MATH F252 Calculus II   Syllabus   Spring 2022

Essential Information

Instructor	Ed Bueler elbueler@alaska.edu
Course webpage	bueler.github.io/calc2/
Canvas site	canvas.alaska.edu/courses/7049
Prerequisite	MATH F251X Calculus I; or placement.
Required text	*OpenStax Calculus Volume 2* by G. Strang & E. Herman, openstax.org/details/books/calculus-volume-2 optional paperback print copy: ISBN-13 978-1-50669-807-6

Description, Course Goals & Student Learning Outcomes

Calculus has applications in all the science and engineering disciplines, and it is part of the UAF core curriculum. The two principal tools from Calculus I (MATH 251), differentiation and integration, are central here too, but this course extends your understanding of integration especially. We will also study sequences and series, including Taylor series. At the completion of the course, students will:

- possess mature skills in computing integrals in one variable,
- be able to apply integrals to common problems (areas, volumes, work, . . .),
- understand the convergence of sequences and series,
- understand and be able to apply Taylor series and polynomials, and
- be able to use parametric and polar equations for curves.

Upon completion, students will have the mathematical foundation to be successful in Calculus III and other courses requiring mathematics background, including many junior/senior-level science and engineering courses.

Class Time

There are four hours of class meetings with your instructor every week:

- MWF 11:45 am – 12:45 pm Gruening 208

- Th 11:30 am – 1:00 pm Gruening 208

The 1.5 hour time on Thursday will be used to discuss new topics (30 minutes) and for a weekly Quiz (30 minutes). The final 30 minutes will be spent going over the Quiz (YES! we will go over it immediately!). Thus all students can leave knowing what Quiz material has been mastered, how to work each problem correctly, and what topics need additional work.

For Tuesday, we will not use the official Recitation (MATH F252L). However, UAF Math Services (uaf.edu/dms/mathlab/ has scheduled group tutoring specifically for this class during that time.

Schedule and Online Materials

The course website contains a Schedule listing the textbook sections to be covered each class, the dates each Homework is due, plus the dates for Quizzes and Exams. You should consult this schedule frequently. I will announce any Schedule adjustments in class.

Most course materials (Syllabus, old Quiz and Exam solutions, study materials, etc.) will be posted on the course webpage. Some course materials (grades, Homework solutions, announcements, etc.) will be available on the Canvas site. Each website links to the other.

Office Hours and Communication

My Office Hours are online at `bueler.github.io/OffHrs.htm`. Students can also schedule meetings with me outside of regular office hours.

I will use Canvas to send announcements. If I need to contact you outside of class times, I'll try to email via Canvas. Please set the email address in Canvas to one that you check regularly!

Evaluation and Grades

Grades are determined as follows. (Each component of the grade is discussed below.)

Class Attendance	5%	A	93–100%	C	68–75%
Homework	10%	A-	90–92%	C-	not given
Quizzes	20%	B+	87–89%	D+	65–67%
Midterm Exam 1	20%	B	82–86%	D	60–65%
Midterm Exam 2	20%	B-	79–81%	D-	57–59%
Final Exam	25%	C+	76–78%	F	$\leq 56\%$
total	100%				

These ranges are a guarantee and a lower bound. I reserve the right to increase your grade above these ranges based on the actual difficulty of the work and/or on average class performance. Any such increases will preserve grade ordering by weighted total score.

Class Attendance and Participation

Attendance and participation is an important part of mastering the material, and a strong predictor of overall course performance in any subject. At the start of each class you will need to initial an attendance sheet. Let me know if you will miss class for any reason.

Homework

Homework assignments consist of a selection of problems from the textbook. Homework is written, on paper or tablet, and turned in as a PDF via Gradescope, accessed via Canvas. (Help with scanning homework can be found on the Tech Help webpage.) Assignments are due most Mondays and Wednesdays (by 11:59pm) in advance of the Thursday Quiz. The list of Homework problems is at the Homework webpage. See the Schedule for due dates.

Complete worked solutions to all Homework problems are **provided in advance on the Canvas site**, so Homework will be graded based on **effort** and **completion**. All students should earn 100% of their homework points! Of course, it is possible, and pathetic, to defeat the purpose

of the homework by copying the solutions. This is a bad idea: the grader/instructor will know you have done so, and Homework is only 10% of your grade so it is not worthwhile. The Homework exists so you can **learn**.

Quizzes

A weekly Quiz will be given on Thursdays in the middle third of the 1.5 hour class. Each Quiz will cover material since the previous Quiz. The Quizzes are given under Exam conditions: books, notes, and calculators are not allowed. Performance on Quizzes is your best indicator of how well you are learning the course material (and much better than your Homework score).

