Kent Pearce   Math 1452-006

Office:	MA 201-A	Lecture
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		Problem Sessions, Exams, Quizzes
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	(Syllabus, Calendar,	Text
	Homework, WebWork	Smith, Strauss, & Toda
	Access)	*Calculus*, 6th Ed.
		Kendall Hunt

Office Hours
     Tu-Th   1:30-3:00 or   Chapters: 5-9
     By Appointment

Course Description

Methods of integration, parametric equations, polar coordinates, hyperbolic functions, infinite series. Applications and problem-solving are strongly emphasized.

Prerequisites

MATH 1351 or MATH 1451 or departmental consent.

Course-Specific Learning Objectives And Corresponding Outcomes

1. *Apply arithmetic, algebraic, geometric, statistical and/or logical reasoning to solve problems.*
    In Math 1452 students will develop skills to: (1) compute areas and volumes; (2) solve real world problems involving selected concepts from the physical and life sciences, and economics; (3) integrate by using substitution, integration by parts, and partial fractions; (4) analyze the convergence of infinite series and sequences; (5) perform basic vector algebra; (6) apply specific concepts to certain problems from the real world and other sciences. Student mastery of problem solving skills will be assessed through homework exercises, in-class quizzes, and examinations.

2. *Represent and evaluate basic mathematical and/or logical information numerically, graphically, and symbolically.*
    In Math 1452 students will learn how to adequately communicate mathematical information in writing, verbally and graphically, by using words, numerical answers, algebraic expressions, logical sentences, as well as graphs and diagrams.

3. *Use mathematical and logical reasoning to evaluate the validity of an argument.*
    In Math 1452 students will learn how to identify, understand and apply mathematical and logical reasoning to theoretical and applied problems. In particular, attention will be given to elementary proofs in calculus and convergence inferences for improper integrals and infinite series.

4. *Interpret mathematical and/or logical models such as formulas, graphs, tables and schematics, and draw inference from them.*
    In Math 1452 students will learn to identify and interpret mathematical information contained in formulas, graphs and tables, in particular: (a) applications to physical problems; (b) formulas from integration tables; (c) geometric and infinite series. The development of student interpretative and inference skills will be assessed through homework exercises, in-class quizzes, and examinations.

College-Level Competency

Students graduating from Texas Tech University should be able to: demonstrate the ability to apply quantitative and logical skills to solve problems.
In particular, students who have taken Math 1452 will be able to use the course-specific learning objectives in order to provide individual solutions to mathematical problems and interpret the results in a relevant manner.

Assessment of the learning outcomes

Learning outcomes will be assessed through paper-based and on-line (WebWork) homework exercises, in-class quizzes, mid-term examinations and the common (departmental) comprehensive final examination.

General requirement

The Common Final represents a course requirement. A student who did not complete the Final Examination, but otherwise completed all the other requirements successfully cannot be assigned a passing letter grade (D or higher) unless taking the Final Examination. Each designated instructor has to keep their copy of partial scores and grades for each student, for one calendar year from the date of recording the grade in the web database.

Grades

HomeWork	14 assignments - Paper-Based - Drop Lowest	
	Due "at the first class period of each week"	
	http://www.math.ttu.edu/~pearce/courses/1452-20152(006)-hwk.shtml	100 pts
WebWork	14 assignments - Web-Based - Drop Lowest	
	Due "end of the day of the first class period of each week"	
	http://webwork.math.ttu.edu/webwork2/spr08kpearcem1452s006/	100 pts
Quizzes	4 in-class quizzes, no make-up quizzes	
	30 Jan, 27 Feb, 03 Apr, 27 Apr (M)	100 pts
Examinations	4 mid-term examinations, no make-up examinations	
	16 Jan, 13 Feb, 13 Mar, 17 Apr	400 pts
Final Exam	Comprehensive, 11 May 2014, Monday, 10:30 am - 1:00 pm	200 pts
Total		900 pts

