Math 1321-01: Accelerated Engineering Calculus II
Spring 2016

Time & Location 9:40-10:30 AM, MTWF in LCB (LeRoy Cowles building) 225

Instructor Chris Miles

Contact Office hours: T 1:00-2:00, W 10:30-11:30 (after class) or **always available by appointment**
Office location: LCB 326
Email: miles@math.utah.edu
Website: www.math.utah.edu/~miles

Lab information Instructor: Joaquín Moraga (moraga@math.utah.edu)
Section 02: Th 9:40-10:30 AM in AEB (Alfred Emery building) 306
Section 03: Th 10:45-11:35 AM in AEB 306

Textbook *Calculus: Concepts and Contexts*, 4th ed. by James Stewart ISBN: 9780495557425. **(required)**
Stewart's Student Solutions Manual (chapters 8-13), ISBN: 9780495560555. **(optional)**

Course website Canvas will be used regularly for this course. Checking the site often for updates is strongly recommended. It can be access via my website or at: utah.instructure.com/courses/366745.

Technology **Calculators will not be allowed on quizzes or exams**, but the use of technology is strongly encouraged otherwise. Students are *not* expected to have prior programming experience, but will be encouraged to run snippets of code that will be provided in lecture and lab. These snippets will often provide an aid to the theory either through easing computation or visualization.

Grading The grade for each student will be calculated by the following breakdown:

homework (10%) + lab (15+5=20%) + quizzes (15%) + exams (2x15=30%) + final (25%).

Lab grade **Attendance to the lab section is required**, and will count for 5% of a student's total grade. The remaining 15% of the lab grade will be determined by the lab submissions that will be graded. The policies, grading criteria, and expectations of the lab will be communicated by the lab instructor the first week. Questions about the content or grading of the lab should be directed toward the lab instructor.

Homework Homework assignments will be given either at the end of class or on Canvas. A subset of the problems will be selected to be turned in weekly (likely every Wednesdays) and will be **graded for both completeness and correctness**, but all of the problems assigned are recommended to the student to attempt and are considered "fair game" for material on exams and quizzes. Questions about homework can be asked in lecture *prior* to the homework being due. **Late homework will not be accepted.**

Quizzes Quizzes will be every Friday unless noted otherwise. They will be approximately 15-20 minutes in length and given at the beginning of class. They will cover the material discussed in class since the previous quiz. **There will be no make-up quizzes but the lowest quiz grade will be dropped from every student's score.**

Exams There will be two in-class mid-term exams. They are tentatively scheduled for the **weeks of Februrary 15th and March 28th**. Exact dates will be announced closer to the exam and will be determined based on the pace of the course. **There will be no make-up exams.**

Final exam	All students are expected to take the comprehensive final exam and **cannot** pass the course without taking it. The room will be the usual meeting place (LCB 225). All students are expected to arrange their personal schedule to allow them to take the exam at this time. **Students with conflicts should speak to the instructor as soon as possible but unless it is an absolute emergency no student will be allowed to take the final exam early.** Note the time:

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FINAL EXAM: MONDAY, MAY 2, 2016 8:00 – 10:00 AM

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Resources	The math department offers free drop-in tutoring for students. The center is located underneath the walkway between LCB and JWB and can be accessed by entering either building. They are open M-Th 8:00 AM-8:00 PM and F 8:00 AM-6:00 PM.
Cheating	If a student is caught cheating on any homework, quiz, or exam, they will automatically receive a 0 for that assignment. **Depending on the severity of the cheating, the student may immediately fail the class.**
Course objectives	Completion of Math 1321 is equivalent to completing the entire three semester calculus I, II, III sequence, including the topics: vectors in the plane and 3-space, differential calculus in several variables, integration and its application in several variables, vector fields line, surface and volume integrals, Green's Theorem, and Stokes' Theorem.
ADA statement	The University of Utah seeks to provide equal access to its programs, services and activities for people with disabilities. If you will need accommodations in the class, reasonable prior notice needs to be given to the Center for Disability Services, 162 Olpin Union Building, 581-5020 (V/TDD). CDS will work with you and the instructor to make arrangements for accommodations. All information in this course can be made available in alternative format with prior notification to the Center for Disability Services.
Schedule	The following schedule is **tentative** and very likely to change with the pace of the course. Students will be alerted of any changes.

Week 1: §8.1 - §8.4, sequences, series, convergence tests
Week 2: §8.5 - §8.7, power series, Taylor series
Week 3: §8.8, 9.1 - 9.2 more Taylor series, three dimensional coordinates, vectors
Week 4: §9.3- §9.6, dot/cross product, lines, planes, surfaces
Week 5: §10.1 - §10.5, vector functions, space curves, calculus of vector functions
Week 6: §11.1 - §11.3, functions of 2+ variables, limits, partial derivatives, **exam I on weeks 1-5**
Week 7: §11.4 - §11.6, tangent planes, linear approximations, chain rule, gradient
Week 8: §11.7 - §11.8, min/max, Lagrange multipliers
Week 9: §12.1 - §12.3, iterated integrals
Week 10: §12.4 - §12.5, integrals in polar, applications
Week 11: §12.6 - §12.7, triple integrals, **exam II on weeks 6-10**
Week 12: §12.8, §13.1 - §13.2, vector fields, line integrals
Week 13: §13.3 - §13.4, Green's theorem
Week 14: §13.5 - §13.7, curl/divergence, surface integrals, Stokes' theorem
Week 15: §13.8, divergence theorem

Note: This syllabus is **not** a binding legal contract. It may be modified at the instructor's discretion at any time with appropriate notice given to the students.