

Guidelines for Graduate Qualifying Exams

September 22, 2022

Background. The Department of Mathematics requires each graduate student to pass qualifying exams at respective levels within certain period of time. Currently, the areas of qualifying exams include: algebra, applied algebra, complex analysis, numerical analysis, real analysis, statistics, and topology. Each year, there will be two qualifying exams scheduled at the end of the spring quarter (spring exams) and the end of the summer (fall exams), respectively.

The department Qualifying Examination and Appeal Committee (QEAC) oversees the graduate qualifying exams and determines the final qualifying exam results based on faculty qualifying examiners' recommendations. The department designates a graduate affairs staff member as the Qualifying Exam Coordinator (QEC) to coordinate all the qualifying exams.

The Department of Mathematics also offers comprehensive exams for some graduate courses. The guidelines for qualifying exams can be used also for the comprehensive exams.

Who can take the qualifying exams? The qualifying exams are primarily for our mathematics graduate students. New, incoming mathematics graduate students are allowed to take the fall qualifying exams before the start of the fall quarter, their first quarter at UCSD. They are, however, not allowed to take any spring exams as they are not enrolled in our program, leading to administrative complications. UCSD undergraduate students or non-math graduate students can take a qualifying exam if they have taken the sequence of the graduate courses of the exam subject. Otherwise, they will need the consent of the faculty examiners.

Administering qualifying exams

- Each qualifying exam will be a (maximum) three-hour written exam, and will be proctored by a faculty examiner.
- All examiners need to determine the content cutoff of the exam and send the information to the graduate affairs staff 10 weeks before the exams; see the timelines below.
- Each exam written by examiners needs to be checked by two other faculty members.
- A completed exam, including all the instructions and questions, needs to be collected two days before the exam. Examiners can email the PDF of the exam to the QEC.
- Grading of all the exams must be completed by the end of the third day after the last exam.
- All the exam grades must be sent to the QEC 24 hours before the QEAC meeting.
- The students will be notified by the QEC their exam results within 24 hours after the QEAC meeting.

The QEAC meeting. All the ladder faculty members are invited to this meeting. During the meeting, all the grades of student qualifying exams are shown, and the exam results – Ph.D. pass, provisional Ph.D. pass, or Masters pass – are recommended by the examiners. The result for each student in each exam is discussed and then finalized.

Student appeals. The students may review their exams but are not allowed to take back their exams. Students can appeal their final exam results with a written notice to the Graduate Vice Chair. The faculty examiners will be notified such appeals and they may decide to regrade the

exam if requested. The QEAC will discuss and make a final decision as to grant or not such an appeal.

Scheduling Timeline

10 weeks prior to exams

- The QEC (Qualifying Exam Coordinator) will request all the qualifying examiners to provide the content cutoff (i.e., topics to be covered, often in terms of chapters and sections of textbooks used) with a 2-week deadline.
- The QEC will send the exam sign-up sheet to students (including all mathematics graduate students and the students who take the qualifying exam courses). The students will be given 2 weeks to sign up the exams.

8 weeks prior to exams

- The QEC will send the exam content cutoff and any other administration details to the students who have signed up for one or more qualifying exams.
- The QEC will contact examiners to begin scheduling all the exams, and the exam schedule needs to be finalized within 2 weeks.
- The QEC will provide all the examiners with a list of students who have registered for the exam.

6 weeks prior to exams

- The QEC will send final schedule to students and faculty examiners.
- The QEC will begin scheduling the QEAC meeting. The meeting schedule will be finalized within 2 weeks.

2 days prior to the start of an exam

- Examiners in each area needs to send a copy to the graduate affairs staff. (This copy will be uploaded to the online Graduate Handbook after the exams conclude.)

3 days after the last qualifying exam

- All the exams must be graded and all the grades must be sent to the QEC.
- The QEAC meeting should be held no later than 4 days after all the exams.

5 days after the last qualifying exam

- All the students should be notified about their exam results.