MATH 129, Calculus II

Course, Departmental and University Policies
Spring 2016

Instructor Contact Information and Course Resources:
Name: Colin Clark
Email: colinclark@email.arizona.edu

Office Hours: ENR2 S470,
Tutoring Room: MTL 121, Mo.-Th. 11.00 – 4.00 and Fr. 11.00 – 2.00.
Problem Session: Optional 1 unit supplemental course. Math 196N We. 4.00 – 5.50. Feb 3 – May 3.

Website/ D2L: http://math.arizona.edu/~clark AND http://d2l.arizona.edu
Calculus Website: http:/math.arizona.edu/~calc

Communication with Students:
Regular attendance is expected. Course information and announcements will either be made in class, by email, or posted on the class d2l website. It is the student's responsibility to check for announcements and messages regularly and to verify that they are checking the email account associated with d2l.

General Information:
Prerequisites: Appropriate Math Placement Level or completion of Math 124, 122B, or 125 with a grade of C or better.

Course Objectives: Math 129 covers the fundamentals of the integral calculus. Upon completion of the course, the student will: be able to use techniques of analytical and numerical integration; be able to apply the definite integral to problems arising in geometry and physics; be able to work with the concept of infinite series and be able to calculate and use Taylor series; be able to analyze differential equations from a numerical, graphical, and algebraic point of view and model physical and biological situations by differential equations.

Required Textbook and Materials:
- The text is *Calculus, Single Variable*; 6th edition; Hughes-Hallett, et al.; Wiley.
- The online computer homework system is WebAssign. A new textbook purchased in the UA Bookstore includes access to WebAssign and the e-book. WebAssign and the e-book may also be purchased directly at http://webassign.net.
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- The WebAssign class key is: **arizona 5425 9987**
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- A graphing calculator is required for this course. We recommend the TI-83 or TI-84 models. Calculators that perform symbolic manipulations, such as the TI-89, NSpire CAS, or HP50g, cannot be used on exams.

Math 129 web page: General information about Math 129 and additional resources can be found at http://math.arizona.edu/~calc/m129.html.

Additional Resources (Math 196N & Department Tutoring)
Math 196N is a one-credit seminar designed to supplement MATH 129. Students enrolled in the course will participate in weekly problem sessions involving material covered in MATH 129. The goal of the course is to promote mathematical thinking, problem-solving skills, and conceptual understanding by utilizing a two-pronged approach. On one hand, students will learn to work in a team and support the learning of other students. By taking this approach, students will have the opportunity to learn through explaining their own mathematical ideas, even ones that might not yet be well formed. For this reason, the course will require active participation from all students. On the other hand, students will be exploring challenging calculus problems with multiple solution methods. This is the "resistance training" aspect of the course. Grading is based on an alternative system of Superior/Pass/Fail based on attendance and participation; there are no tests. In Spring 2016 the course will meet in the Math Teaching Lab (MTL) room 124 on Wednesdays from 4:00-5:50 p.m. beginning February 3. All students currently enrolled in Math 129 are eligible to enroll in Math 196N as long as seats are available. Students may add this course using UAccess through February 3. The class registration number is 80850.

The Math department provides tutoring in MTL 121 from 11.00 – 4.00 Mo. – Th. and from 11.00 – 2.00 on Fr. Tutoring will begin Jan 20.

University statement on Accessibility and Accommodations
It is the University's goal that learning experiences be as accessible as possible. If you anticipate or experience physical or academic barriers based on disability or pregnancy, let your instructor know immediately so that you can discuss options. You are also welcome to contact Disability Resources (520-621-3268) to establish reasonable accommodations. Please be aware that the accessible table and chairs in your classroom should remain available for students who find that standard classroom seating is not usable

Attendance/Administrative Drops
Daily attendance is expected from every student. Students who miss the first class meeting may be administratively dropped unless they have made other arrangements. Students may be administratively dropped from the class for 3 unexcused absences.
Please note the following:

- All holidays or special events observed by organized religions will be honored for those students who show affiliation with that particular religion,
- Absences pre-approved by the UA Dean of Students (or Dean's designee) will be honored.

It is the student's responsibility to notify the instructor in advance of an absence related to religious observation or an activity for which a Dean's excuse has been granted, and to arrange for how any missed work will be handled. The University policy may be found at http://catalog.arizona.edu/2015-16/policies/classatten.htm).