Grading Scale

   A...100% - 90%   B...89% - 80%   C...79% - 70%   D...69% - 60%   F...59% - 0%

Review Sessions

   12 Feb, 7:00 pm; 12 Mar, 7:00 pm; 16 Apr, 7:00 pm

Technology

Graphing calculators (TI-83, TI-84, TI-89 or equivalent) and/or computer algebra software (Maple, Mathematica) can be invaluable aids for facilitating learning. On the other hand, the course objectives are not centered around calculator proficiency nor computer expertise. Students may use a graphing calculator or computer algebra software while doing homework and webwork assignments to facilitate: (1) learning of concepts; (2) understanding the material; (3) checking calculation details. The emphasis on mid-term exams and the final exam will be oriented towards assessing mastery of the concepts stated in the Learning Objectives section. To that end, calculators will <u>not</u> be allowed in the quizzes, mid-term exams, and the final exam.

Attendance

    A roll sheet will be circulated each class period (except on exam dates). Each student is responsible for his/her signing the roll each class period. Students who are absent more than four (4) class periods will receive 20 point deduction from their cumulative total. Students who are absent more than eight (8) periods will receive a 80 point deduction from their cumulative total.

Competency Exam

    A competency exam will be administered on the first week of class to assess adequate Calculus I preparation for being in Calculus II. The competency exam will focus on differentiation techniques (Chapter 3.1-3.6) and on elementary integration techniques (Chapter 5.4-5.4).

Critical Dates

    16 Jan 2015, Friday, Exam 0 - Competency Exam
    19 Jan 2015, Monday, University Holiday
    30 Jan 2015, Friday, Last Day to Drop a Class Without Penalty
    13 Feb 2015, Friday, Exam I
    13 Mar 2015, Friday, Exam II
    16 Mar 2015 - 20 Mar 2015, Monday - Friday, Spring Break
    11 Mar 2015, Wednesday, Mid-semester grades due.
    25 Mar 2015, Wednesday, Last day to drop a course
    06 Apr 2015, Day of No Classes
    17 Apr 2015, Exam III
    29 Apr 2015 - 05 May 2015, Wednesday - Tuesday, Period of No Exams
    05 May 2015, Tuesday, Last day of classes.
    06 May 2015, Wednesday, Individual Study Day
    07 May 2015 - 12 May 2015, Thursday - Tuesday, University Final Exams
    11 May 2015, Monday, Comprehensive Math 1452 Final Exam (10:30 - 1:00)

Notices

Academic Integrity (Extracted from OP 34.12)

    It is the aim of the faculty of Texas Tech University to foster a spirit of complete honesty and high standard of integrity. The attempt of students to present as their own any work not honestly performed is regarded by the faculty and administration as a most serious offense and renders the offenders liable to serious consequences, possibly suspension.

    "Scholastic dishonesty" includes, but it not limited to, cheating, plagiarism, collusion, falsifying academic records, misrepresenting facts, and any act designed to give unfair academic advantage to the student (such as, but not limited to, submission of essentially the same written assignment for two courses without the prior permission of the instructor) or the attempt to commit such an act.

Civility in the classroom (Extracted from Faculty Handbook)

    Texas Tech University is a community of faculty, students, and staff that enjoys an expectation of cooperation, professionalism, and civility during the conduct of all forms of university business, including the conduct of student–student and student–faculty interactions in and out of the classroom.

Observance of Religious Holiday (Extracted from OP 34.19)

    A student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence. A student who is absent from classes for the observance of a

religious holy day shall be allowed to take an examination or complete an assignment scheduled for that day within a reasonable time after the absence.

Accommodation for Students with Disabilities (Extracted from OP 34.22)
Any student who, because of a disability, may require special arrangements in order to meet the course requirements should contact the instructor as soon as possible to make any necessary arrangements. Students should present appropriate verification from Student Disability Services during the instructor's office hours. Please note: instructors are not allowed to provide classroom accommodations to a student until appropriate verification from Student Disability Services has been provided. For additional information, please contact Student Disability Services in West Hall or call 806-742-2405.