Math 7002. COMMUNICATING MATHEMATICS II
Spring 2017. PROJECT

Half of the grade for this course will depend on performance on the major project, which will have two equally important parts:

(i) a talk; and
(ii) a paper.

Each student will be responsible for finding a professorial faculty member to supervise the project. The topic for the project will be chosen in consultation with the advisor and must be submitted to James Oxley (oxley@math.lsu.edu) by **January 31, 2017.** The topic should be something mathematical that interests the student, and it is suggested that it be related to something that the student has learned about in a class or in a reading course. For both the paper and the talk, the target audience will be typical first-year mathematics graduate students. The content of the talk should be covered in the paper, but it is expected that the paper will provide a more complete description of the subject matter than does the talk. Some more detailed guidelines of the talk and the paper are provided below.

The talk

This will be a 15-minute exposition of the subject and will be presented to an audience that includes the rest of the class. All professorial faculty and graduate students will be invited to the talks. The talks will be scheduled for the end of the semester with the first presentations to begin on April 4 (before Spring break). To mimic a conference format, the talks will be scheduled in 20-minute time slots, one following another. The expected length of talks is 15 minutes. This does not include time for questions at the end. Talks that run too long will be stopped by the chair of the session since the next speaker must be given time to set up. Talks must be presented using computer-based slides, which should be carefully prepared in advance. Students should practice their talks in advance, perhaps having their advisors listen to these rehearsals. Students other than those doing the presenting will be expected to provide an attentive audience for the speakers. An abstract of the talk must be provided in LaTeX by noon on the last Saturday before the talk.

The paper

This will be a written exposition of the topic of the project. Its length should be **6 to 10 pages** and it must be done in 12-point LaTeX in the format of the sample paper that will be distributed. The paper will be expected to be in clear, grammatically correct English. It should be mathematically self-contained but may assume the background of

a typical second-semester mathematics graduate student. It should include appropriate definitions, lemmas, theorems, proofs, examples and counterexamples, together with references. Moreover, the topic should be carefully motivated. The paper should be a new, individually written expository work designed to enlighten fellow students concerning an unfamiliar topic. It is not expected to contain original work. The paper should have a brief abstract and an introduction. A concluding section is also desirable. Otherwise, the format should be an accepted one for an expository or survey paper with the requirement that it should include at least one proof to give the flavor of the kinds of techniques that are used. References should be presented in accordance with the format used in the sample article.

The advisor

It is expected that students will meet regularly with their advisors (preferably weekly) to discuss the preparation of both their papers and their talks and to get feedback on the preliminary versions of the paper. **Advisors should be given a copy of this document.** Students should invite their advisors to their talks.

Grading

The talk and the project must be aimed at a typical second-semester graduate student. **Much of the grade will depend on the success in communicating with this audience at the right level.**

Timetable

January 24: Names of advisors must be submitted by email.
January 31: Advisor-approved topics must be submitted by email.
April 1, Noon: For those talks scheduled for April 4 and 6, an abstract of the talk in LaTeX (not a pdf) must be submitted by email to oxley@math.lsu.edu.
April 4: First four talks will be given; the remaining talks will be given on April 6, 18, 25, and 27. On April 20, Ken Ono will deliver the second Porcelli lecture, which all students are expected to attend.
April 7, Noon: Deadline for submitting a typed first draft of the paper. This is optional. Comments and corrections will be written on this draft but no grade will be given for this draft.
April 27: Hard copies of final versions of the papers must be submitted in class.