1 Course Information:

Instructor: Jordan Culp

Office: Neill 127

Office Hours: M,TU,TH: 10:45 am -12:00 pm over Zoom

Meeting Location: Virtual Section - Zoom

Email: jculp@math.wsu.edu, jordan.culp@wsu.edu

Lab TA: Charlotte Orr

Email: charlotte.orr@wsu.edu

Office Hours: TBA

Recommended Textbook:
Calculus Volume 2: Gilbert Strang, Edwin Herman
https://openstax.org/details/books/calculus-volume-2

Course Description: Finding areas between curves and volumes of solids of revolution; the techniques of Integration by Parts, Trigonometric Substitution, and Partial Fraction Decomposition; approximate integration, including the Midpoint and Trapezoid Rules; improper integrals; using integration to find arc lengths and areas of surfaces of revolution; calculus (including arc length and areas) with parametric curves/equations; calculus (including arc length and areas) with polar coordinates; infinite sequences; infinite series, including absolute and conditional convergence, Integral Test, Comparison Test, Limit Comparison Test, Alternating Series Test, Ratio Test, Root Test; power series; Taylor and Maclaurin Series; some vector calculus, including the dot product, the cross product, and the equations of lines in 3 dimensions.

Prerequisite: Math 171 (or equivalent) with C or better, or credit for math 171 via AP or Cambridge exam

2 Student Learning Outcomes and Assessment:

After successfully completing this course, a student will be able to:

- Have a broader understanding of mathematics that is used in engineering, physical sciences and other quantitative disciplines, gaining new skills that will be of value for careers in those areas.
- Have an increased ability to understand and evaluate information that is presented in mathematical formats, such as formulas and graphs.
- Have many opportunities to explore applications of the calculus, especially as related to integration and power series.
- Have an increased ability to convert problems described by words into quantitative formats.
- Clearly communicate your reasoning and findings.
3 Expectations for Student Effort:

Students should expect to spend a minimum of 9 hours per week for each online 3-credit course, engaged in the following types of activities: reading, listening to/viewing media, discussion, or conversation in the LMS or other academic technology, conducting research, completing assignments and reviewing instructor feedback, studying for and completing assessments, etc.

4 Course Timeline:

An approximate time course for this semester is given below:

1. (June 22 - 26): Review, Area Between Curves, Volumes of Solids, Quiz 1
2. (June 29 - July 3): Integration by Parts, Trig Subs, Trig Integrals, Partial Fraction Decomposition, Quiz 2
3. (July 6 - 10): Approximate Integration, Improper Integrals, Arc Length, Surfaces of Revolution, Quiz 3
4. (July 13 - 17): Infinite Sequences, Infinite Series, Convergence Tests, Quiz 4
5. (July 20 - 24): Convergence Tests, Power Series, Taylor Series, Quiz 5

5 Assignments, Assessments, and Grading Policy:

Grading:
The course grade will be based on

- Daily Homework - 30 %
- Weekly Quizzes - 35 %
- Comprehensive Final exam - 35 %

SCALE: A 93, A- 90, B+ 87, B 83, B- 80, C+ 77, C 73, C- 70, D+ 67, D 60

In practice, the cutoffs for the grades may be lower than the above numbers, but they will not be higher.
Homework: A small number of problems will be given each day and are due by the beginning of the next class. The problem sets will be distributed to students at the end of class each day on Blackboard and uploaded by students to Crowdmark for grading by the next day at class time. Solutions will be posted to Blackboard afterwards. Any paper which appears to be copied from another student or from outside websites or sources may be given reduced or possibly zero credit. Handwritten work that has been scanned or electronically composed work, say with a tablet, are both valid methods in which to complete the homework assignments. Each homework should be well organized, clearly written, in the correct orientation, and containing the name and ID of the student. The grader will be given discretion in reducing points if the homework doesn’t satisfy the above requirements.

