Syllabus Math 3751 – Spring, 2005 Analysis I

Course Material:

Required Textbook: Advanced Calculus - A Course in Mathematical Analysis, by Fitzpatrick.
Note: Please bring your textbook and all handouts to each class meeting.
Prereq.: Math 2673 and 3715.

Class Meetings:

MTWF 10:00 – 10:50 am in WBSH 2000.
Students are expected to attend the entire class meeting, late arrivals and Early departures will not be tolerated. Also, please turn off cell phones, unless prior notification of family emergency has been noted.

Instructor:

Name: Prof. John J. Buoni
URL: http://www.as.ysu.edu/~buoni/
E-mail: buoni@math.ysu.edu
Office: Cushwa 1059
Office hours: M WF 11:10 - 12:00 and by prior appointment

Sources of Help:

The course homepage (http://www.math.ysu.edu/~buoni/m3751/m3751.html) has many examples of help. Posted there will be my exams from prior Math 3751 Courses. There is will also be various links to an Interactive Real Analysis self-tutor website located at http://www.shu.edu/projects/reals.

If you are having troubles with writing proofs, read parts of the book. Each of us has our own learning style.

Collaboration:

One of the goals of this course is to learn how to communicate Mathematical ideas; thus, you are strongly encouraged to work together. By all means, form study groups to discuss the homework problems (but give them a fair shot first before you meet with the others) and to study for the exams. A good place to meet is the student lounge (Cushwa 1107) for undergraduate math majors. Remember though, the work you turn in must be your own work and you will have to take the exams individually so do not become too dependent upon one another.
Class Attendance:

"Students are obligated to complete all assigned work promptly, to attend class regularly, and to participate in whatever class discussion may occur. Absence from more than 10 percent of the scheduled class sessions, whether excused or unexcused, is considered excessive. If you plan not to attend class on a regular basis, please take the course from someone else!” The dumbest thing a student could say is that I do not need to attend class because I had the course before!

On those rare occasions that you must miss class, you may find “homework-to-be-returned “on the next class period and assignments on the course page.

Class Prep:

Before each class, get to the class page to check that you are on the same page with me as to what you should know. Please review material covered in the previous class. If I forget to remind you, then. I will assume that you have read the material/ class notes and thus will go on further.

Homework

Homework will be of two types:

Homework to Hand-in: The homework that you hand in must be your own work. On these homeworks, you may use books to help you but copying from a book will not be tolerated and you may collaborate with other students but copying from another student will not be tolerated. Late homework will not be accepted.

Highly Recommended Homework: From which the exam problems will often (but not always) directly come. All “highly recommended homework” will be posted on the course homepage. Once I have completed a section, it is your responsibility (even if I forget to remind you) to complete the “Highly Recommended Homework” from that section. If in doubt as to whether I have finished a section, then ask at the end of class.

Exam Policies

On the exams you may not use personal books nor notes. There will be no make-up exams. The first law of academic life is intellectual honesty. We expect this of all of our students. If you ever have the least bit of uncertainty about the ground rules, ask for clarification. Excuses of the form ‘I did not know’ are never tolerated in an informed society.
Course Goals

The goals of this course are: to learn, understand, and communicate the highlights of Real Analysis. We will learn to prove results from Real Analysis. Consider a proof as a two step process.

Step 1: the skeleton/idea of the proof which is the informal discussion between friends at a chalkboard or on a napkin while drinking coffee, where questions can be asked. This step should help guide you through the next step.

Step 1: the formal real proof, in written literature, where who is reading it cannot ask you questions. These are complete sentences with minimal symbols. For examples of this, read the text.

Evaluation

Your goal is to gain a working knowledge of the material; for which you have some personal freedom in this pursuit of that goal. By the end of the semester, you should demonstrate that you have mastered the material and your grade will be agreeable. With this in mind, your grade will be based upon you’re: Homework to Hand-in, three hourly exams, and a cumulative final exam.