

Essential Information

instructors:	Youngho Yoo	Ed Bueler
sections:	901 (CRN 31037)	902 (CRN 31788)
class times:	MWF 11:45am–12:45pm Th 11:30am–1:00pm	MWF 9:15am–10:15am Th 9:45am–11:15am
classrooms:	Gruening 409	Chap 106
instructor offices:	Chap 303B	Chap 306C
office hours:	sites.google.com/view/younghoyoo	bueler.github.io/OffHrs.htm
emails:	yyoo2@alaska.edu	elbueler@alaska.edu

Course webpages public: uaf-math.github.io/calc2
canvas (section 901): canvas.alaska.edu/courses/30032
canvas (section 902): canvas.alaska.edu/courses/30035

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 and Course Goals

Calculus is part of the language in all the science and engineering disciplines. It is *useful*, and that is why it is part of the UAF core curriculum. The two principal tools from Calculus I (MATH 251), differentiation and integration, are central here too. However, this course extends your understanding of integration, and 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.

In addition, students will have the mathematical foundation for success in Calculus III and other courses requiring knowledge of sophisticated integration techniques in one variable, sequences and series, including many junior/senior-level science and engineering courses.

Class Time

There are 4.5 hours of class meetings with your instructor every week. 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. We go over the quiz immediately so that students can leave knowing what quiz material has been mastered, how to work each problem correctly, and what topics need additional work.

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. We will announce any Schedule adjustments in class.

Most course materials (Syllabus, old Quizzes, Exams with solutions, study materials, etc.) will be posted on the [public course webpage](#). A few course materials (grades, Homework solutions, announcements, link to Gradescope) will be available on the Canvas sites; see the first page of this Syllabus.

Office Hours and Communication

Canvas will be used to make announcements for the whole class. (*Please set up your Canvas accounts to receive these announcements in a location that is regularly checked!*) See the office hours on the first page of this syllabus. You are also welcome to make an appointments by email to the instructor email addresses on the first page.

Evaluation and Grades

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

Homework	10%	A	93–100%	C	70–76%
2-minute Questions	5%	A-	90–92%		
Quizzes	20%	B+	87–89%	D+	67–69%
Midterm Exam 1	20%	B	83–86%	D	63–66%
Midterm Exam 2	20%	B-	80–82%	D-	60–62%
Final Exam	25%	C+	77–79%	F	$\leq 59\%$
total	100%				

The grade ranges at right are a guarantee and a lower bound. We reserve the right to increase your grade above these ranges based on the actual difficulty of the work, average class performance, and/or improvement over the semester including exemplary performance on the final exam.

Homework

Homework assignments consist of a selection of problems from the textbook. All problems for the entire semester can be found at the public webpage [here](#).

The Homework exists because all of us **learn by doing**.

Please write your Homework on paper, or electronically on a tablet, and turn it in as a PDF via Gradescope, accessed via the Canvas pages (see first page of this Syllabus).

Help with scanning homework can be found on the [Tech Help](#) webpage. Assignments are due, mostly on Mondays and Wednesdays, by 11:59pm, thus in advance of the Thursday Quiz; see the online [Schedule](#) for due dates.

Complete worked solutions to all Homework problems are **provided in advance on the Canvas site for your section**. Thus, Homework will be graded based on effort and completion. However, **the work you turn in is expected to be your own**.

To earn full points on the homework, your submission must:

- be unequivocally your own work
- include work, not bald answers
- be legible, organized, and in order
- be on time

2-Minute Questions and Participation

Attendance and participation are important parts of mastering the material, and a strong predictor of overall course performance. At the start of two lectures per week you will do a “2 Minute Question.” Please answer the question, write your name on it, and turn it in. Naturally, you’ll have 2 minutes! This will not be graded for content at all, but whether you did it will be recorded, that is, in lieu of attendance.

Please let your instructor know by email (see first page) if you will miss a class for any reason, and they will excuse you from the 2-Minute Question.

