

Ed Bueler

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Essentials

Course number: MATH F302
 title: Differential Equations
 section: UX1
 credits: 3.0
 CRN: 34998

Websites bueler.github.io/math302 main course page
 piazza.com/uaf/spring2019/math302ux1/home course communication
 webassign.net ← class key: uaf 3982 1786 homework
 classes.alaska.edu (Blackboard) only for grades

Required Text *A First Course in Differential Equations with Modeling Applications*, 11th ed., Dennis G. Zill, 2018 (ISBN-13: 978-1337604994)

Optional Text *Student Solutions Manual for Zill's A First Course in Differential Equations with Modeling Applications*, 11th ed. (ISBN-13: 978-1305965737) (Solutions to selected odd-numbered exercises; available on Amazon)

Course Materials • WebAssign Access Code (bundled with required text above)
 • scanner or smartphone with software/app for scanning documents and making PDFs out of them
 • a printer (useful to print off lecture notes; *not required*)

Prerequisite grade of C- or better in MATH 253 Calculus III or equivalent

Detailed Schedule bueler.github.io/math302/schedule.pdf

FIXME: DON'T BELIEVE ANYTHING FROM HERE ON**Description, Course Goals & Student Learning Outcomes**

The catalog description: *Nature and origin of differential equations, first order equations and solutions, linear differential equations with constant coefficients, systems of equations, power series solutions, operational methods, and applications.*

Online Instructional Methods

This is an online course but it is not independent study nor self-paced. Instructional material will be posted regularly. There will be regular due dates for reviewing those materials, completing online and written homework, and taking proctored weekly quizzes and exams.

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Videos and notes on material related to each section in the module. These are available within each module on Blackboard. The videos attempt to distill the vast broad topic of ordinary differential equations down to manageable chunks. Each lesson coincides with a section (or part of a section) of the textbook. Also provided for the videos are note templates for you to fill in the details as you watch. You will submit these completed notes weekly for token credit.

Weekly written assignments and weekly proctored quizzes.

Textbook readings. More often than not, examples on the video lecture will differ from those in the book. The textbook examples and readings in general are a good source for reinforcing procedural knowledge and gaining conceptual knowledge.

More information on the notes and assignments is below.

In order to allow you flexibility in your own schedule, all assignments will be available well in advance, with due dates each week.

Detailed Schedule

The course website contains a detailed, though tentative, schedule for the semester listing the topics to be covered each class, the dates each assignment is due, and the dates of quizzes and exams. You should consult this schedule frequently and routinely. Any minor adjustments to the schedule will be announced in advance.

Office Hours and Communication

We will use an online video conference tool to supplement the instruction of this course: join.me for a virtual office hours/problem session. These times are an opportunity to come and ask questions about notes, homework, etc. During these times, I can use a whiteboard to answer questions, further explain the finer solution techniques, etc. This audio conference can also be used on an appointment basis: a link for a conference can be provided at an agreed time. See Blackboard for more information. It is the responsibility of the student to stay tuned into the course page on Blackboard regularly reliable internet access is a necessity for an online course.

We will use the Piazza site for announcements, questions, and discussions between students and the instructor. Go to

piazza.com/uaf/spring2019/math302ux1/home

When you sign up for Piazza, you will provide an email address. This should be an address you

check with some regularity; I expect you to receive all messages emailed to this account.

Online Course Materials

Most course materials will be posted on the course webpage. Only **grades** are available on Blackboard, which you can access via the main course website.

Evaluation and Grades

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

Webassign Homework	7.5%
Written Homework	7.5%
Quizzes	15%
Midterm 1	15%
Midterm 2	15%
Final Exam	25%
total	100%

Letter grades will be assigned according to the following scale. This scale is a guarantee; the instructors reserve the right to lower the thresholds.

