MATH F252: Calculus II DRAFT DRAFT Spring 2022 Syllabus

Essential Information

Website	bueler.github.io/calc2/
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
Grades	(Canvas) FIXME

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 Thursday time will be used to discuss new topics (30 minutes) and for a weekly Quiz (30 minutes). The final 30 minutes of the Thursday class 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.

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

Tentative Schedule

The course website contains a schedule for the semester listing the topics to be covered each class, the dates each assignment is due, the topics of every quiz, and so forth. You should consult this schedule routinely. We may make minor adjustments to the schedule, which will be announced in advance.

Office Hours and Communication

I will schedule formal office hours, which will be listed on web sites accessible from the main course webpage. Students can also schedule meetings with their instructor outside of regular office hours.

Any hours in the Math Tutoring Lab are open to **all** Calculus students regardless of their instructor.

We will use Canvas to send announcements. If I need to contact you, I will first try to do this in class, and then I'll try an email to you via Canvas. Thus, please make sure that the email address in Canvas is one that you check regularly. (In Canvas it is also possible to set up text alerts.)

Online Course Materials

Most course materials (e.g., this syllabus, quiz/exam solutions, study materials, etc.) will be posted on the course webpage. In addition, some course materials (grades, written homework solutions,

announcements, discussion board) will be available on Canvas, which you can also access via the main course website.

Description, Course Goals & Student Learning Outcomes

Calculus has applications in all the science and engineering disciplines and is part of the UAF core curriculum. The two principal tools of calculus, introduced in Calculus I (MATH 251) are differentiation and integration. This course extends your understanding of integration, which is the more difficult, and often more important, operation. We also study sequences and series, including Taylor series.

Students completing the course will have the mathematical foundation to be successful in Calculus III and other courses requiring this background, including many junior/senior level science and engineering courses. Specifically, students will

- develop 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
- be able to use parametric and polar equations for curves

Evaluation and Grades

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

Class Participation	5%
Written Homework	10%
Quizzes	20%
Midterm 1	20%
Midterm 2	20%
Final Exam	25%
total	100%

A	93–100%	C	68–75%
A-	90–92%	C-	not given
B+	87–89%	D+	65–67%
B	82–86%	D	60–65%
B-	79–81%	D-	57–59%
C+	76–78%	F	$\leq$ 56%

These ranges are a guarantee, 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 Participation

FIXME Attendance and participation in class is an important part of mastering the material in Calculus (and all of your classes). Class attendance is one of the best predictors of overall course performance regardless of subject. For this reason, we want to incentivize this aspect of your education. All students will get counted as having successfully attended a class if that student was in class on-time and was an active participant during the whole class. Being an active participant includes engaging in classroom tasks such as individual or group worksheets, classroom discussions, and other classroom activities. Your class participation score will be calculated as the percent of classes you attended. Let your instructor know if you have missed class for an excused reason.

Homework

FIXME Homework assignments consist of a selection of problems at the end of each section of our textbook. Homework is written (on paper or tablet) and turned in via Gradescope, accessed

via Canvas. Help with scanning homework can be found under Technology Help on the course webpage. Assignments are due most Mondays and Wednesdays (by 11:59 PM) in advance of the Thursday quiz. Answers to most problems are provided in the back of the book (or linked from the online text). Complete worked solutions to all problems are provided in advance on Canvas. Thus, your homework will be graded based on **effort** and **completion**. Homework can be turned in up to three days late for half-credit. All students should earn 100% of their homework points!

FIXME The list of homework problems and homework guidelines can be found at the Homework link on the course webpage.

Clearly, it is possible to defeat the purpose of the homework by copying the solutions. This is a bad idea, and the grader/instructor will know you have done so! My goal in providing answers & solutions is to foster the use of homework as a **learning experience**.

Quizzes

A quiz will be given on most Thursdays in the middle third of the 1.5 hour class. The weekly quiz will cover the material taught in the classes held since the previous quiz; specific topics can be found in the schedule on the course website. Quizzes (other than Quiz 1) are equally weighted, and are given under testing conditions; books, notes, and calculators are not allowed unless otherwise stated). Performance on Quizzes is your best regular indicator of how well you are learning the course material, and much better than your homework score.

Make-up Quizzes are possible provided there is a documented, excused absence. Always contact your instructor if you 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**.

Midterms

FIXME There are two Midterm Exams this semester, to be held on the dates in the schedule on the course website. The course webpage contains previous Midterms (with solutions) so a student can know in advance what these are like, with an opportunity for practice. Midterms are given in the evenings in one of two time slots: (A) 5pm-6pm or (B) 6pm-7pm. Note that students choosing time slot A will be required to stay in the classroom until 6pm. We understand that the evening time slots may not work for some students. A student who cannot attend either time slot **must notify his/her instructor at least one week in advance** in order to make other arrangments.

FIXME Make-up Midterms will be given only for documented excused absences.

Final Exam

The cumulative Final Exam will be held at the day/time listed in the online schedule. The course webpage contains previous Final Exams (with solutions) so a student can know in advance what these are like, with an opportunity for practice. A make-up final exam will be given only in extenuating circumstances, for documented and excused reasons at the discression of the instructors.

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

The University of Alaska is an affirmative action/equal opportunity employer and educational institution. The University of Alaska does not discriminate on the basis of race, religion, color, national origin, citizenship, age, sex, physical or mental disability, status as a protected veteran, marital status, changes in marital status, pregnancy, childbirth or related medical conditions, parenthood, sexual orientation, gender identity, political affiliation or belief, genetic information, or other legally protected status. The University's commitment to nondiscrimination, including against sex discrimination, applies to students, employees, and applicants for admission and employment. Contact information, applicable laws, and complaint procedures are included on UA's statement of nondiscrimination available at www.alaska.edu/nondiscrimination. For more information, contact:

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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