University statement on Academic Integrity
Students are responsible to inform themselves of University policies regarding the Code of Academic Integrity. Students found to be in violation of the Code are subject to penalties ranging

from a loss of credit for work involved to a grade of E in the course, and risk possible suspension or probation. The Code of Academic Integrity will be enforced in all areas of the course, including, but not limited to, homework, quizzes, and tests. For more information about the Code of Academic Integrity policies and procedures, including information about your rights and responsibilities as a student, see the following website: http://deanofstudents.arizona.edu/academic-integrity/students/academic-integrity

University statement on the Student Code of Conduct
Students at The University of Arizona are expected to conform to the standards of conduct established in the Student Code of Conduct. Prohibited conduct includes:

1. All forms of student academic dishonesty, including cheating, fabrication, facilitating academic dishonesty, and plagiarism.
2. Interfering with University or University-sponsored activities, including but not limited to classroom related activities, studying, teaching, research, intellectual or creative endeavor, administration, service or the provision of communication, computing or emergency services.
3. Endangering, threatening, or causing physical harm to any member of the University community or to oneself or causing reasonable apprehension of such harm.
4. Engaging in harassment or unlawful discriminatory activities on the basis of age, ethnicity, gender, handicapping condition, national origin, race, religion, sexual orientation, or veteran status, or violating University rules governing harassment or discrimination.

Students found to be in violation of the Student Code of Conduct are subject to disciplinary action. For more information about the Student Code of Conduct, including a complete list of prohibited conduct, see the following website:
http://deanofstudents.arizona.edu/accountability/students/student-accountability

Other Relevant University Policies Relating to Conduct
Please take note of the following University policies:
- Policy on Threatening Behavior by Students: http://policy.web.arizona.edu/education-and-student-affairs/threatening-behavior-students
- Nondiscrimination and Anti-Harassment Policy: http://policy.arizona.edu/human-resources/nondiscrimination-and-anti-harassment-policy

Expected Classroom Behavior
Students should turn off all electronic devices during class unless the device is deemed necessary for the class by the instructor. This includes, but is not limited to cell phones, mp3 players, and laptops. If you have a disability-related accommodation that involves the use of a computer during class, please discuss this with your instructor in advance.

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Homework / Quizzes (50 Points)
Problems will be assigned from each section in the form of worksheets which will begin in class an completed at home. A typical worksheet will consist of three parts. The first part will contain challenging problems on the current or previous section or the syllabus. Additionally, students will be expected to prepare for upcoming sections, and and the second part of the worksheet will contain problems assigned to guide this preparation. Third, worksheets may have an accompanied quiz, which will take place at the start of the next class period and submitted with the worksheet. All written work must be handwritten neatly and legibly. All work must be shown and notation must be used correctly. Late homework will not be accepted. Students who miss homework due to unforeseen circumstances should discuss the situation with me. At the end of the semester, approximately the lowest 10% of the scores may be dropped and the remaining scores will be scaled into a grade out of 50.

WebAssign (50 Points)
Homework will also be due through WebAssign. To create a WebAssign account, go to http://webassign.net, click on the Class Key button. Our class key is **arizona 5425 9987.** There is a 14-day grace period (from the first day of classes) before you must purchase/ submit your access code for this class. Each time you log-in, you will see a reminder. WebAssign does not accept submissions after the due date, so it is your responsibility to submit your homework on time. Students who miss homework due to unforeseen circumstances should discuss the situation with me. At the end of the semester, the total WebAssign scores will be scaled into a grade out of 50.

Midterm Exams:
The four in-class exams are tentatively scheduled for Thursday, February 4; Tuesday, March 1; Tuesday, April 5; and Thursday, April 28. Each exam will be worth 100 points, and so the total for all four exams will be worth 400 points. All electronic devices must be turned off during all exams.

Missed Exam policy:
In general, there will be no make-up exams in the course. However, in complex and unusual circumstances which are beyond your control, a make-up exam may be given on a case-by-case basis. This will require providing a detailed account of the situation and supporting documents. Approval in these cases is at the sole discretion of the instructor and/or the dean of students.

Calculation of Course Grades:
There are a total of 700 possible points for the course as shown below:

Written Homework Score (Rescaled)	**50**
WebAssign (Rescaled)	**50**
Exam 1 (4 Feb)	**100**
Exam 2 (1 Mar)	**100**
Exam 3 (5 Apr)	**100**
Exam 4 (28 Apr)	**100**
Final (9 May)	**200**
Total	**700**

Final grades will be determined by a percentage of the 700 total possible points in the course. Final grades for the class will be no lower than those set forth in the scale below:

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

Final Exam

Math 129 has a common final exam. It will take place on Monday, May 9 from 8:00am to 10:00am. Locations will be announced later in the semester. Information and the department study guide will be available at http://math.arizona.edu/~calc/m129.html. The weight of the final exam in the calculation of your course grade will be found in your instructor's syllabus.