A+	97–100%	C+	77–79%	F	< 60%
A	93–96%	C	70–76%		
A-	90–92%	C-	not given		
B+	87–89%	D+	67–69%		
B	83–86%	D	63–66%		
B-	80–82%	D-	60–62%		

Homework

Homework in this class comes in two varieties: online homework via WebAssign, and written homework on paper.

Written Homework

Written homework is due approximately weekly according to the schedule found on the main course website, typically every Monday. Homework is **due at the start of your lecture** on the day it is due, and late homework is not accepted. No homework grades are dropped. All written homework assignments are equally weighted. Solutions will appear on Blackboard.

The written homework problems typically consist of more challenging or interesting exercises, and allow you to practice presenting a solution suitable for reading by another human being. You are encouraged to work with others to solve these problems, and you have access to the Math Lab to get help. However, when you write up your final solutions, you need to do so on your own.

Presentation matters. You must show all relevant work, your writing should be legible, and it should be easy for the grader to follow your reasoning. At the discretion of the grader, points will be deducted for poor presentation. To aid in presentation, you should expect to first prepare a draft of your solutions, and then a final edition to be graded.

WebAssign

Starting week 2, online WebAssign homework will be assigned multiple times each week. These problems consist of more routine exercises and allow you to receive immediate feedback on correctness. You are welcome to use your text and a calculator to help solve these problems, but the use of more sophisticated tools (e.g., Wolfram Alpha) will undermine the benefit to you of the homework, and may leave you unprepared for the quizzes and exams.

Logistics:

- You will need a WebAssign code. Texts purchased from the UAF bookstore include one; otherwise, a code can be purchased from WebAssign directly. WebAssign can be used for two weeks in a “trial” period, which you can take advantage of if you are uncertain about your placement in this class.
- Instructions for logging in to WebAssign can be found on the course website.
- You (usually) get 5 chances to get a problem correct.
- Each assignment is due at 11 pm.
- You may request an automatic 3-day extension though you will only be allowed to earn back half the remaining points.
- Each WebAssign assignment is equally weighted. No scores are dropped.

Quizzes

The 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 are equally weighted, and are given under testing conditions; books, notes, and calculators are not allowed. Performance on the quizzes is a better indicator of exam performance, and how well you are learning the course material, than homework which may be done with the input of tutors/friends/internet/etc.

Quizzes cannot be made up except with a documented excused absence. **The lowest quiz grade will be dropped.** Solutions to quizzes will be posted on the course webpage.

Midterms

There are two midterm exams this semester, to be held on the dates in the schedule on the course website.

Final Exam

The cumulative final exam will be held at the day/time listed in the online schedule. A make-up final exam will be given only in extenuating circumstances, for documented and excused reasons at the discretion of the instructors.

Tutoring and Resources

- The Math and Stat Lab, Chapman Building Room 305, offers walk-in tutoring, with no appointment needed. 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 at www.uaf.edu/dms/mathlab.
- Student Support Services offers free tutoring in many subjects to students who qualify for their program.
- ASUAF offers private tutoring for a small fee (based on student income).

Rules and Policies

Participation and Attendance

Class and recitation attendance is mandatory. Students who stop participating in the course will be withdrawn. Examples of inadequate participation include, but are not limited to:

- missing class five times
- not completing or not turning in **three** written homework assignments
- failing to participate in classroom activities

- repeatedly failing tests and quizzes with no attempt at remediation

Disability Services

The Office of Disability Services implements the Americans with Disabilities Act (ADA), and ensures that UAF students have equal access to the campus and course materials. The instructors will work with the Office of Disability Services (208 Whitaker, 474-5655) to provide reasonable accommodations to students with disabilities.

Student Protections and Services

Every qualified student is welcome in our classes. As needed, we are happy to work with you, Disability Services, Military and Veteran 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 we notice or are informed of *certain types* of misconduct, then we are required to report it to the appropriate authorities. For more information on your rights as a student and the resources available to you, please go to the following site: <https://cms-test.alaska.edu/handbook/>.

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.