



Syllabus: Math 1172 – Autumn 2022

(Last Update: 8-22-2022)

"We are all in this together"

Lecturers: Jim Talamo and Esteban Vargas Bernal **To Contact Us:** Send a message via Canvas (NOT email)

Please make sure to contact us via Canvas message and not email. If you have an issue with Canvas, please use <u>talamo.2@osu.edu</u> as an email address to reach Jim; do NOT use any buckeyemail.osu.edu address, as these emails will not reach me.

Math 1172 will be a collaborative learning experience. The flexible course environment offers many challenges but also provides greater opportunities to make the course more interactive and tackle these challenges together. The assessments will consist of a timed component given at a common time and a take home-component. The timed component must be completed individually. The take-home portions are meant to be collaborative, and you will have the ability to reach out to your lecturer during the assessments to ask questions. I want everyone to learn together and learn from each other – either by asking questions or answering them.

Lectures

Our class this semester will be follow a flipped model. Lecture content will be <u>asynchronous</u>; we will use Jim's prerecorded lectures, which are available on Canvas. The Live Classes on Monday, Wednesday, and Fridays will NOT be lectures. While important concepts will be summarized, the classes will be devoted to groupwork, activities, and solving problems from the homework. Priority will be given for the section listed on the course calendar during Live Class on the date. On Canvas, there will be links to live classes; you may attend any and/or as many sections as you wish, even if they are not during your lecture time.

Since Live Class will not be lectures, it will be expected that you have gained exposure to the course material AHEAD of time. There are three ways to do so.

- 1. Watch the prerecorded lectures
- 2. Read the .pdf of the Ximera Textbook
- 3. Complete the Interactive Ximera Textbook (which is OPTIONAL)

It's up to you to use the resource or combination of resources that best fits your personal style of learning.

The asynchronous lectures follow my outlines, which are available for download in both .pdf and .note format on Canvas. It is suggested that you download the outline and fill it out as you watch the lecture. All lessons are available on Canvas, so you may work at your own pace, although you should watch each before class on the date listed on the syllabus.

In addition, I have produced – and will continue to produce – written and video content for this course to help you practice the course material. I will produce more content as time allows.

How to get help in this course

Attend Live Class and Office Hours. Office hours will be virtual, and links to them may be found on Canvas. If you want to set up an appointment with your lecturer for in person help, please message them via Canvas. Make sure

to attend your recitation and find out when your TA's office hours are. Additionally, you may schedule individual appointments with your lecturer, or seek assistance from the MSLC.

MSLC Free Tutoring Hours

The Math Stat Learning Center (MSLC) offers free drop-in tutoring. Everyone can benefit from drop-in tutoring. During the day, the MSLC's in-person tutor rooms are a great place to work on math homework or study for exams. Students often use the space like a library with the added benefit of a tutor or peers nearby. During the evening, the MSLC's zoom tutors can help assist with homework or review questions that arise. MSLC tutors focus not only on helping you solve the problem at hand, but also work with you to build your understanding and knowledge to prepare you for exams.

Course Requirements

Technology requirements

All students are required to have access to internet and are expected to have access to a tablet or iPad. If you do not have an iPad or tablet, you will have the opportunity to borrow a loaner device through the college. Students will be required to download and upload work for assessments. This can be done entirely with iPads, but you may also print documents, record your solutions, scan your work, and upload it as a .pdf.

Course Prerequisites

Mathematics 1151 (with grade C- or better), equivalent transfer credit from another college or university as determined by the Math Advising Office (https://math.osu.edu/undergrad/advising-office), or Course Code L on the Math Placement Test.

GE Information

This mathematics course can be used, depending on your degree program, to satisfy the Quantitative and Logical Skills category of the General Education Requirement (GE).

Course Goals

- 1. Master essentials of integral calculus, series, Taylor series, vectors, and differential multivariable Calculus.
- 2. Model physical situations mathematically and use techniques of calculus solve them.
- **3.** Introducing formal mathematical reasoning and arguments.
- **4.** Incorporate technology to solve mathematical problems.
- 5. Become a more resourceful, analytical thinker.

