MATH 1190: Calculus I

Spring Semester 2016

Instructor – Shangrong Deng

CRN	Days	Time	Course Num/Sec	Location
13028	M W F	9:30 am. -- 10:40 am.	MATH 1190/54	D-107 Marietta

A Course in the General Education Program

Program Description: The General Education at Kennesaw State University program offers a comprehensive series of interrelated courses in the liberal arts and sciences for all Kennesaw State University students. Whereas the major program contributes depth within a chosen specialization, the General Education core provides breadth of understanding within a variety of disciplines. Together, the General Education core and the major degree program offer students the knowledge, skills, and perspectives to become informed and engaged citizens living in a diverse, global community.

Program Goals: The General Education Program at KSU has four goals. During the course of the program, students should achieve the following:
- Demonstrate knowledge and understanding of general education disciplines.
- Demonstrate proficiency in communication.
- Demonstrate skills in inquiry, critical thinking, analysis, and problem solving through scholarly and/or creative activity across the general education disciplines.
- Demonstrate an understanding of ethics, diversity, and a global perspective.

MATH 1190 satisfies one of Kennesaw State University's general education program requirements. It addresses the Applied Math learning outcome. This learning outcome states:

Applied Math: Students will demonstrate an ability to effectively apply symbolic representations to model and solve problems.

For more information about KSU's General Education program requirements and associated learning outcomes, please visit the topic "University-Wide Degree Requirements" in the KSU Undergraduate Catalog.

General Education Assessment Study:

Kennesaw State University is currently engaged in a campus-wide assessment of its general education program. The purpose is to measure student achievement with respect to faculty defined student learning outcomes. This course has been selected to participate in the process. No individually-identifiable student information will be collected as part of the assessment.   Data will be reported only in aggregated form. Students should know that the data may be used for scholarly work by members of KSU faculty (but only in anonymous and aggregated form). If you are opposed to having your anonymous data used for scholarly work, you can "opt out" of this specific aspect of the process.

For more information on the general education assessment process and for access to an "opt out" form, please click

http://kennesaw.edu/curriculum/gen-ed-assessment.html

Course Description:

MATH 1190 – Calculus I
4 Class Hours 0 Laboratory Hours 4 Credit Hours

Prerequisite: A grade of "C" or better grade in MATH 1112 or MATH 1113 or approval of department chair.

This course is the first in the calculus curriculum and introduces the central concepts of calculus. Topics include limits, continuity, derivatives of algebraic and transcendental functions of one variable, applications of these concepts and a brief introduction to the integral of a function.

Expected Learning Outcomes:

1. The student will be able to determine the limit of a function, including limits involving infinity, numerically, graphically, and analytically, including using the Squeeze Theorem.

2. The student will be able to determine the continuity of a function at a specific number and on an interval, both graphically and analytically.
3. The student will be able to use the Intermediate Value Theorem.
4. Students will be able to compute derivatives of basic functions using the limit definition of the derivative.
5. Students will be able to calculate derivative functions using the common rules: power, product, quotient, and chain rules, and be able to calculate the derivatives of polynomials, exponential and logarithmic functions, and trigonometric and inverse trigonometric functions.
6. Students will be able to use implicit differentiation and logarithmic differentiation.
7. Students will know that the Mean Value Theorem can be used to prove the Increase/Decrease Test. Student will use knowledge of derivatives in applications including, but not limited to, maximum-minimum problems, shapes of curves, indeterminate forms, and L'Hôpital's Rule.
8. Students will be able to calculate antiderivatives for basic functions using their knowledge of derivatives.
9. Students will be able to use the definition and geometric interpretation of the definite integral to evaluate definite integrals of basic functions.
10. Students will be able to use the Fundamental Theorem of Calculus to evaluate definite integrals.

Instructor Information and Policies for this course

Instructor: Shangrong Deng
Phone: 470-578-7237
Office: D-206, Marietta
Office hours: 10:40 am. -- 11:10 am. M. W. F.
                     9:40 am. – 10:10 am. T. Th. or by appointment
Email: sdeng@kennesaw.edu
                     (email is the best way to get a message to me)

Attendance: Regular class attendance is essential and expected of every student enrolled in this class. Attendance will be taken from time to time. Attendance data will be reported to school and will be used to determine borderline cases. Excessive absences often provide an early signal of a student's lack of success in the course. All students will be responsible for knowing about all material, assignments, and announcements given in class, even if they are absent.

