Syllabus for Calculus for Engineering Technology I (MATH 2450)
Fall 2005

The following items should be included on the syllabus distributed to the student at the first meeting.

Office hours: Time and place of office hours. University requirement is 5 hours for faculty and visiting faculty, 3 hours for graduate assistants, and 2 hours for part-time faculty.

Prerequisites: Passing grade in Math 1320 and Math 1330 or in Math 1340, or satisfactory placement test scores. If a student's ACT-Math score is 22 or greater a score of 12 or greater is required on the Trigonometry placement test. If a student's ACT-Math score is 20 or 21, then the student must have a score of 12 or greater on the Trigonometry Placement test and a score of 12 or greater on the College Algebra placement test. For student's with ACT-Math scores of 20 or 21 who score between 9 and 11 inclusive on the Trigonometry placement test and have College Algebra placement test scores of 15 or greater, they may enroll in MATH 2450 if they concurrently enroll in Trigonometry Review MATH 1980. Students who enroll in MATH 2450 but have failed prerequisite courses may be administratively dropped from the class. General education curriculum core course meets the skills requirements in mathematics.

Textbook: *Technical Calculus - Special Edition for UT*, Ewen, Gray, Trefzger, and Colley.

Resources: Students should be made aware of the tutoring help the University provides. Mathematics tutoring is provided by the Mathematics Learning and Resource Center that is located in the basement of Carlson Library - phone ext. 2176. Please notify your students of tutoring available at the LEC (or email them the link). LEC Tutoring Hours: Monday/Thursday 9AM - 8PM, Tuesday/Wednesday 9AM - 9PM, Friday 9AM - 2PM.

Grading and Evaluation: The syllabus should describe the methods of evaluation whether quizzes, exams, or graded assignments. The usual procedure is to give at least three 1-hour in-class exams and a two hour final exam. If quizzes are not used as a portion of the grade, then four 1-hour exams are recommended. How each evaluation method is to count toward the class grade should be described and a grading scale or description of a grading procedure should be provided. It should be kept in mind when scheduling quizzes and exams that the last day to add/drop the class is the 15th calendar day of the semester and the last day to withdraw from the class is the end of the tenth week. By these dates, students like to have some measure of their progress in the class. Also be sure to publish a policy concerning missed exams and quizzes that is consistent with the Universities missed class policy (http://www.utoledo.edu/facsenate/missed_class_policy.html).

Class Schedule: Syllabus should provide a list of sections to be covered and it is advisable to give an exam schedule. It is also important to list dates such as the last day to drop, the last day to withdraw, and exam dates. The suggested number of periods needed for each section is listed below. Given the fact that the class schedule includes a 1-hour recitation giving the class 5 contact hours per week, the suggested lecture time to be devoted to these topics leaves ample time for problem solving and review. Instructors find that providing ample time for review and working problems is important for student success in this course. Most students will enroll in MATH 2460 which has MATH 2450 as a prerequisite.

Suggested Schedule for MATH 2450

Chapter	2	The Derivative	11 hours
	2.1	Motion	1.0
	2.2	The Limit	1.0
	2.3	Slope of a Tangent Line to a Curve	0.5
	2.4	The Derivative	0.5
	2.5	Differentiation of Polynomials	1.0
	2.6	Derivatives of Products and Quotients	2.0
	2.7	Derivatives of a Power	2.0
	2.8	Implicit Differentiation	1.0
	2.9	Proofs of Derivative Formulas (Optional)	1.0
	2.10	Higher Derivatives	1.0
Chapter	3	Applications of the Derivative	11 hours
	3.1	Curve Sketching	2.0
	3.2	Using the Derivative in Curve Sketching	2.0
	3.3	More Curve Sketching	2.0
	3.5	Maximum and Minimum Problems	3.0
	3.6	Related Rates	1.0
	3.7	Differentials	1.0
Chapter	4	Derivatives of Transcendental Functions	12 hours
	4.1	Trigonometric Functions	3.0
	4.2	Derivatives of Sine and Cosine Functions	2.0
	4.3	Derivatives of Other Trigonometric Functions	1.0
	4.4	The Inverse of Trigonometric Functions	1.0
	4.5	Derivatives of Inverse Trigonometric Functions	1.0
	4.6	Exponential and Logarithmic Functions	1.0
	4.7	Derivatives of Log Functions	1.0
	4.8	Derivatives of Exponential Functions	1.0
	4.9	Applications	1.0
Chapter	5	The Integral	7 hours
	5.1	The Indefinite Integral	2.0
	5.2	The Constant of Integration	1.0
	5.3	Area Under a Curve	2.0
	5.4	The Definite Integral	2.0
Chapter	6	Applications of Integration	9 hours
	6.1	Area between Curves	3.0
	6.2	Volumes of Revolution: Disk Method	3.0
	6.3	Volumes of Revolution: Shell Method	3.0
		Total Hours	50