



Math 243, Calculus II, Spring, 2018, Section 23771

Instructor:	Mark Arrasmith
Department:	Department of Mathematics, Statistics and Physics
Office Location:	Jabara Hall Room 329
Office Hours:	10:30am–11:30am Daily
Email:	arrasmith@math.wichita.edu or mark.arrasmith@wichita.edu
Phone:	316-978-3954
Classroom; Days/Time:	112 LH; 9:30am–10:20am Daily
WebAssign Key:	wichita 2108 7531
Final Exam:	9:00am, Monday, May 7th

How to use this syllabus

This syllabus provides you with information specific to this course, and it also provides information about important university policies. This document should be viewed as a course overview; it is not a contract and is subject to change as the semester evolves. If a change is required in the course syllabus, the new version of the syllabus will be distributed in class.

Academic Honesty

Students are responsible for knowing and following the Student Code of Conduct http://webs.wichita.edu/inaudit/ch8_05.htm and the Student Academic Honesty policy http://webs.wichita.edu/inaudit/ch2_17.htm.

If you cheat on an exam, you will receive a zero on said exam and at maximum a 73% in our course. If you are caught cheating and deny it, you will be failed from our course. If you cheat a second time, you will be failed from our course. Either way, you will be reported to all relevant authorities (including your appropriate college).

Course Description

General education advanced further study course. A continuation of MATH 242. Includes a study of integration and applications and an introduction to infinite series.

Prerequisites

Math 242 with a C or better.

Required Texts/Readings Textbook

Calculus, (eighth edition) by James Stewart, Cengage Learning, 2016 (available from the WSU bookstore).

Definition of a Credit Hour

Success in this 5 credit hour course is based on the expectation that students will spend, for each unit of credit, a minimum of 45 hours over the length of the course (normally 3 hours per unit per week with 1 of the hours used for lecture) for instruction and preparation/studying or course related activities for a total of 225 hours. Go to: <http://webs.wichita.edu/?u=academicaffairs&p=/definitionandassignmentofcredithours/> for the policy and examples for different types of courses and credit hour offerings.

Class Protocol

Regular attendance is expected. You are paying to be here, please show up.

Grading

There will be four (4) exams and a comprehensive final exam. The exams will constitute 17% a piece of your course grade, homework is 15%, and the comprehensive final is 17%.

Grading Scale

WSU uses a +/- grading scale for final grades and to calculate grade point averages. In this class, grades are assigned according to the following chart. (Other classes might assign grades differently: Be sure to understand the different grading scales in all of your classes.)

Percentages	Letter grade	Grade Points	Interpretation
90%-100%	A	4.00	<i>The A range denotes excellent performance.</i>
89%	A-	3.70	
88%	B+	3.30	
80%-87%	B	3.00	<i>The B range denotes good performance.</i>
79%	B-	2.70	
78%	C+	2.30	
70%-77%	C	2.00	<i>The C range denotes satisfactory</i>
69%	C-	1.70	
68%	D+	1.30	
60%-67%	D	1.00	<i>The D range denotes unsatisfactory</i>
59%	D-	0.70	
0%-58%	F	0.00	<i>F denotes failing performance.</i>

Assignments

Homework Assignments will be done via <http://www.webassign.net>

Missed Assignments and Exams

Missing exams is highly discouraged. Contact me before the exam, if possible, if you are ill or have a personal reason to miss the exam. Makeup exams will not be allowed unless the instructor finds the reason for missing an exam is adequate and sufficient documentation is provided; a note from a medical professional indicating a medical reason for an absence is usually sufficient justification for a makeup exam.

Disabilities

If you have a physical, psychiatric/emotional, or learning disability that may impact on your ability to carry out assigned course work, I encourage you to contact the Office of Disability Services (DS). The office is located in Grace Wilkie Annex, room 150, (316) 978-3309 (voice/tty) (316-854-3032 videophone). DS will review your concerns and determine, with you, what academic accommodations are necessary and appropriate for you. All information and documentation of your disability is confidential and will not be released by DS without your written permission.

Counseling & Testing

The WSU Counseling & Testing Center provides professional counseling services to students, faculty and staff; administers tests and offers test preparation workshops; and presents programs on topics promoting personal and professional growth. Services are low cost and confidential. They are located in room 320 of Grace Wilkie Hall, and their phone number is (316) 978-3440. The Counseling & Testing Center is open on all days that the University is officially open. If you have a mental health emergency during the times that the Counseling & Testing Center is not open, please call COMCARE Crisis Services at (316) 660-7500.

Diversity and Inclusive

Wichita State University is committed to being an inclusive campus that reflects the evolving diversity of society. To further this goal, WSU does not discriminate in its programs and activities on the basis of race, religion, color, national origin, gender, age, sexual orientation, gender identity, gender expression, marital status, political affiliation, status as a veteran, genetic information or disability. The following person has been designated to handle inquiries regarding nondiscrimination policies: Executive Director, Office of Equal Opportunity, Wichita State University, 1845 Fairmount, Wichita KS 67260-0138; telephone (316) 978-3186.

Intellectual Property

Wichita State University students are subject to Board of Regents and University policies (see http://webs.wichita.edu/inaudit/ch9_10.htm) regarding intellectual property rights. Any questions regarding these rights and any disputes that arise under these policies will be resolved by the President of the University, or the Presidents designee, and such decision will constitute the final decision.