Course Learning Objectives

To understand the basic techniques and applications of integral calculus, including applications of integration, integration techniques, sequences and series, Taylor series and their applications, working with parametric equations and polar coordinates, vectors, and differentiable multivariable calculus.

Course Materials

Required Text: Ximera (available through Canvas for free!)

Required Homework System: Ximera (available through Canvas for free!)

Ximera Information

General Information

Many instructors have worked hard to produce a free, open-source textbook and homework system for Calculus students at OSU. I have produced most of the material in the 1172 textbook and the majority of your homework problems this semester. Since I will also be producing all of your assessments, this means that the homework and textbook sections are relevant and reflective of my expectations. This is an ongoing project, and I have produced a good amount of supplemental material for sections that are still being worked on.

Troubleshooting

Periodically, there may be issues that arise. One important item to note is the following.

You must access Ximera through our Canvas page; do not go to the external website or your progress will not be recorded. Make sure to open Canvas in an internet browser; do NOT access Ximera through the Canvas app!

Additionally, please make sure to check out the link below for troubleshooting information.

Get Help: http://go.osu.edu/ximerahelp

Some common issues that still persist - and our course policies to resolve them - are below. In order to resolve these issues, please **note that you should contact your TA before your lecturer.**

- I didn't finish working on the homework yet, but I have a grade in the Canvas Gradebook.

 The Gradebook syncs with the Ximera servers in real time. Your grade will continually update until the due date for the assignment has passed. You can continue working on the homework, and as you complete more of it, your score will increase.
- My scores in the Canvas Gradebook are not updating.
 Continue to work on the assignment until the due date. Make sure that your work is being saved on Ximera. After the assignment is due, do the following.
 - Open the affected Ximera assignment in your Canvas from an internet browser (not the Canvas app).
 - Click on the big blue box that says "*Certificate".
 - Take a screenshot of the screen that shows the name of the assignment, the scores on each problem, and the overall total percentage.
 - Do not click on the link on the bottom of this page; it will not allow us to find the information we need to correct your scores.
 - Send the screenshot to your TA in a message from Canvas.
 You may cc your lecturer if you would like, but it is not necessary. It will be your TA's responsibility to handle these issues this semester.
- I'm getting a "Bad Gateway" Error.

This means that the Ximera servers have likely crashed. This problem is usually remedied quickly. If the servers crash the night homework is due, the deadline will be extended until the following night; there is no need to contact your instructors if this happens.

Statute of Limitations

It is your responsibility to check Canvas regularly to make sure there are no discrepancies with graded assignments. Any errors that are discovered more than two weeks after the assignments are due may not be resolved.

Grades and Assessment Information

Math 1172 will use a percent based system to determine course grades. Each type of assessment will count as a certain percent of your final grade. To calculate your score for each category, take the number of points available in that category divided by the total number of points possible in that category. Then, multiply this by the total percentage listed below. This will be your score.

For instance, the final counts as 25% of your final score. If you score a 90% on the exam, you would earn .9*25 = 22.5

To get your final course grade, calculate your score in each category and add together. Note that Canvas can do this for you automatically!

Assignment or category	Percent of Final Grade
Syllabus Quiz	1%
Ximera Review Assignments	2%
Ximera Homework	12%
Midterms (4)	60 % (15% each)
Final Exam	25%
Total	100%

Grading Scale

A	Above 93	B-	80-83	D+	67-70
A-	90-93	C+	77-80	D	60-67
B+	87-90	С	73-77	Е	Below 60
В	83-87	C-	70-73		

This grading scale will not be adjusted. There will be no "rounding up" at the end of the semester.