Quizzes: Quizzes will be given during lab, typically at the end of the second lab meeting of the week. Topics covered on each week’s quiz will typically involve material discussed in lecture from Thursday of the previous week to Wednesday of the current week. Students will upload their quizzes to Crowdmark for grading. Quizzes will be distributed in lab by your TA and will only be posted to Blackboard with solutions after lab. Any paper which appears to be copied from another student or from outside websites or sources may be given reduced or possibly zero credit. The grader will be given discretion in reducing points if a submitted quiz doesn’t satisfy the clarity requirements as stated above in the homework.

Final Exam: A comprehensive final exam will be given on the last day of the semester. The final exam will be distributed to students and uploaded by them to Crowdmark for grading. Any paper which appears to be copied from another student or from outside websites or sources may be given reduced or possibly zero credit.

No calculators, cell phones, helpful websites, notes, or cheatsheets will be allowed for use on the quizzes or final exam, unless otherwise stated by the instructor.

6 Attendance and Make-up Policy:

Attendance: Attendance in lecture or lab will not be formally recorded or have a direct impact on your grade. Indirectly, this course covers a significant amount of material in a very short amount of time, attendance in lecture and lab will surely have an impact on your grade.

Make-up Policy: As a rule, late homework will not be accepted. Exceptions will be considered in rare cases where circumstances were unexpected and beyond the student’s control, and the student informs the instructor promptly. The late/make up policy for quizzes will be the same as for homework. The final exam can not be made up.

7 Academic Integrity Statement:

I encourage you to work with classmates on assignments. However, each student must turn in original work. No copying will be accepted.

Academic integrity is the cornerstone of higher education. As such, all members of the university community share responsibility for maintaining and promoting the principles of integrity in all activities, including academic integrity and honest scholarship. Academic integrity will be strongly enforced in this course. Students who violate WSU’s Academic Integrity Policy (identified in Washington Administrative Code (WAC) 504-26-010(3) and -404) will receive a grade of F in the course, will not have the option to withdraw from the course pending an appeal, and will be reported to the Office of Student Conduct.

Cheating includes, but is not limited to, plagiarism and unauthorized collaboration as defined in the Standards of Conduct for Students, WAC 504-26-010(3). You need to read and understand all
of the definitions of cheating: http://app.leg.wa.gov/WAC/default.aspx?cite=504-26-010. If you have any questions about what is and is not allowed in this course, you should ask course instructors before proceeding.

If you wish to appeal a faculty member’s decision relating to academic integrity, please use the form available at conduct.wsu.edu.

8 WSU Reasonable Accommodation Statement:

Reasonable accommodations are available for students with a documented disability. If you have a disability and need accommodations to fully participate in this class, please either visit or call the Access Center (Washington Building 217; 509-335-3417) to schedule an appointment with an Access Advisor. All accommodations MUST be approved through the Access Center.

accesscenter.wsu.edu, Access.Center@wsu.edu

9 Accommodation for Religious Observances or Activities:

Washington State University reasonably accommodates absences allowing for students to take holidays for reasons of faith or conscience or organized activities conducted under the auspices of a religious denomination, church, or religious organization. Reasonable accommodation requires the student to coordinate with the instructor on scheduling examinations or other activities necessary for course completion. Students requesting accommodation must provide written notification within the first two weeks of the beginning of the course and include specific dates for absences. Approved accommodations for absences will not adversely impact student grades. Absence from classes or examinations for religious reasons does not relieve students from responsibility for any part of the course work required during the period of absence. Students who feel they have been treated unfairly in terms of this accommodation may refer to Academic Regulation 104 – Academic Complaint Procedures.

10 WSU Safety Measures:

Classroom and campus safety are of paramount importance at Washington State University, and are the shared responsibility of the entire campus population. WSU urges students to follow the “Alert, Assess, Act.” protocol for all types of emergencies and the “Run, Hide, Fight” response for an active shooter incident (url below). Remain ALERT (through direct observation or emergency notification), ASSESS your specific situation, and ACT in the most appropriate way to assure your own safety (and the safety of others if you are able). Please sign up for emergency alerts on your account at MyWSU. For more information on this subject, campus safety, and related topics, please view the FBI’s “Run, Hide, Fight” video (https://oem.wsu.edu/emergency-procedures/active-shooter/) and visit the WSU safety portal (https://oem.wsu.edu/about-us/).