

Course Code & No. - Section: Math 131 - Section 1
Course Title (Credits): Calculus II (4)
Term & Year: Fall / 2014
Course Ref. No. (CRN): 80396

Instructor: Katie (Larkin) McConaghy
Email: piontheside@gmail.com
Office Hours: By appointment

Class Meeting Time: T/Th 4:00 – 5:45
Location: PA211

Prerequisites: MATH 130 or permission from the instructor

Course Description

Covers topics in integral calculus including computing antiderivatives and using the definite integral. Also covers multivariable calculus, ordinary differential equations, mathematical modeling with differential equations and probability. Selected advanced topics in mathematics will also be included. Potential advanced topics are numerical methods, Fourier analysis, partial differential equations, and the mathematics of random variables (stochastic processes).

Student Outcomes

The student will:

1. demonstrate ability to:
 - construct antiderivatives analytically
 - integrate by substitution
 - integrate by parts
 - analyze integrals graphically and numerically
 - compute partial derivatives
 - solve problems involving constrained optimization
 - perform multiple integration
 - set up and solve first-order ordinary differential equations
 - use differential equations to model physical systems
 - use numerical techniques to solve differential equations
2. learn critical analysis, logic, and problem solving of verbal and quantitative data
3. acquire skills which will prepare the student for a career in a technical field or for graduate school
4. demonstrate an appreciation of the importance of mathematics to society
5. demonstrate the critical thinking skills that are necessary to understand issues in science and technology
6. demonstrate the ability to pursue research questions to completion
7. demonstrate the personal skills necessary to collaborate on research projects

The Mathematical Association of America's (MAA) Committee on the Undergraduate Program in Mathematics (CUPM) in developing future mathematics curriculum has made the following preliminary recommendations

- Students should achieve mastery of rich and diverse set of mathematical ideas and should experience mathematics as an engaging field with contemporary open questions.
- Students should be able to think analytically and critically, to formulate and solve problems, and to interpret their solutions. They should understand and appreciate the value and validity of careful reasoning, precise definition, and close argument.
- Students should have experience applying knowledge from one branch of mathematics to another and from mathematics to other disciplines.
- Students should be able to use a variety of technology tools.
- Students should be able to communicate mathematics both orally and in writing; they should be able to read mathematics.

Methods of Assessing Student Outcomes

Homework problems and exams.

Instructional Strategies

Lecture/Modeling/Demonstration/Examples/Practical Exercise/Active Participation/Cooperative Learning/Homework/Examination

Required Text

- Calculus of a Single Variable by Larson; 10th Ed. ISBN: 9781285060286

Class Requirements

- Homework – 30%
- Chapter Tests – 50%
- Cumulative Final Exam – 20%

Grading Policy

All exams and assignments will be graded on the following straight scale:

A: 90 - 100%, B: 80 – 89%, C: 70 - 79%, D: 60 - 69%, F: Below 60%

Attendance Policy

Attendance will be recorded but will not directly affect your grade. However, if you miss a class in which an assignment was given, you will not be able to make it up.

Homework Policy

For each chapter, suggested and required homework will be assigned. Each student is expected to submit the required homework on exam day. No late work will be accepted. Work must be shown for each exercise. The required homework will be graded on completion and accuracy of a few randomly selected exercises. The lowest homework grade will be dropped.

Exam Policy

There will be one test per chapter. Exams will be taken during class time and the students will be able to use a calculator or StudyWorks. Exams cannot be made up unless an arrangement has been made with me prior to exam day given an acceptable reason for missing. The final exam will be cumulative and will be given on Wednesday, 12/10/14 from 3 – 6pm.

How To Succeed In This Course

- **Keep up with the work!** Math can be a difficult subject; it is **imperative** that you keep up with the work in this class! Pay attention to the schedule and don't miss assignments.
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- **Form study groups!** They can be a great source of help! You can work together on homework assignments, but you need to submit the answer you believe is correct.

IMPORTANT DATES

- **Aug 24:** Last day to drop with 100% refund
- **Sept 1:** Labor Day – SNC closed
- **Oct 27:** Last day to change grade status or withdraw without academic penalty
- **Oct 31:** Nevada Day – SNC closed
- **Nov 11:** Veteran's Day – SNC closed
- **Nov 24 – 28:** Thanksgiving Break – no classes
- **Dec 8:** Study Day – no classes
- **Dec 10:** Final Exam (3:00 – 6:00pm)

Prim Library Resources

Using the library's resources effectively (not just Internet resources) contributes to developing each of SNC's core themes by exposing students to high quality academic resources, diverse opinions, new ideas, and a future that includes building on a liberal arts education. In this course, you will be expected to utilize the library's resources (either on-site or remotely) as you complete your assignments.

