniors in the academic year 2005-06. It can be used as a rough guide for other students, as we will follow a similar plan in subsequent years.
Senior Exercise Dates for 2005-06

By September 14 (Wednesday). Inform Ms. Sheldon as to the advisor of your Senior Paper. The department's policy is that each faculty member may advise at most three senior papers, so make your choice right away. You are required to take Seminar in Mathematical Exposition, Math 190, and Senior Thesis, Math 191, which are both half-credit courses. The department expects that you will invest at least a solid full course in your paper and its oral presentation.

September 30 (Friday). In Math 190, we will schedule talks for the Senior Thesis. There will be two talks each Friday afternoon starting January 27 and continuing until everyone has talked. We will have talks on January 27 only if there are volunteers. Anyone who wishes to volunteer for the first available date should tell Kathy before October 3. In Math 190 we will conduct a lottery to assign dates to those who did not volunteer.

A senior who declares a math major after the lottery will be assigned a place in the queue by a separate lottery. Normally this would push some students back to later presentation dates. If you want to be certain of the date of your presentation, simply tell us by Oct. 3 and we will lock in your date. The only other way to change your talk date (except for real emergencies) is for two people to come to Ms. Sheldon and tell her that they want to exchange dates.

October 13 (Thursday, just before Fall Recess). Advise Ms. Sheldon of the topic of your Senior Paper.

January 27 (Friday). The first meeting of Math 191, assuming there is at least one volunteer presentation. Otherwise the first meeting will be the following week.

February 22 (Wednesday). First draft of your Senior Paper is due to Ms. Sheldon, by 4:30 p.m.

March 31 (Friday). Two copies of the final draft of the Senior Paper are due to Ms. Sheldon by 4:30 p.m.