However, there will be opportunities to complete additional work throughout the semester for extra credit. You will be able to revise your midterms to earn up to half of the points you missed back. However, there will not be an opportunity to revise your Final Exam. Since I have implemented this change, the effect has had a significantly greater positive impact on grades than the historical departmental adjustments. It also incentivizes you to learn from incorrect responses. My personal opinion is that there are no "mistakes" when you answer an exam problem incorrectly. Rather, incorrect responses provide the opportunity for ironing out misconceptions and enhance your understanding. To incentivize this and to make a larger part of your course grade effort-based, Esteban and I have decided to continue to offer this opportunity.

Canvas Gradebook Warning

By default, Canvas will not treated ungraded items when computing your course grade. There is a feature that allows you to input hypothetical scores to see what effect they have. Before all items are input, the percentages above will not be reflected by the Canvas gradebook.

For instance, once Midterm 1 has been entered, there will be 4 components to the grade Canvas reports – the syllabus quiz, review assignments, homework, and Midterm 1 for a total of 27% of the course grade. The grade that will be reported by Canvas will be a percentage of the 27% of the score you have earned. If you have perfect scores on the syllabus quiz, a 95% on the reviews, a 90 on the homework, and an 85% on Midterm 1, your score will be computed as follows.

$$100(.01) + 95(.02) + 90(.12) + 85(.15) = 26.45$$

Canvas will report your grade as 26.45/30, which gives an 88.17% for the course. If you then earn a 92% on Midterm 2, your new score will be

$$100(.01) + 95(.02) + 90(.12) + 85(.15) + 92(.15) = 40.25$$

Canvas will report your grade as 40.25/45, which gives an 89.44% for the course.

A few opportunities for extra credit will be given this semester. The weight for these will be listed on the projects and be included into the course <u>AFTER</u> the final exam. The same guidelines above will NOT occur if there is more than 100% available for the course. In this case, Canvas will take your total points earned for the course and match them to the grading scale.

For instance, say you have the same scores as above, and earn an 80% on Midterm 3, and an 86% on Midterm 4, an 83% on the final, and an 89% on an extra credit assignment worth 1%. Without the extra credit, your score is:

$$100(.01) + 95(.02) + 90(.12) + 85(.15) + 92(.15) + 80(.15) + 86(.15) + 83(.25) = 85.90$$

You will earn .89(.01) = .89 percent extra for the extra credit, which takes your course grade to a 86.79.

Note that Canvas will do this automatically. If you have questions about the score that appears on Canvas, you must perform the relevant calculations (as above) and present them to your lecturer.

Homework

There will be two components to the homework for this course.

- 1. **Review Assignments**: Most weeks, there will be an assignment that addresses relevant concepts from pre-calculus and calculus I that are relevant for the coming week's material. These assignments allow for you to refresh on important perquisite material that will arise when working problems on the current week's material. You can access these assignments under the "Assignments" tab in Canvas.
- 2. <u>Weekly Homework:</u> Most weeks, there will be assignments that are due Tuesdays and Thursdays. The number of assignments will vary by the week. You can access these assignments under the "Assignments" tab in Canvas. The low two scores will be dropped.

Allowed resources for homework: ANYTHING!

The purpose of the homework is to expose you to the many facets of the material and to make sure that you have reinforced fundamental prerequisite skills. You may work together on the homework and ask us questions. You may use technology in any capacity as you wish or seek any degree of outside assistance as you would like. The exams will be based heavily on the content in the homework.

Late Policy: Late homework is not accepted excepted in the case of an emergency. Documentation will be required for extensions and should be sent via a Canvas message.

Syllabus Quiz

There will be a quiz that covers the content on this syllabus due on Thursday, September 1. You may use the syllabus to answer the questions. The point of this quiz is to make sure you are familiar with how the course will be run and to practice uploading your work to Gradescope. An announcement will appear on Canvas towards the end of the first week of class once the quiz becomes available. Instructions for uploading the work will also be given in this announcement.

Midterms

Midterms will consist of an in-class and a take-home component. They will be submitted via Gradescope. More information about how to upload exams will be given in the Announcements section in Canvas during the first week of class.

Timed component

<u>General Information:</u> These will be designed to check that you have a basic understanding of the material. A sample exam and a list of other questions will be made available for practice. The actual exam will be based heavily on these questions and be of a similar length to the sample one.