Sanctions for Cheating and/or Plagiarism

The Honor Code

The faculty of SNC believes students must be held to high standards of integrity in all aspects of college life in order to promote the educational mission of the College and to encourage respect for the rights of others. Each student brings to the SNC community unique skills, talents, values and experiences which, when expressed within the community, contribute to the quality of the educational environment and the growth and development of the individual. Students share with members of the faculty, administration and staff the responsibility for creating and maintaining an environment conducive to learning and personal development, where actions are guided by mutual respect, integrity, responsibility and trust. The faculty and students alike must make diligent efforts to ensure high standards are upheld by their colleagues and peers as well as themselves. Therefore faculty and students accept responsibility for maintaining these standards at Sierra Nevada College and are obligated to comply with its regulations and procedures, which they are expected to read and understand.

Consequences of Violating the Student Honor Code

SNC students and faculty share the responsibility for maintaining an environment of academic honesty. Thus, all are responsible for knowing and abiding by the SNC Faculty/Student Honor Code published in the current SNC Catalog. Faculty are responsible for presenting the Honor Code and the consequences of violating it to students at the start of their classes AND for reporting all incidences of academic dishonesty to the Provost. Students are responsible for knowing what constitutes CHEATING, PLAGIARISM and FABRICATION and for refraining from these and other forms of academic dishonesty. Violations of the Honor Code become part of a student's academic record.

- 1st Offense: Student receives a zero for assignment/exam and counseling with faculty on the honor code, consequences for violating the honor code, and the value of academic honesty in learning.
 - 2nd Offense: Student fails course and receives counseling with faculty on the honor code, consequences for violating the honor code, and the value of academic honesty in learning.
 - 3rd Offense: Student is expelled.
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ADA Accommodations

In accordance with the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973, students with a documented disability are eligible for support services and accommodations. If a student wishes to request an accommodation, please contact the Director of Academic Support Services, Henry Conover, at (775) 831-1314 x7534, hconover@sierranevada.edu, office in Prim Library: PL-304.

The SNC Email System

The SNC email system is the official communication vehicle among students, faculty members and administrative staff and is designed to protect the confidentiality of student information as required by the Family Educational Rights and Privacy Act of 1974 Act (FERPA). Students should check their college email accounts daily during the school year.

Students have a right to forward their SNC e-mail to another e-mail account (for example, @hotmail or @gmail). However, confidentiality of student information protected by FERPA cannot be guaranteed for SNC e-mail forwarded to an outside vendor. Having email redirected does not absolve a student from the responsibilities associated with official communication sent to his or her SNC email account.

The Sierra Nevada College Mission Statement:

Sierra Nevada College graduates will be educated to be scholars of and contributors to a sustainable world. Sierra Nevada College combines the liberal arts and professional preparedness through an interdisciplinary curriculum that emphasizes entrepreneurial thinking and environmental, social, economic and educational sustainability.

The Core Themes:

Liberal Arts

Professional Preparedness

Entrepreneurial Thinking

Sustainability

Tentative Schedule**SNC - Math 131 - Section 1 - Fall 2014**

Week	Week starting	Topic
1	8/18/2014	Review
2	8/25/2014	Ch 5: Logarithmic, Exponential, Transcendental Functions
3	9/1/2014	Ch 5: Logarithmic, Exponential, Transcendental Functions
4	9/8/2014	Ch 6: Differential Equations
5	9/15/2014	Ch 6: Differential Equations
6	9/22/2014	Ch 6: Differential Equations
7	9/29/2014	Ch 7: Applications of Integration
8	10/6/2014	Ch 7: Applications of Integration
9	10/13/2014	Ch 7: Applications of Integration
10	10/20/2014	Ch 7: Applications of Integration
11	10/27/2014	Ch 8: Integration Techniques
12	11/3/2014	Ch 8: Integration Techniques
13	11/10/2014	Ch 8: Integration Techniques
14	11/17/2014	Ch 8: Integration Techniques
15	11/24/2014	Thanksgiving Break
16	12/3/2014	Supplement: Multivariable Calculus
	12/10/2014	Final Exam 3 - 6pm

* Schedule subject to change.