Instructor Meeting Times

Math Learning Center: Wednesday 4:10-5:00 pm
Office Hours: Tuesday 10:00-10:50, Wednesday 2:10-3:00 pm, Thursday 9:00-9:50

Course Meeting Times and Location

Sect 8: Monday, Tuesday, Thursday, Friday 8:00 - 8:50 LINH 109
Sect 10: Monday, Tuesday, Thursday, