



Math 3304 Section 103

Instructor: Dr. Martin Bohner
Office: Rolla 106 (under construction)
Office Hours: MWF 3-3:50 PM (zoom), and by appointment
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Course Coordinator is Mr. Paul Runnion (prunnion@mst.edu)

In general, the use of cell phones and other electronic devices in class is not allowed. Such devices are to remain off and put away during the entire class period. You may use a tablet to take notes as long as your use is restricted to taking notes and does not disturb those around you. The taking of still images, video recordings, and audio recordings at any time during class is strictly prohibited.

Course Format: This is an in-person lecture. Exams will be administered in person.

Prerequisites: A grade of "C" or better in either Math 1215 or Math 1221.

Textbook: This is an Auto-Access course. Your MyLab Math access will give you access to the textbook *Fundamentals of Differential Equations*, 9th edition, Nagle, Saff, Snider, Pearson, 2018.

Canvas: In addition to our section's Canvas page (where information is posted pertaining to our section only), there is a Math 3304 resource course in Canvas. In Canvas, go to Courses → All Courses → Browse More Courses, and you'll find the resource course on that main page.

Learning Outcomes:

A student successfully completing this course should be able to:

1. Solve homogeneous and nonhomogeneous constant-coefficient linear ordinary differential equations by various methods, including the Laplace Transform
2. Use differential equations to model various physical systems
3. Solve systems of first-order linear differential equations using matrix methods

Classroom Attire: All relevant University policies regarding classroom attire must be followed.

Attendance Policy: You are expected to attend every class period in its entirety. If you miss a class, it is *your* responsibility to find out what you missed and to pick up any returned work.

Exams: There will be four 100-point exams in total this semester. There are three 50-minute exams and one 120-minute comprehensive final. Each of the four exams is worth 100 points. The exams will cover the material from the textbook, homework problems, and additional material covered in class (another reason to not miss class).

Your lowest exam score will be dropped at the end of the semester. This accommodates students who miss an exam, or do not perform well on an exam, for any reason that is beyond their control. Thus, exams are worth a total of 300 points. Furthermore, if you are satisfied with the scores on your first three exams, then you do not need to take the final exam.

The 50-minute exams will be given in person at 5:00 PM on each of the following Thursdays: **Sept. 25, Oct. 23, and Dec. 4.** The evening exams are scheduled class times, and *you* are responsible for working out any conflicts to ensure that you are present for each scheduled exam. Put these dates on your calendar NOW, check for conflicts, and contact your instructor if you have concerns or need assistance. The 120-minute final exam is

Monday December 15, 3:00 PM – 5:00 PM. Missed exams will count as a zero. Once exam grading is complete, scores will be made available in Canvas.

Missed Exams: Makeup exams will not be given. Students who are attending university sponsored events during exams need to let their instructor know as soon as possible. Often the university faculty or staff member attending the event can proctor the exam during the scheduled exam time. ***Do NOT schedule other activities (fieldtrips, interviews, etc.) during exams.*** If you have an unavoidable emergency the day of an exam (illness, personal emergency, etc.), it is vital that you contact your instructor to explain your absence. You should provide documentation (student health note, care management note, etc.) even though the exam cannot be made up – this is still VERY important in case you miss a second exam due to another documented emergency.

MyLab Math: All homework in this course will be completed using MyLab Math. Be sure to pay attention to the PDF course calendar posted in Canvas, which lists due dates for all MyLab Math work. You should make it a practice to complete this work daily. If you have questions about homework, be sure to use the “Ask My Instructor” feature. This is a great way to get assistance specific to your problem. Work assigned in MyLab Math will contribute 100 points to your overall grade.

The only way to earn full points for your homework and quizzes is to submit fully correct work prior to the time the assignment is due. For homework assignments, any work submitted after the posted due date and time will incur a 20% per day deduction (and, thus, receive a score of zero if submitted more than 5 days late).

Grading Policy: On all written work submitted for grading, you are expected to show your work clearly and completely. On work other than MyLab Math work, you will be graded on your work as well as on your final answers, but a correct final answer that is neither supported nor justified by work you have shown will receive no credit. I am happy to address any questions regarding the grading of any submitted work, and I encourage you to ask. However, you must bring such questions to my attention within one week of the date it is returned to the class, or no changes will be made in the grade. There are 500 total points possible in this course, divided as follows:

Exams:	300 points
Homework:	100 points

The grading scale will be no lower than as follows:

A	Total points ≥ 360
B	$320 \leq$ Total points < 360
C	$280 \leq$ Total points < 320
D	$240 \leq$ Total points < 280
F	Total points < 240

Calculator Policy: The use of calculators is prohibited on all exams in this course (including the final), unless we pivot online (see below). The exam problems will be designed to be easily solved without a calculator. On certain homework problems (especially application-based problems), you may find a graphing calculator and/or a computer algebra system to be useful.

Artificial Intelligence Usage Policy: You are permitted to utilize AI programs such as ChatGPT to aid in generating ideas and brainstorming on homework in this course. However, it is important to acknowledge that the material generated by these programs may not always be accurate, complete, or reliable. Additionally, relying on these programs may hinder your independent thinking and creativity and may negatively impact your preparedness for exams. The use of AI tools on any exam in this course is strictly prohibited and will be dealt with severely and in accordance with relevant S&T policies.

Instructor Absences or Weather Cancellations: If I must miss class, I will either arrange for a substitute lecturer or I will record lectures and place them online. I will, of course, notify the class ahead of time so that you know if class has been moved online in some format.

If the university closes due to weather, or I cannot get to campus due to weather, watch Canvas for announcements regarding the class. It is most likely that I will post a recording of the day's lecture for your asynchronous viewing pleasure; however, I reserve the right to hold a live Zoom class at the regularly scheduled class time.

No due dates or schedule changes are likely to occur due to any of these situations.

Pivot to Online: We plan to complete this course in the originally scheduled format. If something should occur that requires a sudden pivot online, the following will occur in the class.

***Announcements and Email:** You MUST check the Announcements section in Canvas several times a day. You also need to check your email several times a day. If we pivot to online, this is the only method of communication I have with you.*

***Lectures:** All lectures will be provided on Canvas. It is most likely that I will post a recording of the day's lecture for your asynchronous viewing pleasure; however, I reserve the right to hold a live Zoom class at the regularly scheduled class time.*

***Homework:** No changes. It will still be on MyLab Math and follow the standard schedule.*

***Exams:** The 50-minute exams will be administered via MyLab Math on the originally scheduled dates. Regular MyLab Math exams will have a 75-minute time limit, will allow calculator use, and must be taken between 4:30-6:30 PM on the regularly scheduled exam date. The MyLab Math final will have a 120-minute time limit and must be taken between 2:45 PM and 5:15 PM on the regularly scheduled exam date. Note that, for exams administered via MyLab Math, **no partial credit will be provided** (except the limited partial credit automatically assigned by MyLab Math). At our sole discretion, electronic proctoring methods may be employed to monitor these exams – you must, therefore, have access to a laptop or desktop computer with a functional webcam and microphone for these exams. For any exam administered via MyLab Math, a review quiz (which will include some, but possibly not all, of the question pools used to generate the exam) will be posted in MyLab Math at least 48 hours prior to the exam (provided the course instructors know the exam will be online sufficiently far in advance).*

***Technology:** You are expected to have adequate technology to attend Zoom meetings with audio and video capabilities. You are also expected to be able to do all exams, quizzes, lab, and homework on MyLab Math.*

Questions: If you ever have a question about anything, please see me during my office hours or make an appointment. If this does not resolve your concern, you may contact Prof. Paul Runnion (Rolla 212, prunnion@mst.edu), the course coordinator for Math 2222. If your concern about a policy-related matter is not resolved by speaking with Prof. Runnion, you may contact Dr. John Singler, the interim department chair of Mathematics and Statistics, in Rolla 202.

Statement about Copyright, FERPA, and Use of Video

It is vitally important that our classroom environment promote the respectful exchange of ideas. This entails being sensitive to the views and beliefs expressed during discussions, whether in class or online. Please obtain instructor permission before recording any class activity. It is a violation of University of Missouri policy to distribute such recordings without authorization and the permission of all who are recorded. More information is provided [online](#).

Accessibility and Accommodations

It is the university's goal that learning experiences be as accessible as possible. Student Accessibility and Testing provides services and accommodations that facilitate full participation in Missouri S&T's learning experience for students with disabilities. If you anticipate or experience physical, academic, and/or digital barriers due to a disability, please contact Student Accessibility and Testing at (573) 341-6655, email saat@mst.edu, or visit <https://saat.mst.edu/> for information.

Academic Integrity: Your Foundation for Success

At Missouri S&T, we don't just develop great engineers and scientists—we develop ethical leaders ready to solve tomorrow's challenges. The integrity you demonstrate today shapes the professional you'll become tomorrow.

Our student-created [Honor Code](#) reflects what makes Miners exceptional: you tackle difficult problems honestly, collaborate respectfully, and take responsibility for your work. These aren't just classroom values; they're the foundation of successful careers in every field.

When you embrace the [Standard of Conduct](#) and [Honor Code](#) as your foundation for success, you strengthen your problem-solving abilities, build your professional reputation, and enhance the value of your S&T degree. Your S&T education is more than technical expertise, it's about becoming someone who uses that knowledge ethically to improve our world. [Learn more](#) about academic integrity resources.

Student Mental Health and Well-Being

Your well-being is important, and it contributes to your success in this course. At S&T, we provide resources to support your mental, physical, and social well-being. Any of us can experience challenges that make learning difficult. If you are struggling, take advantage of the following resources offered by the university:

Student Well-Being (<https://wellbeing.mst.edu/>)

Student Well-Being provides counseling services, health promotion initiatives, and prevention programs to empower the S&T community to thrive and enhance personal, academic, and professional success. Department office hours are Monday-Friday, 8 a.m. – 4:30 p.m. On the website, you can find information related to confidential individual and group counseling, wellness consultations and trainings, case management services, resources for many health and wellness topics, and help for mental health crisis situations. For the 988 Suicide and Crisis Lifeline, call or text 988, or visit missouri988.org.

TalkCampus (<https://www.talkcampus.com/sign-up>)

TalkCampus is an anonymous, 24/7 peer-to-peer support platform available in 26 languages. You can connect with millions of students from around the world, join groups, journal, learn from various modules, and more. Sign up using your university email address to get access.

Health and Well-Being Canvas Course (<https://umsystem.instructure.com/enroll/G3LY3G>)

The Health and Well-Being Canvas Course features trainings, presentations, and other health and well-being resources for students. The course is free for all students, is non-credit, and students can enroll at any point in the semester.

UCARE (<https://ucare.mst.edu>)

UCARE is the central point of contact to connect a student who may be experiencing a personal, academic, financial, wellbeing, and/or other concern to support and resources. Sharing your concern with UCARE helps connect a student with solution-focused assistance to support their holistic well-being, success, and academic

progress. A referral can be submitted at <https://wellbeing.mst.edu/ucarereferrals/> or by emailing ucare@mst.edu. For urgent matters, check out the urgent and crisis resource page at <https://wellbeing.mst.edu/crisis>.

Nondiscrimination, Equity, and Title IX

Missouri S&T is committed to the safety and well-being of our campus community, and to creating an environment free from discrimination and harassment.

The University prohibits discrimination and harassment on the basis of race, color, national origin, ancestry, religion, sex, pregnancy, sexual orientation, gender identity, gender expression, age, disability, protected veteran status, and any other status protected by applicable state or federal law.

Additionally, US Federal Law Title IX states that no member of the university community shall, on the basis of sex, be excluded from participation in, or be denied benefits of, or be subjected to discrimination under any education program or activity. Sexual harassment violations of this law include quid pro quo, hostile environment, sexual assault, dating/domestic violence, and stalking.

Students who are experiencing pregnancy or pregnancy-related conditions, including the birthing parent and non-birthing parent, have rights protected under Title IX. Students should contact Student Accessibility and Testing or the Office of Equity and Title IX to learn more about their rights and pregnancy-related assistance/accommodations provided by the University to ensure equitable access to University educational programs and activities.