Administration: The exams will occur on Thursday evenings from 7:00-8:00 PM on the dates listed on the course calendar. You will have 1 hour to complete the exam and an additional 20 minutes to upload your work to Gradescope. If you have accommodations through SLDS, your time will be extended in accordance with those accommodations, but the extended time will NOT apply to the upload window. After this, late submissions will be penalized 10 points per minute they are late. If you have an issue uploading an assessment to Gradescope, you can send me a Canvas message with a copy of your assessment as proof that it was completed on time. There will be a make up exam given on the following Friday morning from 8:00-9:00 AM. To take the make up exam, you must provide documentation of a conflict with the Thursday evening time. If neither time works for you, please contact your lecturer via Canvas message so we can arrange an alternate exam time.

<u>Guidelines:</u> Each student must complete and submit the in-class component separately.

You may:

- Use any resources available on Canvas.
- Use your notes.

You may not:

• Seek outside assistance.

This which includes, but is not limited to posting quizzes and exams online, working with private tutors, asking MSLC tutors for assistance, and seeking help from people not currently affiliated with the course.

Use techniques that are not covered in our course without proof.

Problems that utilize material not covered in the course will receive scores of 0.

The above are all grounds for academic misconduct, which will result in the filing of an incident report to the Committee of Academic Misconduct (COAM), a score of 0 for the affected assessment, the enactment of the scenario listed on Page 8 of this syllabus, and any additional penalties imposed by COAM.

Take-home component

You will have 24 hours to complete this part. You may use as much or as little of that time as you wish. Completed work must be saved in .pdf form and uploaded to Gradescope on a copy of the assessment. There will be directions for registering for Gradescope and uploading work available on Canvas during the first week of class.

The take-home component can consist of multiple choice, multiselect, short answer, and free-response problems. Each exam will have an application problem that requires you to apply relevant material to an unfamiliar problem. Technology may be used, and many multiple choice and multiselect questions will require that you use technology to solve efficiently. All work should be shown by hand for short answer and free response problems unless otherwise directed, although you may (and are encouraged to) use technology to check your work. Many of the questions will require that you analyze arguments and interpret computations that you have performed; simply mastering technology to perform computations will not be sufficient for this course.

What you may do and use

Work together in groups of up to four students and submit a single copy.

Your group members need not be in the same lecture or recitation section as you. If you submit a single copy, all group members' names should be written on it, and all group members should be included to the submission on Gradescope.

- Use any resources available on Canvas.
- Ask your instructors questions.

What you may not use or do

Seek outside assistance.

This which includes, but is not limited to posting quizzes and exams online, working with private tutors, asking MSLC tutors for assistance, and seeking help from people not currently affiliated with the course. These are all grounds for academic misconduct, and will possibly result in a score of 0 for the affected assessments.

• Use techniques that are not covered in our course without proof.

Problems that utilize material not covered in the course will receive scores of 0.

The above are all grounds for academic misconduct, which will result in the filing of an incident report to the Committee of Academic Misconduct (COAM), a score of 0 for the affected assessment, the enactment of the scenario listed on Page 8 of this syllabus, and any additional penalties imposed by COAM.

Should a significant amount of academic misconduct occur in such a way to compromise the integrity of the course, a universal change to the exam structure may be implemented.

Regrade Policy

If you have questions or concerns over how a problem was graded on your Midterm, you can use the Regrade Request feature on Gradescope. You must submit regrade requests within three days of the return of an assessment for it to be considered. Any requests sent after that will not receive points back.

Make-up Policy

There will be a make-up exam the Friday after the regularly scheduled exam from 8:00 AM - 9:00 AM. Students can only take makeup exams if they have a scheduling conflict with the evening exam or there are extraordinary circumstances. Excuses due to illness must be accompanied by a doctor's note. Students should contact their instructor as soon as possible in the event a makeup is needed and should always contact the instructor BEFORE the exam is given.

