

**LOGIC AND PROOF IN MATHEMATICS  
COURSE SYLLABUS  
SPRING TERM 2007**

**Professor:** Kurt Overhiser  
**Office:** East Campus - Building 8, Room 206  
**Phone:** 407-582-2481  
**E-mail:** koverhiser@valenciac.edu

**Student Engagement Hours:**

Monday 10:00am – 11:15am (IMC)  
Tuesday 10:00am – 12:45pm (EC 8-206)  
Wednesday 10:00am – 11:15am (IMC)  
Thursday 10:00am – 12:45pm (EC 8-206)  
Friday 10:00am – 11:15am (IMC) AND 1:00pm – 2:15pm; 4:15pm – 5:45pm (EC 8-206)

**Course:** MHF 2300--Logic and Proof in Mathematics

**Catalog Course Description:**

MHF 2300 is a three-credit mathematics course. The prerequisite for this course is MAC 1104 or MAC 1105 with a grade of 'C' or higher. An appropriate score on an approved assessment such as the CPT can also satisfy this requirement. Topics in this course include basic mathematical logic, methods of proof in mathematics, application of proof to elementary mathematical structures. This course is for prospective majors in mathematics or mathematics education and is a Gordon Rule class. A minimum grade of C is required in MHF 2300 if it is to be used to satisfy Gordon Rule and general education requirements.

**Required Materials:**

1. *Mathematical Reasoning Writing and Proof 2<sup>nd</sup> edition* by Ted Sundstrom
2. basic calculator

**Attendance:**

Regular attendance and class participation are significant factors that promote student success in this course. Attendance is required and will be taken every day at the beginning of class. If a student is not present at that time, he or she will be marked absent. During those days when a student is absent, he or she is responsible for all material covered that day and for any in-class announcements given by the professor. The instructor may exercise the authority to withdraw any student with more than four absences. There will be no excused absences.

**Homework:**

The daily homework assignments for this course will be posted on the class website. You are expected to read the textbook and review your notes as you do the assigned homework. There will be time allotted at the beginning of each class to go over selected homework problems. With advance notice, students may be asked to put completed homework problems up on the board for discussion. The key for success in this course is to do the homework. If you are having trouble with the material, be sure to promptly solicit help from the professor.

**Examinations:**

Students will be notified at least one week in advance of any upcoming examinations. Because mathematics is a subject that builds on itself, some of the content of the exams will be cumulative in nature. There will be two in-class exams and a final exam.

**Proof Portfolio:**

A major goal of this course is to develop your ability to write sound mathematical proofs. To demonstrate your progress towards this goal you will be given ten problems requiring proof. You may submit each of the problems to be critiqued by the professor. After each submission you may revise your proof and resubmit it for a final grade. Further details regarding this portfolio and the actual problems will be given soon in a separate document.

**Number Theory Portfolio:**

We will use number theory as the primary subject matter while you are learning proof techniques. Definitions and theorems related to number theory are scattered throughout the text. The number theory portfolio will be where you collect and organize this number theory content. You will be given a list of terms to be defined and a list of key theorems. You will also include in this portfolio specific examples demonstrating the definitions and theorems.

**Course Grade and Evaluation:**

Each of the two in-class exams as well as the final exam will count as 20% of the total grade. The proof portfolio will count 25% and the number theory portfolio will count 15%. Grades will be assigned according to the rule: 90-100 is an A, 80-89 is a B, 70-79 is a C, 55-69 is a D and below 55 is an F.

**Make-Ups:**

NO make-up exams will be given. In case of a medical emergency, death in the family, or legal situation, the final exam score may replace the missed exam once documentation is received and approved by the professor. If a student knows in advance that he/she has a conflict with a scheduled test, it may be possible to take the test at an earlier time.

**Academic Dishonesty:**

All forms of academic dishonesty are prohibited at Valencia. Academic dishonesty includes, but is not limited to, plagiarism, cheating, furnishing false information, forgery, alteration or misuse of documents, misconduct during a testing situation, and misuse of identification with intent to defraud or deceive. Sanctions available to the professor should a violation occur are described in the Valencia Student Handbook or online at <http://valencia.cc.fl.us/policies/PDF/10-16.pdf>.

**College Withdrawal Policy:**

The College has initiated withdrawal procedures and timelines in response to legislation/rules adopted by the state legislature and State Board of Community Colleges. The withdrawal deadline for this semester is Friday March 23, 2007. If you withdraw or are withdrawn from the course after this deadline, you will be assigned either a WP (withdrawn passing) or a WF (withdrawn failing) based on the work you complete of to that point. Additional information is available in the 2006-2007 College Catalog on pages 70-72.

**Valencia Student Core Competencies:**

Valencia faculty members have defined four interrelating competencies (Think, Value, Communicate, Act) that prepare students to succeed in the world community. These competencies are outlined in the College Catalog. In this course you will further your mastery of these core competencies through classroom lecture and discussion, group work, and other learning activities.

**CLAST Competencies:**

The College-Level Academic Skills Test (CLAST) measures the following: reading skills, essay skill, English language skills, and mathematics skills. To the extent possible, you will be encouraged to develop these skills as part of your work in this course. More information on the CLAST test can be found in the 2006-2007 College Catalog on pages 86-88.

**Student Code of Classroom Conduct:**

Valencia is dedicated not only to the advancement of knowledge and learning, but is concerned with the development of responsible personal and social conduct. By enrolling at Valencia, a student assumes the responsibility for becoming familiar with and abiding by the general rules of conduct. The primary responsibility for managing the classroom environment rests with the professor. Students who engage in any prohibited or unlawful acts that result in disruption of a class may be directed by the professor to leave the class. Violation of any Valencia policies/procedures or classroom rules may lead to disciplinary action up to and including expulsion from the College. Disciplinary action could include being withdrawn from the class, disciplinary warning, probation, suspension, expulsion, or other appropriate and authorized actions. Valencia's Student Code of Classroom Conduct (Policy 10-18) can be found in the current Student handbook, or online at <http://valencia.cc.fl.us/policies/PDF/10-18.pdf>. Additional information is available in the 2006-2007 College Catalog on pages 73-74.

**Students with Disabilities:**

Students with disabilities who qualify for academic accommodations may provide the instructor a notification letter from the Office for Students with Disabilities (OSD) and discuss specific needs with the instructor, preferably during the first two weeks of class. The Office for Students with Disabilities determines accommodations based on appropriate documentation of disabilities. The East Campus Office is located in Building 5, Room 216.

**Disclaimer:**

Changes in the syllabus, grading procedure, and homework assignments may be made at any time at the discretion of the professor.