In accordance with the University of Missouri's Collected Rules and Regulations, all faculty and staff are required to report any information concerning discrimination disclosed through communication including, but not limited to, direct conversation, email, social media, classroom papers and homework exercises to the Equity Officer/Title IX Coordinator.

For more information regarding support for those that have been impacted or to report an incident of discrimination or harassment as defined by [Chapter 600](#) of the University's Collected Rules and Regulations, visit the Office of Equity and Title IX or visit their website at equity.mst.edu.

Office of Equity and Title IX

Equity Officer and Title IX Coordinator: Dr. Paul Hirtz

Phone: (573) 341-7734

Location: 900 Innovation Drive, Suite 500

E-mail: equity@mst.edu

Classroom Egress Maps

For all in-person instruction, faculty should explain where the classroom emergency exits are located. Classroom egress maps are posted at <http://designconstruction.mst.edu/floorplan/>.

University Libraries

The library provides students and faculty with physical and electronic books, journals, articles and databases as well as recreational reading and video materials. You can also check out laptops, calculators, tool kits and more and reserve study or meeting rooms. Talk to us one-on-one via chat, email, phone or in person for any assistance regarding library services or finding peer-reviewed, credible research materials for study and research needs. Find out more information about the library here: library.mst.edu.

Writing and Communication Center

The Writing and Communication Center's mission is to assist all students in their efforts to become better writers, communicators, and critical thinkers. The Center's peer consultants and coaches provide free individualized one-on-one and small-group conversations to offer meaningful feedback and guidance to students across all

disciplines. More information can be found on our website, through email: writing@mst.edu or stop by Curtis Laws Wilson Library 201A.

Student Success Center

The Student Success Center (SSC) offers peer tutoring and success coaching to help students succeed in their academic goals. Additionally, we work as a resource hub and can connect you to the campus resources necessary to help you dig deeper and finish the semester strong. Visit the SSC in Room 117 Innovation Lab and contact us at ssc@mst.edu or 573-341-7596. To learn more about the SSC, visit <https://ssc.mst.edu/>

S&T Tutoring Opportunities

The Student Success Center (SSC) helps you with your studies in three ways:

- **Drop-in:** Our Drop-in service provides convenient access to experienced peer learning assistants for a multitude of courses across campus. No appointments necessary. Simply check our tutoring schedule to discover when support for your specific course is available: <https://ssc.mst.edu/stutoring/drop-in/>
- **Group Sessions (formerly LEAD):** Our Group sessions offer after-hours group tutoring, facilitated by our dedicated peer learning assistants in partnership with faculty members. Explore the Group schedule to see if your course is featured and join us at the next session: <https://ssc.mst.edu/stutoring/groupsessions/>
- **Knack Tutoring:** If your schedule clashes with our in-house offerings, or if your course isn't covered, Knack is your solution. Request a tutor for either a virtual meeting or an in-person session on campus, ensuring you get the help you need, when you need it. For more information about Knack, visit: <https://ssc.mst.edu/stutoring/> or to sign up for your FREE Knack account, visit: <https://www.joinknack.com/student/missouri-university-of-science-and-technology>

Success Coaching Opportunities

The Student Success Center (SSC) helps students in developing essential soft skills like time management, goal setting and study strategies through two ways:

- **1:1 Peer Meetings:** These are casual, 30-minute sessions where your Success Coach will work with you to explore and customize success strategies that align with your lifestyle and goals. For more information or to schedule your FREE consultation, visit: <https://ssc.mst.edu/successcoaching/>
- **Workshops:** Led by our Success Coaches, these interactive sessions provide quick, actionable insights on various success strategies without the need for one-on-one meetings. Interested in attending? Visit: <https://ssc.mst.edu/services/workshops/>

Military & Veterans Services Center (MVSC)

The Military & Veteran Services Center at Missouri S&T is dedicated to supporting those who have served, are currently serving, and those who aspire to serve in our nation's armed forces, along with their families. We are committed to fostering a welcoming and inclusive environment that empowers military-connected students to achieve their educational and personal goals. Through tailored resources, academic and career support, and community connections, we aim to enhance the success and well-being of service members, veterans, and their loved ones as they transition into and thrive within higher education here on campus.