Calculator and Technology Policy

Any type of calculator and other online technology (Wolfram Alpha, Symbolab, MATLAB, etc) **WILL be permitted during exams**. By default, you may use technology in any capacity to solve multiple choice and select all questions. In fact, many of these types of problems will require that you use technology to perform computations. You will have to state the relevant computation to be done, what you use to perform the calculation, and what the result is. You may not use technology as justification for short answer and free responses questions unless directed otherwise. The use of technology in this way for these types of problems will result in penalties. However, it is fine if you use technology to CHECK answers for any problem. You may also use technology to produce graphs for every type of question, and you are permitted to import graphs drawn using technology into your exam solutions. You may also use technology to perform any arithmetic operations (addition, subtraction, multiplication, division, etc)

Revisions Policy

You may revise the Take-Home Portion of Midterms 1-4 for up to half credit back. A document for each revisions will be released after the exams have been graded. You must follow all instructions on the document to earn points back. Since students can earn different scores on each problem, there will be tight guidelines to ensure that scoring the revisions is a feasible task for your instructors. Failure to follow guidelines will result in no credit given for the revisions. If you have any questions about the formatting of your revisions, please reach out to your lecturer BEFORE the assignment is due.

Academic Misconduct Contingency

In addition to the guidelines listed on Pages 6 and 7 of this syllabus, the coversheet for each exam will list what you are and are not allowed to do. The in-class component of the exam is meant to check that you individually have a basic understanding of the relevant material, and the take-home portions are designed for you to think about and apply the learned material. You can work together. You can contact your instructors with questions. You can even revise your exams to earn credit back. This is all done to try to take pressure off of earning a grade in the course so you can focus on learning the material better. That being said, should we suspect academic misconduct, we will file a COAM case. If the suspected misconduct occurs on the exam and you work in a group, each group member will be reported.

Should you be convicted of misconduct, the following penalties apply.

- 1. You and your group will receive a score of 0 for the affected assessment.
- 2. You and your group will incur any additional penalties from the committee, which often include a reduction in overall course grade.
- 3. You and your group's future exams will become oral assessments administered by me.

There will be no in-class or take-home component. You will not have the opportunity for revisions. You will not work with others. Should the COAM case be resolved after subsequent exams are given and it is found that misconduct occurred, your scores will be voided for them and you will have to complete an oral assessment to earn credit for them.

The exams in this course are set up for you to succeed. The take home parts will not be easy for most because the most important thing you can take away from this course is how to become an analytical problem solver who can use what you know in a variety of contexts. You should think hard. You should work together to solve difficult problems. You should revise your work to earn points back. You should **not** cheat.

Course Contingencies

It is possible that individual sections or even the entire course will be transitioned to virtual learning. Safety is more important now than ever.

University Safety Statement

"Health and safety requirements: All students, faculty and staff are required to comply with and stay up to date on all university safety and health guidance (https://safeandhealthy.osu.edu), which includes following university mask policies and maintaining a safe physical distance at all times. Non-compliance will be warned first and disciplinary actions will be taken for repeated offenses."

- Please complete daily health checks and self-isolate if running a fever or experiencing other symptoms.
- Follow university expectations regarding masks and social distancing.
 Note that masks are REQUIRED for in-person recitations. To ensure social distancing, you may only attend in-person recitations on the days your cohort meets in person, and you may only attend your TA's class.
- If you are in a hybrid class, only come in person on the day you are assigned and sit in your assigned seat.

Contingencies

Some possible contingencies and their resolutions include the following.

 A student is unable to attend class because of a positive diagnosis, symptoms, or quarantine following contact tracing.

The student should notify your lecturer and their TA in writing and be able to provide notification. The student will have the option to attend the online recitation section per their discretion. I will work with affected students to provide reasonable extensions for assignments and assessments missed.

• An entire class is required to guarantine following contact tracing.

The affected recitation section will become an online section. Since lectures and assessments will be conducted virtually, these will be unaffected. I will work with affected students to provide reasonable extensions for assignments and assessments missed.