Shocker Alert System

Get the emergency information you need instantly and effortlessly! With the Shocker Alert System, we will contact you by email the moment there is an emergency or weather alert that affects the campus. Sign up at www.wichita.edu/alert.

Student Health Services

WSUs Student Health clinic is located in 209 Ahlberg Hall. Hours are 8:00am to 7:00pm (8:00 am to 5:00 pm on Fridays), though the clinic may be closed occasionally on Wednesdays from noon to 1:30pm. The telephone number is (316) 978-3620. In addition to outpatient and preventive care (including immunizations, a prescription service, and testing/counseling for sexually transmitted infections), Student Health can handle minor injuries. All services are confidential. For more information see www.wichita.edu/studenthealth.

Title IX

Title IX of the Educational Amendments of 1972 prohibits discrimination based on sex in any educational institution that receives federal funding. Wichita State University does not tolerate sex discrimination of any kind including: sexual misconduct; sexual harassment; relationship/sexual violence and stalking. These incidents may interfere with or limit an individuals ability to benefit from or participate in the Universitys educational programs or activities. Students are asked to immediately report incidents to the University Police Department, (316) 978-3450 or the Title IX Coordinator (316) 978-5177. Students may also report incidents to an instructor, faculty or staff member, who are required by law to notify the Title IX Coordinator. If a student wishes to keep the information confidential, the student may speak with staff members of the Counseling and Testing Center (316) 978-3440 or Student Health Services (316)978-3620. For more information about Title IX, go to: <http://www.wichita.edu/thisis/home/?u=titleixf>

Measurable Student Learning Outcomes

General Course Outcomes: The student will attain competency in the body of knowledge identified as Calculus, and develop a set of foundational skills necessary to success in the Calculus sequence and in the courses for which this sequence is a pre-requisite.

Objectives and outcomes to be achieved are the following:

- (a) Solve problems.
- (b) Adapt definitions and statements of results to specific settings.
- (c) Model real-world scenarios and problems mathematically.
- (d) Use mathematical language, symbols, and and reasoning in the reading, writing, and discussion of mathematics.
- (e) Use critical thinking skills, reasoning, and argumentation.
- (f) Retrieve and utilize mathematical content and skills in outside settings.
- (g) Make connections to other disciplines and walks of life - apply critical thinking and reasoning, and construct and evaluate arguments.

Learning Outcomes by Chapter:

Learning Outcomes corresponding to Chapter Six: The student will review the concept of a function and its inverse, and then interpret this in the following applications. (i) Solve problems involving exponential growth and decay. (ii) Define and apply inverse trigonometric functions. (iii) Define and apply hyperbolic functions. (iv) Identify indeterminate forms, and apply L'Hopital's Rule to compute their limits.

Learning Outcomes corresponding to Chapter Seven: The student now expands their computational abilities through the mastery of specific techniques of integration. Specifically, the student becomes able to do the following. (i) Apply the integration techniques of integration by parts, integration by the method of trigonometric substitution, and the method of partial fractions. (ii) Apply a variety of computational techniques for handling integrals involving powers of trigonometric functions. (iii) Synthesize this material and develop methods and recognize patterns, in order to determine which techniques to apply to a given integral. (iv) Calculate improper integrals.

Learning Outcomes corresponding to Chapter Eight: The student deepens their appreciation of the utility of Calculus by exploring applications. Through the development of this material, the student reinforces the unifying concept of integration theory. Because these applications often produce more challenging integrals, the student also practices and reinforces integration techniques. Specifically, the student will be able to do the following. (i) Use integration theory to develop formulas for arc length and surface area. (ii) Appreciate the utility of Calculus through selected applications to problems arising in physics, engineering, economics, and biology.

Learning Outcomes corresponding to Chapter Ten: The student works with new coordinate systems, and differentiates between functions and equations. The student's mastery of content areas includes the following abilities. (i) Uses parametric equations to describe curves in the plane. (ii) Applies techniques of calculus in the setting of parametric curves. (iii) Uses polar coordinates to describe points and sets in the plane. (iv) Applies techniques of calculus using polar coordinates. (v) Describes conic sections in rectangular and polar coordinates.

Learning Outcomes corresponding to Chapter Eleven: The student now applies functions to the discrete setting, and develops techniques adapted to the exploration of such functions. (i) Applies the concept of a function to yield the notion of a sequence. (ii) Expands to series, and explores the concept of convergence. (iii) Applies tests for convergence - the integral test and the comparison tests. (iv) Applies the test for convergence of an alternating series. (v) Discovers the notion of absolute convergence, and applies the ratio and root tests. (vi) Discovers patterns and develops strategies for determining which convergence tests to apply to a given series. (vii) Generalizes to series of functions, especially power series. (viii) Applies Taylor polynomials to questions involving approximation.

Learning Outcomes corresponding to Chapter Twelve: The student now explores three-dimensional space and objects in three-dimensional space. (i) Locates points in rectangular coordinate system. (ii) Calculates the geometric operations associated to vectors - the dot product and the cross product - along with their geometric interpretations and physical applications. (iii) Describes lines and planes by equations. (iv) Identifies and classifies cylinders and quadric surfaces, understanding how geometric information is captured by algebraic equations and conversely.