Please note the following:

- University rules relating to final examinations may be found at: http://www.registrar.arizona.edu/schedule101/exams/examrules.htm
- The University final exam schedule may be found at: http://www.registrar.arizona.edu/schedules/finals.htm

Incomplete

A grade of "I" (Incomplete) will be given only at the instructor's discretion, according to University Policy as described at http://www.registrar.arizona.edu/gradepolicy/incomplete.htm.

Withdrawal and Grade Replacement Option

A student may withdraw from the course with a deletion from record through January 27 using UAccess. A student may withdraw with a grade of "W" through March 29 using UAccess. The last day to submit a petition to your college dean for late withdrawal is April 19.

Changes to the Course Syllabus

The information contained in the instructor's syllabus, other than the grade and absence policies, as deemed appropriate by the instructor, are subject to change with reasonable advance notice. In particular, the dates of midterm exams, the number of exams, and the order in which topics are covered may differ from the dates and arrangement in the tentative weekly schedule.

Monday	Tuesday	Wednesday	Thursday	Friday
Jan 11	Jan 12	Jan 13 **First day of classes**	Jan 14 7.1-Integration by Substitution 7.2-Integration by Parts	Jan 15
Jan 18 **Martin Luther King, Jr. Day – No Classes**	Jan 19 7.2-Integration by Parts 7.3-Tables of Integrals	Jan 20	*Jan 21* 7.3-Tables of Integrals 7.4-Partial Fractions	Jan 22
Jan 25	Jan 26 7.4-Partial Fractions & Trig Sub	*Jan 27* **Last Day to Drop with Deletion from Record**	Jan 28 7.4-Trig Sub 7.5-Numerical Methods	Jan 29
Feb 1	Feb 2 7.5-Numerical Methods Review	Feb 3	Feb 4 **EXAM 1** 7.6-Improper Integrals	Feb 5
Feb 8	Feb 9 7.6-Improper Integrals 7.7-Comparison of Improper Integrals **Last Day to Apply for GRO**	Feb 10	*Feb 11* 7.7-Comparison of Improper Integrals	Feb 12
Feb 15	Feb 16 7.7-Comparison of Improper Integrals 8.1-Areas & Volumes	Feb 17	Feb 18 8.1-Areas & Volumes 8.2-Applications to Geometry	Feb 19
Feb 22	Feb 23 8.2-Applications to Geometry 8.4-Density	Feb 24	Feb 25 8.4-Density Review	Feb 26
Feb 29	Mar 1 **EXAM 2** 8.5-Applications to Physics	Mar 2	Mar 3 8.5-Applications to Physics	Mar 4
Mar 7	Mar 8 8.5-Applications to Physics 9.1-Sequences	Mar 9	Mar 10 9.1-Sequences 9.2-Geometric series	Mar 11

Monday	Tuesday	Wednesday	Thursday	Friday
Mar 14	Mar 15	*Mar 16* **SPRING BREAK**	Mar 17	Mar 18
Mar 21	Mar 22 9.2-Geometric series 9.3-Convergence of series	Mar 23	Mar 24 9.3-Convergence of series 9.4-Tests for Convergence	Mar 25
Mar 28	Mar 29 9.4-Tests for Convergence 9.5-Power Series & Intervals of Convergence **Last Day to Withdraw With W Using UAccess**	Mar 30	Mar 31 9.5-Power Series & Intervals of Convergence Review	Apr 1
Apr 4	Apr 5 **EXAM 3** 10.1-Taylor polynomials 10.2-Taylor series	Apr 6	Apr 7 10.1-Taylor polynomials 10.2-Taylor series 10.3-Finding & Using Taylor Series	Apr 8
Apr 11	Apr 12 10.3-Finding & Using Taylor Series 11.1-What is a Differential Equation?	Apr 13	Apr 14 11.1-What is a Differential Equation?11.2-Slope Fields	Apr 15
Apr 18	Apr 19 11.2-Slope Fields 11.4-Separation of Variables **Last Day to Submit Petition for Late Withdrawal**	Apr 20	Apr 21 11.4-Separation of Variables 11.5-Growth & Decay	Apr 22
Apr 25	Apr 26 11.5-Growth & Decay Review	Apr 27	Apr 28 **EXAM 4** 11.6-Applications and modeling	Apr 29
May 2	May 3 11.6-Applications and modeling	May 4 **Last day of classes**	May 5	May 6
May 9 **FINAL EXAM 8:00-10:00 am**	May 10	May 11	May 12	May 13