 An instructor is unable to be present due to a positive diagnosis, symptoms, or quarantine following contact tracing.

I have recordings of lectures for all of the Math 1172 material that will be made available should I be unable to be present. Drafts of assessments will be made two weeks in advance and distributed and administered appropriately by your TAs. Should a recitation be cancelled, please note that you will still have access to online recording for one of the online recitations.

In-person classes are suspended at the university.

All recitation sections will become online sections. Since lectures and assessments will be conducted virtually, these will be unaffected.

Equitable Practices

Accessibility Statement

The university strives to make all learning experiences as accessible as possible. In light of the current pandemic, students seeking to request COVID-related accommodations may do so through the university's request process, managed by Student Life Disability Services. If you anticipate or experience academic barriers based on your disability (including mental health, chronic, or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. SLDS contact information: slds@osu.edu; 614-292-3307; slds.osu.edu; 098 Baker Hall, 113 W. 12th Avenue.

Sexual Misconduct Statement

Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at http://titleix.osu.edu or by contacting the Ohio State Title IX Coordinator at titleix@osu.edu

Diversity Statement

The Ohio State University affirms the importance and value of diversity in the student body. Our programs and curricula reflect our multicultural society and global economy and seek to provide opportunities for students to learn more about persons who are different from them. We are committed to maintaining a community that recognizes and values the inherent worth and dignity of every person; fosters sensitivity, understanding, and mutual respect among each member of our community; and encourages each individual to strive to reach his or her own potential. Discrimination against any individual based upon protected status, which is defined as age, color, disability, gender identity or expression, national origin, race, religion, sex, sexual orientation, or veteran status, is prohibited.

Mental Health Statement

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. The Ohio State University offers services to assist you with addressing these and other concerns you may be experiencing. If you or someone you know are suffering from any of the aforementioned conditions, you can learn more about the broad range of confidential mental health services available on campus via the Office of Student Life's Counseling and Consultation Service (CCS) by visiting ccs.osu.edu or calling 614-292-5766. CCS is located on the 4th Floor of the Younkin Success Center and 10th Floor of Lincoln Tower. You can reach an on call counselor when CCS is closed at 614-292-5766 and 24 hour emergency help is also available through the 24/7 National Suicide Prevention Hotline at 1-800-273-TALK or at suicidepreventionlifeline.org.

Academic Misconduct Statement

It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term academic misconduct includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee. For additional information, see http://studentaffairs.osu.edu/resource_csc.asp

Other Information

Technology Problems

It is inevitable that technology will sometimes malfunction. Students are responsible for beginning assignments early enough to have time to ask for help with technical issues. Although I will make reasonable accommodations for students when there are technical issues, the student will be responsible for documenting errors and seeking help in a timely fashion from both technical support and the instructor as needed. No accommodations will be made for students who do not work actively to resolve their technical problems in a timely fashion.

Students who experience technical problems with Carmen or CarmenConnect should contact Carmen Support at 8—HELP or visit https://carmen-services.it.ohio-state.edu/carmen-help/students/

Student participation expectations

You are expected to check Carmen at least **once every 24 hours on weekdays**. You should plan on working on this online course every school day. There are frequent deadlines in this course, and students are expected to keep track of all deadlines. Students are expected to work ahead of those deadlines whenever possible to prevent last-minute problems. Students are expected to attend all recitation meetings.

Helpful Resources

Should you have questions or concerns about COVID 19, please be aware of the following university resources.

Information about COVID 19: https://wexnermedical.osu.edu/features/coronavirus

COVID 19 Testing: https://wexnermedical.osu.edu/features/coronavirus/returning-to-work/protection **Protection and Prevention:** https://wexnermedical.osu.edu/features/coronavirus/returning-to-work/protection

As we forge into 2021, COVID and other factors - including personal issues and stress brought on by the events of the country or world at large - may cause you stress. Student Life offers many resources.

Student Wellness: https://swc.osu.edu/

Physical and Mental Health: https://studentlife.osu.edu/articles/we-are-here-for-you