Math 130 Instructor Suggestions

TO: Math 130 teachers
FROM: Undergraduate Committee
DATE: April 28, 2003
SUBJ: Suggestions for teaching Math 130

Math 130 is to prepare students for calculus. We have revised the syllabus with that goal in mind, but a new syllabus is not all that is required. It is important to impress on your students from the first day that the goal is to enable them to compete in calculus and they must keep up or they will not be able to compete in 141, 142 and 241.

Students enrolling in Math 130 are required to have two years of algebra, a year of geometry, and half a year of trigonometry in high school. (Those who did not have trigonometry in high school or college must take Math 109 simultaneously with Math 130. *)

However, many students in the course do not really know the material from their high school courses. Math 130 should be taught in a manner that requires the students to internalize the material, so that they will be able to use it in calculus and the remainder of their lives. Each teacher of the course needs to find a way to accomplish this goal. One suggested approach is to have several students put selected homework problems on the board several days of almost every week and to call on each student to do so. Another suggestion is to have students work in pairs or in larger groups. Sometimes students should be given individual attention. Teachers should discuss other teaching strategies with the course coordinator. An excellent guide to university teaching can be found at http://www.maa.org/programs/tahandbook.html *

The new syllabus includes more time for algebra and certain topics about functions of various types; it deletes selected topics that were in the previous syllabus. It is anticipated that the additional time and reduced number of topics will allow for activities such as student board work, continual review of previously discussed topics, and concentration on concepts. No days explicitly for review before tests are in the syllabus.

Please follow the syllabus fairly closely. You may think your students already know these topics, but experience shows that it is necessary to cover them in considerable detail. The material included in the syllabus MUST be covered, but teachers should look at consecutive topics and be prepared to adjust the amount of time spent on each one in response to their students’ needs and abilities. For example, absolute values may require more time than other topics in sections 1.1 and 1.2, but by the end of the fourth class period all of those sections should have been covered carefully. Also, it is recommended that students be required to learn the double- and half-angle formulas in section 7.3, but not the product-to-sum and sum-to product formulas; it should be impressed upon the students that the latter formulas are useful and that they should know those formulas exist and where to find them. Another recommendation is that graphing by hand be emphasized as a way to develop and retain a better understanding of the different kinds of functions studied in the course.

* This document was modified in minor ways to update certain items on 8/11/06 by Jennifer Fowler, course coordinator.
To: Math 130 Instructors  
From: Jennifer Fowler, course coordinator  
Date: Fall 2007  

1. Please look carefully at the homework assignments for each section. Be sure to emphasize the topics in each section that are required to do the assigned homework. If there are topics in a section and no similar homework problems are assigned from that topic, it is not necessary to cover that topic. Use the Learning Objectives document to plan your classroom activities and exams.

2. The departmental syllabus assigns 15% to an “other” category. You are free to choose how the 15% “other” category is allocated. Graded homework and in-class activities should be included in an attempt to increase our students' success rate. Other options for the remaining points might come from quizzes, worksheets, and group projects.

One possible way to allot the points would be: 10% for weekly homework sets or homework quizzes (10 – 15 of these) and 5% for in-class activities or worksheets (10 - 15 of these). Homework quizzes take a few problems directly from assigned homework problems from the text. You may choose to allow open-note homework quizzes. Ideas for in-class group activities might be: some of the more difficult problems from the text, review problems, or activities found in the Instructor's Manual.

3. There will be no requirement for online homework for all sections this year. Students may access online iLrn tutorial quizzes for extra practice at their option. You may assign these quizzes as part of the 15% grade if you like – please talk to me about how to set this up.

4. Fill in the attendance & make-up policy. Be sure that you have some kind of clearly stated policy. The final exam should never count for more than 50% of a student's grade (to cover for a missed exam, for example).

5. You may add to this syllabus if you wish. I usually add some study suggestions and tips and some information about online@ut and sample problems we will be studying.

6. The final exam will be based on assigned homework problems. Calculators will be permitted on the final exam. The Learning Objectives document will serve as a guide to the composition of the common final.

7. Please give 4 exams, with the last exam occurring on or before November 29. When writing your exams, choose problems that are very similar to the chapter test problems given in the Learning Objectives document. Please share this document with your students. Do not test any topic that is not listed as a learning objective. Our goal is to be very specific about what we want our students to learn and then test the extent to which they have done so. **Please avoid “creativity” in writing your exam. Make your problems replicas of assigned textbook questions.** I can provide sample exams for you. I am required to collect one copy of each exam that you give and a copy of your syllabus. Please put these in my box as you print them.