Math 2450-001 Calculus for Engineering Technology I Syllabus Fall 2014

Time and Location: MW 7:30-9:10 UH 3800
Instructor: Seung-Moon Hong, UH2030J, (419)530-2804, seungmoon.hong@utoledo.edu
Office hours: M 2:00-4:00, W 12:00-3:00

Textbook: *Technical Calculus - Special Edition for UT* , by Ewen, Gray, Trefzger, and Colley.
Catalog Description: Differential calculus of algebraic and trigonometric functions, including limits, curve sketching, motion, maxima/minima, related rates, integral calculus of algebraic functions.
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 students 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 MATH2450 if they concurrently enroll in Trigonometry Review MATH1980. Students who enroll in MATH2450 but have failed prerequisite courses may be administratively dropped from the class. General education curriculum core course meets the skills requirements in mathematics.
Resources: There are resources available for students who need extra help outside my office hours. For this course the most reliable source of tutorial help can be found at the Mathematics Learning and Resource Center, B0200, located in the basement of Carlson Library-phone ext. 2176. For MLRC hours, see http://math.utoledo.edu/mlrc/MLRC.pdf.

Homework: It will be assigned but not collected.
Quizzes: There will be a quiz weekly. Some will be announced and some will not. No late quiz is accepted. To allow some unexpected cases, 1-2 of the lowest quizzes will be dropped.
Exams: There will be two in class exams and a comprehensive final exam given during scheduled final exam period for the section.

Calculator: No calculators with symbolic or graphing capabilities are allowed on quizzes and exams. Cell Phones/Smart Phones are not allowed during quizzes and exams.
Cell Phones and Laptop Computer Usage: Please turn off your cell phone and keep it stored away. You can use a laptop computer to take notes, but it cannot be used for any other purpose.
Attendance: Your attendance to all classes is strongly encouraged. Any announcements made in class regarding the schedule of future classes, exams or other information takes precedence over this outline.
Missed Quizzes and Exams: If you miss a class you are responsible for obtaining the material, notes, etc. Absence for quizzes and exams can only be excused if covered by the University's missed class policy. The policy specifically mentions absences from class may be excused for personal emergencies, religious observances, participation in certain UT sponsored activities, and government required activities. For more information see http://www.utoledo.edu/facsenate/missed_class_policy.html. The student must contact me in advance by phone, e-mail or in person, provide official documentation to back up his or her absence, and arrange to make up the missed item as soon as possible.

Drop/Withdrawal: In general the last day to drop or add this course is the Friday of the second week of classes. The last day to withdraw from this class with a grade of W is the Friday of the tenth week of classes.

Academic Honesty:Successful completion of this course requires personal integrity and honest academic effort. Any dishonest activities will not be tolerated in this course. Any student who engages in dishonest behavior will, at the instructor's discretion, fail the exam, fail the course, or more serious consequences. See the University's "Policy Statement on Academic Dishonesty".

Non-Discrimination Policy: The University of Toledo is committed to a policy of equal opportunity in education, affirms the values and goals of diversity.

Students with Disabilities: The University will make reasonable academic accommodations for students with documented disabilities. Students should contact the Student Disability Services (Rocket Hall 1820; 419.530.4981; studentdisabilitysvs@utoledo.edu) as soon as possible for more information and/or to initiate the process for accessing academic accommodations. For the full policy see: http://www.utoledo.edu/offices/student-disability-services/sam/index.html

Student Privacy: Federal law and university policy prohibits instructors from discussing a student's grades or class performance with anyone outside of university faculty/staff without the student's written and signed consent. This includes parents and spouses. For details, see the Confidentiality of student records (FERPA) section of the University Policy Page at http://www.utoledo.edu/policies/academic/undergraduate/index.html.

Grading: The following percentages are assigned to the components of the student's grade.

Quizzes 30%, Exam I 20%, Exam II 20%, Final Exam 30%.

The final letter grade will be based on your total average as follows:

Total average	below 60%	60% – 69%	70% – 79%	80% – 89%	90% – 100%
Grade	F	D	C	B	A

	Last day to add/drop	Sep 8
	Exam I	Sep 24
Calendar:	Exam II	Oct 29
	Last day to withdraw	Oct 31
	Final Exam	Dec 17, 7:30-9:30

Schedule:

Week	Subject
1	2.1 Motion
	2.2 The Limit
	2.3 Slope of a Tangent Line to a Curve
	2.4 The Derivative
2	2.5 Differentiation of Polynomials
	2.6 Derivatives of Products and Quoteints
	2.7 Derivatives of a Power
3	2.8 Implicit Differentiation
	2.10 Higher Derivatives
4	3.1 Curve Sketching
	3.2 Using the Derivative in Curve Sketching
5	3.3 More Curve Sketching
	Exam I
6	3.5 Maximum and Minimum Problems
	3.6 Related Rates
7	3.7 Differentials
	4.1 Trigonometric Functions
8	4.2 Derivatives of Sine and Cosine Functions
	4.3 Derivatives of Other Trigonometric Functions
	4.4 The Inverse of Trigonometric Functions
9	4.5 Derivatives of Inverse Trigonometric Functions
	4.6 Exponential and Logarithmic Functions
	4.7 Derivatives of Log Functions
10	4.8 Derivatives of Exponential Functions
	4.9 L'Hospital's Rule
	Exam II
11	4.10 Applications
	5.1 The Indefinite Integral
	5.2 The constant of Integration
12	5.3 Area Under a Curve
	5.4 The Definite Integral
13	6.1 Area between Curves
14	6.2 Volumes of Revolution: Disk Method
15	6.3 Volumes of Revolution: Shell Method