Math 1860-011 Calculus II Syllabus Summer 2013

Time and Location: MTWR 1:30-3:40 UH 3800
Instructor: Seung-Moon Hong, UH2030M, (419)530-2804, seungmoon.hong@utoledo.edu
Office hours: MW 11:30-1:00

Textbook: *Thomas' Calculus Early Transcendentals*, 12th edition by George B. Thomas, Maurice D. Weir and Joel Hass. The textbook is available online at a 30% discount in electronic form from www.coursesmart.com. In this case, students will be responsible for printing it or accessing it electronically.
Prerequisites: Passing grade in Math 1850 or equivalent.

Homework: It will be assigned and graded on MyMahtLab. Student need an access code. The course ID for this class is **hong31261**. You are responsible to check if you have new homework and to finish it on time. Late homework will not be accepted for any reason. To allow some unexpected cases, a few of the lowest assignment scores will be dropped.
Quizzes: There will be one or more quizzes weekly. Some will be announced and some will not. No late quiz is accepted. At the end of the semester, 1-2 of the lowest quizzes will be dropped.
Exams: There will be two in class exams and a comprehensive final exam.

Calculator: No calculators with symbolic or graphing capabilities are allowed on 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.
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 Office of Accessibility (Rocket Hall 1820; 419.530.4981; officeofaccessibility@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/utlc/accessibility/faculty.html

Learning objectives:

The successful Calculus II students should be able to

1. Use antiderivatives to evaluate definite integrals and apply definite integrals in a variety of applications to model physical, biological or economic situations. Whatever applications (e.g. determining area, volume of solids of revolution, arc-length, area of surfaces of revolution, centroids, work, and fluid forces) are chosen, the emphasis should be on setting up an approximating Riemann sum and representing its limit as a definite integral.

2. Employ a variety of integration techniques to evaluate special types of integrals, including substitution, integration by parts, trigonometric substitution, and partial fraction decomposition.

3. Evaluate improper integrals, including integrals over infinite intervals, as well as integrals in which the integrand becomes infinite on the interval of integration.

4. Determine the existence of and find algebraically the limits of sequences. Determine whether a series converges by using appropriate tests, including the comparison, ratio, root, and integral.

5. Find the n-th Taylor polynomial at a specified center for a function and estimate the error term. Use appropriate techniques to differentiate, integrate and find the radius of convergence for the power series of various functions.

6. Analyze curves given parametrically and in polar form and find the areas of regions defined by such curves.

7. Perform and apply vector operations, including the dot and cross product of vectors, in the plane and space.

Grading: The following percentages are assigned to the components of the student's grade. Homework 10%, Quiz 20%, Exam I 20%, Exam II 20%, Final Exam 30%.

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

Total average	60% or above	70% or above	80% or above	90% or above
Grade	D	C	B	A

Calendar:

Last day to add/drop	May 20
Exam I	May 23
Exam II	June 06
Last day to withdraw	June 07
Final Exam	June 19-20

Schedule:

Week	Subject
1	6.1 Volumes using Cross Sections
	6.2 Volumes using Cylindrical Shells
	6.3 Arc Length
	8.1 Integration by Parts
	8.2 Trigonometric Integrals
	8.3 Trigonometric Substitution
2	8.4 Integration of Rational Functions by Partial Fractions
	8.7 Improper Integrals
	10.1 Sequences
	10.2 Infinite Series
	Exam I
3	10.3 The Integral Test
	10.4 Comparison Tests
	10.5 Ratio and Root Tests
	10.6 Absolute and Conditional Convergence
	10.7 Power Series
	10.8 Taylor and Maclaurin Series
4	10.9 Convergence of Taylor Series
	10.10 Applications of Taylor Series
	11.1 Parameterizations of Plane Curves
	11.2 Calculus with Parametric Curves
	11.3 Polar Coordinates
	11.4 Graphing in Polar Coordinates
	Exam II
5	11.5 Areas and Lengths in Polar Coordinates
	12.1 Three Dimensional coordinate system
	12.2 Vectors
	12.3 The Dot Product
	12.4 The Cross Product
6	12.5 Lines and Planes in Space
	12.6 Cylinders and Quadric Surfaces (opt)
	Final Exam