Make-up Quizzes will be given only for documented extenuating circumstances, at my discretion. Always contact me if you will miss a Quiz!

Students will be given the opportunity to grade and correct their Quizzes in the last third of the Thursday class and can earn back points up to half the missed points for doing so **accurately**.

Midterm Exams

There are two Midterm Exams this semester, to be held on the dates in the schedule on the course website: **Midterm Exam 1 on Thursday February 17** and **Midterm Exam 2 on Thursday April 7**. Midterms are given during the class time.

Make-up Midterms will be given only for documented extenuating circumstances, at my discretion.

Final Exam

The cumulative Final Exam will be held at the day/time listed in the online schedule: **10:15-12:15 Wednesday April 27**.

Tutoring and Resources

- The Math and Stat Lab, Chapman Building Room 305, offers tutors. See

  www.uaf.edu/dms/mathlab/ for schedules and availability.
- Free one-on-one (or small group) tutoring is available in Chapman Building Room 201. You must schedule an appointment; see www.uaf.edu/dms/mathlab/.
- Student Support Services (uaf.edu/sss/) offers free tutoring in many subjects to students who qualify for their program.
- ASUAF (uaf.edu/asuaf/) offers private tutoring for a small fee, based on student income.

Rules and Policies

Incomplete Grade

Incomplete (I) will only be given in DMS courses in cases where the student has completed the majority (normally all but the last three weeks) of a course with a grade of C or better, but for personal reasons beyond his/her control has been unable to complete the course during the regular term. Negligence or indifference are not acceptable reasons for the granting of an incomplete grade.

Late Withdrawals

A withdrawal after the deadline (currently 9 weeks into the semester) from a DMS course will normally be granted only in cases where the student is performing satisfactorily (i.e., C or better) in a course, but has exceptional reasons, beyond his/her control, for being unable to complete the course. These exceptional reasons should be detailed in writing to the instructor, department head and dean.

No Early Final Examinations

Final examinations for DMS courses shall not be held earlier than the date and time published in the official term schedule. Normally, a student will not be allowed to take a final exam early. Exceptions can be made by individual instructors, but should only be allowed in exceptional circumstances and in a manner which doesn't endanger the security of the exam.

Academic Dishonesty

Academic dishonesty, including cheating and plagiarism, will not be tolerated. It is a violation of the Student Code of Conduct and will be punished according to UAF procedures.

COVID-19 statement

Students should keep up-to-date on the university's policies, practices, and mandates related to COVID-19 by regularly checking this website:

sites.google.com/alaska.edu/coronavirus/uaf

Students are expected to adhere to the university's policies, practices, and mandates and are subject to disciplinary actions if they do not comply.

Student protections statement

UAF embraces and grows a culture of respect, diversity, inclusion, and caring. Students at this university are protected against sexual harassment and discrimination (Title IX). Faculty members are designated as responsible employees which means they are required to report sexual misconduct. For more information on your rights as a student and the resources available to you to resolve problems, please go to the following site:

catalog.uaf.edu/academics-regulations/students-rights-responsibilities/

Disability services statement

I will work with the Office of Disability Services (www.uaf.edu/disabilityservices/) to provide reasonable accommodation to students with disabilities.

Student Academic Support

- Speaking Center (907-474-5470, uaf-speakingcenter@alaska.edu, Gruening 507)

- Writing Center (907-474-5314, uaf-writing-center@alaska.edu, Gruening 8th floor)

- UAF Math Services, Chapman 210 (www.uaf.edu/dms/mathlab/)

- Developmental Math Lab, Gruening 406

- The Debbie Moses Learning Center at CTC (907-455-2860, 604 Barnette St, Room 120, (`ctc.uaf.edu/student-services/student-success-center/`)

- For more information and resources, please see the Academic Advising Center Student Resources list (`www.uaf.edu/advising/student-resources/`).

Student Resources

- Disability Services (907-474-5655, uaf-disability-services@alaska.edu, Whitaker 208)

- Student Health & Counseling [6 free counseling sessions] (907-474-7043, `www.uaf.edu/chc/`, Whitaker 203)

- Center for Student Rights and Responsibilities (907-474-7317, uaf-studentrights@alaska.edu, Eielson 110)

- Associated Students of the University of Alaska Fairbanks (ASUAF) or ASUAF Student Government (907-474-7355, asuaf.office@alaska.edu, Wood Center 119)

Nondiscrimination statement

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UAF Department of Equity and Compliance
1760 Tanana Loop, 355 Duckering Building, Fairbanks, AK 99775
907-474-7300   uaf-deo@alaska.edu

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