Quizzes

A weekly Quiz will be given on Thursdays. It will be in the middle third of the 1.5 hour class, and it will cover material since the previous Quiz. 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 it is a much better predictor of Exam performance than is your Homework score. Always contact your instructor if you will miss a Quiz for a justified reason!

As soon as the Quiz is done, students will be given the opportunity to correct their Quizzes in the last third of the Thursday class. You can earn-back up to half the missed points for doing so **accurately and thoroughly**.

Midterm and Final Exams

There are two Midterms this semester and a cumulative Final Exam:

- **Midterm 1, Thursday February 19 (during class time)**
- **Midterm 2, Thursday April 9 (during class time)**
- **Final Exam, Wednesday April 29, 10:15am-12:15pm**

All Exams are closed book, closed notes, and no calculator.

Midterms are given during the class time. Make-up Midterms will be given only for documented extenuating circumstances, at instructor discretion. Always contact your instructor if you will miss a Midterm, ideally as far in advance as possible. Department policy does not allow instructors to give an early Final Exam.

Time Commitment

As with most university courses, you should expect to spend 2-3 hours **outside** of class each week for every credit-hour. So for Calculus 2, you should expect to spend a minimum of 8-12 hours actually working homework and examples from the text, asking questions and preparing for quizzes and exams. The 8-12 hours does not include the time spent finding your textbook and homework assignment, getting coffee, etc! Moreover, the study time should be spread throughout the week over a minimum of 5 days.

Getting Help

Calculus 2 is a challenging course! (You will earn your sense of accomplishment when you succeed at learning the material.) Please expect to experience the discomfort that is an unavoidable part of learning something new, including periods of confusion and struggle. You should expect to need to get extra help from your instructor, tutors in the Math and Stat Lab, and each other.

Please come and talk to us if you are unable to clarify points of confusion. We want to know what your long-term struggles are and help you move past them.

Places to Get Help

- The Math and Stat Lab is now located in the Student Success Center on the 6th floor of the Rasmussen Building and offers drop-in tutoring.
See www.uaf.edu/dms/mathlab/ for schedules and availability.
- Free one-on-one (or small group) tutoring is also available in the SSC. 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

AI usage

Feel free to use a calculator or online tools on Homework. It is also reasonable to explore new AI tools like ChatGPT, but merely doing cut-and-paste without understanding will have no benefit to your learning.

Moreover, during proctored and on-paper Quizzes and Exams, electronic tools of any type are not allowed. Since on-paper Quizzes and Exams represent 85% of your grade, copying without understanding is not a good long-term strategy.

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.

Late Withdrawals

A withdrawal after the deadline 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.

Student protections and services statement

Every qualified student is welcome in my classroom. As needed, I am happy to work with you, Disability Services, Veterans' Services, Rural Student Services, etc. to find reasonable accommodations. Students at this University are protected against sexual harassment and discrimination (Title IX), and minors have additional protections. As required, if I notice or am informed of certain types of misconduct, then I am required to report it to the appropriate authorities. For more information on your rights as a student and the resources available to you to resolve problems, please go the following site: <https://www.uaf.edu/orca/index.php>.

General education statement

This course is listed as a General Education Math Course. As such this course is expected to contribute to meeting the following four general learning outcomes:

1. Build knowledge of human institutions, sociocultural processes, and the physical and natural works through the study of mathematics. Competence will be demonstrated for the foundational information in each subject area, its context and significance, and the methods used in advancing each.
2. Develop intellectual and practical skills across the curriculum, including inquiry and analysis, critical and creative thinking, problem solving, written and oral communication, information literacy, technological competence, and collaborative learning. Proficiency will be demonstrated across the curriculum through critical analysis of proffered information, well-reasoned solutions to problems or inferences drawn from evidence, effective written and oral communication, and satisfactory outcomes of group projects.
3. Acquire tools for effective civic engagement in local through global contexts, including ethical reasoning, intercultural competence, and knowledge of Alaska and Alaska issues. Facility will be demonstrated through analyses of issues including dimensions of ethics, human and cultural diversity, conflicts and interdependencies, globalization, and sustainability.
4. Integrate and apply learning, including synthesis and advanced accomplishment across general and specialized studies, adapting them to new settings, questions and responsibilities, and forming a foundation for lifelong learning. Preparation will be demonstrated through production of a creative or scholarly product that requires broad knowledge, appropriate technical proficiency, information collection, synthesis, interpretation, presentation and reflection.

