SYLLABUS
MATH 595: Practicum in Teaching the Liberal Arts – Mathematics (2 units)

INSTRUCTOR: Jay Bartroff, KAP 406B, (213) 740-1044, bartroff@usc.edu

OFFICE HOURS: Mondays, Wednesdays 12:45-1:45 PM

MEETINGS: Wednesdays 5:00-6:45 PM, KAP 414

COURSE OUTLINE: This course is a practicum designed for first-semester teaching assistants in mathematics. Concurrent registration in this course is a condition of being assigned a first TA ship in mathematics. An emphasis will be made on the specific difficulties that arise in leading mathematics discussion sections.

COURSE OBJECTIVES: This course will combine lectures, classroom discussion, student lectures and peer critique in order to equip graduate student to be effective discussion leaders. Topics include the following.

• Basics of teaching: blackboard technique, creating effective lectures by speaking loudly and clearly, writing large and legibly on the board, preparing material carefully. Though these ideas may seem obvious, many new graduate TAs struggle with one or more of these techniques.

• How to lead discussion sections: goals and tips for running discussion sections, designing appropriate quiz questions, presenting problems versus presenting theory, soliciting questions from students.

• Effective grading of homework, quizzes, and exams.

• Interacting with your assigned professor: the importance of staying in contact with your assigned professor to appropriately match discussion sections with the lecture course, understanding your role within the course, how much grading to expect.

• Interacting with students: creating a rapport with students and clearly conveying course expectations, how to encourage participation and create an ‘active’ learning environment, dealing with academic dishonesty, policies for make-up assignments and quizzes.

• Time management: preparing effectively while leaving appropriate time for other duties, timing of quizzes and lectures.

• International student issues: teaching effectively through language and cultural gaps.

• Education theory: we will examine cutting edge mathematics education theory including cooperative learning strategies and techniques for incorporating technology into discussion sections.

• Beginning to build your teaching resume: Steps you can take even early on in your teaching career to prepare for writing an effective teaching statement later.
Students will examine and discuss case studies of real world situations encountered in the classroom. The purpose of this exercise is to rapidly provide students with the experience needed to make good judgements when difficult situations arise.

Each student enrolled in the course will have several opportunities to practice and improve their presentation of mathematical concepts. By analyzing the strengths and weaknesses of these presentations, students will learn to identify potential shortcomings and avoid making common mistakes.

**Course Content:** Starting the third week of classes, each class meeting will consist of two students giving practice presentations followed by a critique by the rest of the class and the instructor. Case studies from the textbook and other topics will also be discussed.

**Textbook:** *Teaching Mathematics in Colleges and Universities: Case Studies for Today’s Classroom: Graduate student Edition* by Solomon Friedberg. Additional materials will be distributed in class.

**Grading:** This course will be taught Credit/No Credit. Grading will be based on attendance and participation. Students will be required to give sample lectures, comment on other students lectures, and read and report on assigned teaching related materials.

**Students with Disabilities:** Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to me (or to TA) as early in the semester as possible. DSP is located in STU 301 and is open 8:30 a.m.-5:00 p.m., Monday through Friday. Website for DSP: [sait.usc.edu/academicsupport/centerprograms/dsp/home_index.html](sait.usc.edu/academicsupport/centerprograms/dsp/home_index.html) and contact information: (213) 740-0776 (Phone), (213) 740-6948 (TDD only), (213) 740-8216 (FAX), ability@usc.edu.

**Academic Integrity:** USC seeks to maintain an optimal learning environment. General principles of academic honesty include the concept of respect for the intellectual property of others, the expectation that individual work will be submitted unless otherwise allowed by an instructor, and the obligations both to protect one’s own academic work from misuse by others as well as to avoid using another’s work as one’s own. All students are expected to understand and abide by these principles. SCampus ([scampus.usc.edu](scampus.usc.edu)), the Student Guidebook, contains the University Student Conduct Code (see University Governance, Section 11.00), while the recommended sanctions are located in Appendix A.

**Emergency Preparedness/Course Continuity in a Crisis:** In case of a declared emergency if travel to campus is not feasible, USC executive leadership will announce an electronic way for instructors to teach students in their residence halls or homes using a combination of Blackboard, teleconferencing, and other technologies. See the university’s site on Campus Safety and Emergency Preparedness ([preparedness.usc.edu](preparedness.usc.edu)).