Mathematics Departmental Comprehensive Examinations

There are currently two exams required of all students seeking a mathematics major who matriculated before Fall 2012. They are the GRE Subject Test in Mathematics, and an in-house departmental exam. Students matriculating in Fall 2012 or later are not required to take the GRE Subject Test in Mathematics.

The GRE Subject Test in Mathematics is administered nationally three times per year by the Educational Testing Service (ETS), usually in October, November, and April. It requires registration about six weeks in advance and payment of a fee ($150 as of 2013-2014) to ETS. The closest test location to ULV is Claremont Graduate University, and while that site may not be available for all three testing dates, there are several other testing locations in Southern California. Information about the GRE Subject Test in Mathematics can be found at http://www.ets.org/gre/subject/about/content/mathematics. A free downloadable practice book of sample problems is available from a link on the GRE site.

The GRE Subject Test in Mathematics is required of many universities as part of the admissions requirements for entering graduate students in mathematics, and therefore asks mathematical questions which require a rather high level of understanding. It also has some questions from undergraduate courses which are only taught at larger research universities, and which ULV students would not be expected to be able to answer, not having taken the course (for example, topology). The questions rely less on memorization and more on in-depth understanding of concepts and the ability to apply them in many different situations. In general, if a student has to do a lot of detailed computation on one of the test problems, chances are that the approach is not a “smart” approach, as brute computation is generally frowned on in this test. The department requires that students take this test because it allows the department to compare the abilities of current students (and how well the department is teaching them) with baseline data going back thirty years. Please see the department chair for more information. It is recommended that this test be taken in April of the senior year, unless you are planning to go on to graduate school, in which case one of the fall dates would be more suitable.

The in-house departmental exam is a two-hour exam adapted from a nationally administered test and given without charge. The test has a total 60 multiple choice questions, containing 6 questions on Precalculus, 34 questions on Calculus I, II and III, 10 questions on Linear Algebra, and 10 questions on Abstract Algebra. Students not taking Abstract Algebra will have their scores adjusted according. It is recommended that students review all their old notes, homework and tests from the six courses listed above, and treat this exam as a practice warm-up a few weeks before the GRE exam, although it can be taken at any time before completion of the degree. Students will not receive a diploma until they pass this exam at an acceptable level. There have occasionally been times in the past when a student has had to re-take the exam in order to graduate. Although the initial exam is free, there is a $40 fee if it is necessary to re-take the exam, and there should be a minimum of six weeks between exams for more rigorous study. See the department chair to schedule an exam or for more information.