

Math 199: Directed Research or Senior Project in Mathematics

Catalog Description

199. Directed Research or Senior Project in Mathematics. (2 or 4 units). Tutorial, three hours per week per unit. Limited to juniors/seniors. Supervised individual research under guidance of faculty mentor. Scheduled meetings to be arranged between faculty member and student. Culminating report required. May be repeated for maximum of 12 units, but no more than one 197 or 199 course may be applied toward upper division courses required for majors offered by Mathematics Department. Individual contract required. P/NP or letter grading.

General Information

The research course, Math 199, provides an excellent opportunity for an advanced student to do research on a mathematical topic under the guidance of a faculty member. In a typical situation, the student finds an interesting topic in a mathematics course and wants to pursue the topic in the subsequent term. If the student has shown initiative and done well in the course, the faculty member may agree to direct the student's further research through a 199 course. Occasionally a group of students will approach a professor to take a 199 course together, doing research on some aspect of a course they are currently taking from the professor.

University regulations specify that courses labeled 199 are open only to juniors and seniors with a 3.0 GPA in their major field. Math 199 is intended for students who have already taken a number of Math and PIC courses.

In order to enroll in a 199 course, the student's petition must receive the approval of the sponsoring faculty member and of the Undergraduate Vice Chair. The petition should spell out student's obligations are for successful completion of the course, including what will be covered in the course, how often the student will meet with the faculty sponsor, and what written material will be required.

While the 199 course is meant to be flexible, to cover students or groups of students with special interests and in special situations, there is a list of criteria that the Undergraduate Vice Chair considers before giving approval to a 199 petition. Some of these conditions have been mentioned above. Exceptions to these conditions are rare. The conditions are:

1. Math 199 is intended for students who have already taken a number of Math and PIC courses.
2. The 199 course should be sponsored by a regular Mathematics Department faculty member.
3. Before agreeing to sponsor a 199 course, the faculty member should have some good grounds upon which to assess the student's potential and level of ability, such as having had the student in another course.
4. There should be roughly 30 hours work for each unit credit.
5. The faculty sponsor and the student should meet on a regular basis, which should be specified in the petition. For four units credit, weekly meetings are appropriate, while for two units credit, biweekly meetings suffice.
6. There must be some written work, specified in the petition, that is submitted to the sponsoring faculty member and available to the Undergraduate Vice Chair upon the conclusion of the course.
7. Math 199 credit will not be given for work also turned in for another course.
8. Math 199 credit will not be given for standard programming work alone. While a computer project can form part of the work, there should also be a major component of research on an advanced topic.
9. Math 199 is not appropriate for field study credit, except in conjunction with a project for a Mathematics Department faculty member that also has a major component of research on an advanced topic.

For more information, please contact Student Services, ugrad@math.ucla.edu.