Students are expected to spend about 2 hours of quality study time between class sessions devoted to this course's material. This time should be divided among 4 activities:

1. studying the section(s) of the book that were discussed the previous classroom session;
2. working on the assigned homework;
3. reading those sections of the textbook scheduled to be lectured on during the next class session, and developing clarifying questions to ask in class;
4. preparing for tests.

There will be no make-up tests given, and everyone must take the final exam.
Students will accumulate points as follows:

Four tests worth 100 points each	400 points
Completion of homework in WebAssign	100 points
Comprehensive final exam	150 points
Total	650 points

Course grades will be assigned as follows:

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

Withdrawal Policy:

The last day to withdraw without academic penalty is March 2, 2016. Ceasing to attend class DOES NOT constitute official withdrawal from the course. Students who simply stop attending classes without officially withdrawing will be assigned the grade of "F". Students wishing to officially withdraw must do so online at www.kennesaw.edu, under Owl Express, Student Services.

Technology Statement: Technology in the form of a TI-84 graphing calculator (or its equivalent) will be used. Use of calculators with calculus symbolic capabilities (such as the TI-89) will not be permitted for tests or exams.

Textbook*: Single Variable Calculus, Early Transcendentals, 1st edition,* by Michael Sullivan and Kathleen Miranda. This textbook is available either in a hardcover edition or a slightly cheaper loose-leaf edition. The price for new copies of the book will include a registration code for WebAssign product, which is where your instructor's required homework assignments for this course will be accessed and worked as part of the course grade. Students who feel they are able to do without a physical book have the option of purchasing a WebAssign registration code with e-book.

Required Online Resource: WebAssign (https://webassign.net/login.html)

Completion of homework assignments in WebAssign will count toward the course grade. Your instructor customizes an instance of WebAssign, setting up homework assignments with their due dates, as well as other resources. Students in this class section are required to subscribe to WebAssign and enroll in the WebAssign course using a class key given in their D2L course. A student acquires a WebAssign subscription code for the course's textbook in one of the following ways:

1. By purchasing a new physical copy of the textbook at either the KSU Bookstore or the General Bookstore; new copies of the textbook will come with a WebAssign registration code included in the price.

2. By purchasing, from WebAssign, just a WebAssign registration code with the e-book. Some students may find this cheaper option financially attractive.

3. By purchasing a book and/or WebAssign registration code from an alternate source (such as Amazon or eBay).

Students should assure that any new textbook they purchase is bundled with a WebAssign registration code as part of the book's price.

Homework Assignments through WebAssign:

Important Note: Any computer difficulties you experience are your responsibility to resolve and are not grounds for extensions of homework due dates. If you are having trouble with your computer, you can use one of the public computers on campus to complete your homework.

There are 20 homework assignments during the semester that you complete in WebAssign. Each assignment is worth 5 points of the 100 total points for homework. You will have 50 attempts, until the due date, to earn credit for each question ("Exercise") in an assignment. Historically, there has been a strong correlation between a student's homework score and the subsequent test score.

Caution! Those who merely do the homework to "get the points" but who don't understand the knowledge being exercised in the homework (that is, they "get the points" but they don't "get the point") will undoubtedly do poorly on the tests, and the final exam.

Math 1190/54 , Tentative Daily Schedule

Meeting Number	Date	Classroom Topic
1	Mon, Jan 11	Section P.4
2	Wed, Jan 13	Section P.5
3	Fri, Jan 15	Section P.6, P.7
4	Wed, Jan 20	Section 1.1
5	Fri, Jan 22	Section 1.2, 1.3
6	Mon, Jan 25	Section 1.4
7	Wed, Jan 27	Sections 1.5
8	Fri, Jan 29	Section 2.1
9	Mon, Feb 1	Section 2.2
10	Wed, Feb 3	Section 2.3
11	Fri, Feb 5	Review
12	Mon, Feb 8	Test 1
13	Wed, Feb 10	Section 2.4
14	Fri, Feb 12	Section 2.5
15	Mon, Feb 15	Section 3.1
16	Wed, Feb 17	Section 3.1
17	Fri, Feb 19	Section 3.2
18	Mon, Feb 22	Section 3.2
19	Wed, Feb 24	Section 3.3
20	Fri, Feb 26	Section 3.3
21	Mon, Feb 29	Review
22	Wed, Mar 2	Test 2
23	Fri, Mar 4	Section 3.4
24	Mon, Mar 7	Section 4.1
25	Wed, Mar 9	Section 4.2
26	Fri, Mar 11	Section 4.3
27	Mon, Mar 14	Section 4.4
28	Wed, Mar 16	Section 4.5
29	Fri, Mar 18	Section 4.6
30	Mon, Mar 21	Sections 4.7
31	Wed, Mar 23	Review
32	Fri, Mar 25	Test 3
33	Mon, Mar 28	Section 4.8
34	Wed, Mar 30	Section 4.8
35	Fri, Apr 1	Section 5.1
36	Mon, Apr 11	Section 5.2
37	Wed, Apr 13	Section 5.2