Official UAF Syllabus Addendum

Student protections statement: The university respects and upholds the principles of due process and a fair and equitable process as specified in the Board of Regents' Policy 09.02 Student Rights and Responsibilities. For more information regarding the rights and responsibilities of students, refer to the Office of Rights, Compliance and Accountability website. You are encouraged to read the Board of Regents' policy carefully to fully understand your responsibilities to our community.

We strive to create a safe and respectful environment for all members of our community. If you have questions about expectations of you as a student or believe your rights are being violated, we encourage you to reach out to the Office of Rights, Compliance and Accountability for help. UAF reserves the right to suspend, expel or take other necessary and appropriate action in cases where a student is unable or unwilling to uphold community standards and campus safety.

For more information on your rights as a student and the resources available to you to resolve problems, please go to the following site:

<https://catalog.uaf.edu/academics-regulations/students-rights-responsibilities/>

Disability services statement: I will work with the Office of Disability Services to provide reasonable accommodation to students with disabilities.

ASUAF advocacy statement: The Associated Students of the University of Alaska Fairbanks, the student government of UAF, offers advocacy services to students who feel they are facing issues

with staff, faculty, and/or other students specifically if these issues are hindering the ability of the student to succeed in their academics or go about their lives at the university. Students who wish to utilize these services can contact the Student Advocacy Director by visiting the ASUAF office or emailing asuaf.office@alaska.edu.

Student Academic Support:

- Communication Center (907-474-7007, uaf-commcenter@alaska.edu, Student Success Center, 6th Floor Room 677 Rasmuson Library)
- Writing Center (907-474-5314, uaf-writing-center@alaska.edu, Student Success Center, 6th Floor Room 677 Rasmuson Library)
- UAF Math Services (907-474-7332, uaf-traccloud@alaska.edu)
 - Drop-in tutoring, Student Success Center, 6th Floor Room 672 Rasmuson Library
 - 1:1 tutoring (by appointment only), 6th Floor Room 677 Rasmuson Library
 - Online tutoring (by appointment only) available
<https://www.uaf.edu/dms/mathlab/>, available at the Student Success Center
- Developmental Math Lab, Gruening 406
- The Debbie Moses Learning Center at CTC (907-455-2860, 604 Barnette St, Room 120, <https://www.ctc.uaf.edu/student-services/student-success-center/>)
- For more information and resources, please see the Academic Advising Resource List (<https://www.uaf.edu/advising/students/index.php>)

Student Resources:

- Disability Services (907-474-5655, uaf-disability-services@alaska.edu, 110 Eielson Building)
- Student Health & Counseling [free counseling sessions available] (907-474-7043, <https://www.uaf.edu/chc/appointments.php>, Whitaker Building, Room 206, Health, Safety & Security Bldg — same building as Fire and Police)
- Office of Rights, Compliance and Accountability (907-474-7300, uaf-orca@alaska.edu, 3rd Floor, Constitution Hall)
- Associated Students of the University of Alaska Fairbanks (ASUAF) or ASUAF Student Government (907-474-7355, asuaf.office@alaska.edu, asuaf.office@alaska.edu, Wood Center 119)

Nondiscrimination statement: Nondiscrimination statement: The University of Alaska is an equal opportunity/equal access employer, educational institution and provider. 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.

UAF Office of Rights, Compliance and Accountability

1692 Tok Lane

3rd floor, Constitution Hall, Fairbanks, AK 99775

907-474-7300

uaf-orca@alaska.edu

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