Math 252: Calculus II

Winter 2023 – Section 001

Course number: 68075
Credit hours: 4
Instructor: Tuan Pham, email: tnpham@eou.edu
Office: Loso Hall 225, telephone: 541-962-3465
Office hours: M,T,Th,F 11:45-12:45 PM and 2-3 PM or by appointment
Time and place: M,T,Th,F 9:00 - 9:50 AM at Badgley 146.
Canvas: https://eou.instructure.com/courses/37817
Textbook: "*Essential Calculus*", 2nd Edition by James Stewart.
Prerequisite: Math 251 with a grade of C- or better.

Catalog description: Integral Calculus including the definite integral, the fundamental theorem of Calculus, area between curves, volumes by slicing, L'Hospital's Rule, the Calculus of the exponential and logarithmic functions, techniques of integration, improper integrals and arc length.

Learning Outcomes: Upon successful completion of this class, a student should be able to:

1. Find areas using Riemann Sums;
2. Evaluate definite and indefinite integrals of various functions including exponential, logarithmic, and trigonometric functions using various techniques including, substitution, integration by parts, trig substitution, and partial fraction decomposition;
3. Determine if functions are one-to-one and find their inverse;
4. Demonstrate an understanding of the Fundamental Theorem of Calculus;
5. Accurately apply L'Hospitals Rule;
6. Evaluate volumes of three dimensional objects using various techniques including disks, washers, and shells;
7. Evaluate arc length;
8. Determine the area bounded by two curves;
9. Solve simple differential equations.

Grading components:

Homework: 25%
Attendance: 15%
Quizzes: 10%
Mathematica labs: 10% (extra credit)
Midterm: 25%
Final exam: 25%

Means of assessment:

- **Homework**: there will be 8 homework sets to be turned in on paper in class every Tuesday. A schedule of homework assignments was posted on the course website and Canvas.

  Students are encouraged to work together, but must individually write in his/her own words and reflect his/her own understanding. Only a few selected problems will be graded in detail. The rest will be given credit on the basis of completion.

- **Attendance**: the instructor will check attendance every day of class, except for the first week. Students who show up receive 1 point. Students who do not show up receive 0 point. The lowest 2 scores will be dropped.

- **Quizzes**: quizzes will be given in class at random times on random days. They are to test students' understanding of recent topics.

- **Mathematica labs**: it is not always feasible to sketch graphs or compute an integral by hand. A mathematical software can be very useful in visualizing a function and computing tricky integrals (exactly or approximately). An optional component of this course are the lab assignments using a mathematical software called Mathematica for computation and visualization purposes. No programming experience is required. There will be 5 lab assignments to be submitted on Canvas as pdf or word documents. These lab assignments are for extra credit.

- **Midterm Exam:** there will be one midterm exam held in class on **Monday, February 13, 2023**. A 4" x 6" handwritten single-sided note card is allowed. A scientific calculator is allowed. Graphing/programmable/transmittable calculators are not allowed.

- **Final exam:** this exam will only cover the material after the midterm exam. Thus, it is not a cumulative exam. It will be held at the regular classroom (Badgley 146) **from 10 AM to noon on Thursday, March 23, 2023**. A 4" x 6" handwritten single-sided note card is allowed. A scientific calculator is allowed. Graphing/programmable/transmittable calculators are not allowed.

Make-up work: make-up exams will be given only in exceptional circumstances, with appropriate documentation, such as illness or family emergency. If possible, notify the professor as soon as you are aware of the issue. Late assignments may be accepted within one week after the due date under similar conditions.

Grade lines: the course grade lines will not be harder than the standard grade lines: A 100-93%, A- 92.99-90%, B+ 89.99-87%, B 86.99-83%, B- 82.99-80%, C+ 79.99 - 77%, C 76.99-73%, C- 72.99-70%, D+ 69.99-67%, D 66.99-63%, D- 62.99 - 60% and F < 60%.

Other Learning Resources:

- The instructor has office hours dedicated to help you. Don't hesitate to make an appointment if the office hours conflict with your schedule.

- Your fellow classmates are also a good resource. Form a study group and you will find it helpful.

- You can find peer tutors at the Math Lab in Loso Hall 232. They have drop-in hours (no appointment necessary) which vary from term to term. You can find the latest information here: https://www.eou.edu/lcenter/math-lab-schedule/

- The Learning Center at Loso Hall 234 (next to the Math Lab) and the Library are great study places for you and your group.

Academic Misconduct Policy:
Eastern Oregon University places a high value upon the integrity of its student scholars. Any student found responsible for an act of academic misconduct (including but not limited to cheating, unauthorized collaboration, fabrication, facilitation, plagiarism or tampering) may be

subject to having his or her grade reduced in the course in question, being placed on probation or suspended from the University, or a combination of these.

Students with Disabilities policy:
Any student who feels he or she may need an accommodation for any type of disability must contact the Disability Services Office in Loso Hall, Room 234. Phone 541-962-3081.