38	Fri, Apr 15	Section 5.2
39	Mon, Apr 18	Section 5.3
40	Wed, Apr 20	Section 5.4
41	Fri, Apr 22	Section 5.4
42	Mon, Apr 25	Section 5.5
43	Wed, Apr 27	Review
44	Fri, Apr 29	Test 4
45	Mon, May 1	Review
Final	TBA	Final Exam

Additional Important Notes:

1. Students are expected to read and study the indicated topics before the lecture.

2. The lecture schedule is tentative. Any changes will be announced in class.

3. The instructor may post supplemental information after each lecture on the Desire2Learn website (http://d2l.kennesaw.edu), so you should check D2L daily.

4. Student homework is assigned in WebAssign. Your grade on the homework counts toward your course grade.

5. There is a special homework assignment for Chapter P which will be due at the end of the 2nd week of class, which is intended to encourage students to quickly get set up in WebAssign. This is, in effect, a 21-st homework assignment, worth as much as a regular homework assignment (5 points maximum), and whatever points are earned for this assignment will be treated as a course bonus.

6. WebAssign is accessible from lab computers on the KSU campus. Or, you may also access WebAssign from your own personal computer. Immediately after you first enroll in your instructor's WebAssign homework course, be sure to confirm that your personal computer has all the necessary software required for WebAssign to work correctly.

7. Any computer difficulties you experience are your responsibility and not grounds for extensions of homework due dates. The best way to avoid computer problems is to complete assignments ahead of time and not at the last minute before the due date/time.

WITHDRAWAL FROM THE UNIVERSITY OR FROM INDIVIDUAL COURSES AND ACADEMIC INTEGRITY

Spring Term, 2016

Withdrawal

Students who find that they cannot continue in college for the entire semester after being enrolled, because of illness or any other reason, need to complete an online form. To completely or partially withdraw from classes at KSU, a student must withdraw online at www.kennesaw.edu, under Owl Express, Student Services.

The date the withdrawal is submitted online will be considered the official KSU withdrawal date which will be used in the calculation of any tuition refund or refund to Federal student aid and/or HOPE scholarship programs. It is advisable to print the final page of the withdrawal for your records. Withdrawals submitted online prior to midnight on the last day to withdraw without academic penalty will receive a "W" grade. Withdrawals after midnight will receive a "WF". Failure to complete the online withdrawal process will produce no withdrawal from classes. Call the Registrar's Office at 770-423-6200 during business hours if assistance is needed.

Students may, by means of the same online withdrawal and with the approval of the university Dean, withdraw from individual courses while retaining other courses on their schedules. This option may be exercised up until **March 2, 2016**.

This is the date to withdraw without academic penalty for **Spring** Term, 2016 classes. Failure to withdraw by the date above will mean that the student has elected to receive the final grade(s) earned in the course(s). The only exception to those withdrawal regulations will be for those instances that involve unusual and fully documented circumstances.

Academic Integrity

Every KSU student is responsible for upholding the provisions of the Statement of Student Rights and Responsibilities, as published in the Undergraduate and Graduate Catalogs. Section II of the Statement of Student Rights and Responsibilities addresses the University's policy on academic honesty, including provisions regarding plagiarism and cheating, unauthorized access to University materials, misrepresentation/falsification of University records or academic work, malicious removal, retention, or destruction of library materials, malicious/intentional misuse of computer facilities and/or services, and misuse of student identification cards. Incidents of alleged academic misconduct will be handled through the established procedures of the Department of Student Conduct and Academic Integrity (SCAI), which includes either an "informal" resolution by a faculty member, resulting in a grade adjustment, or a formal hearing procedure, which may subject a student to the Code of Conduct's minimal one semester suspension requirement.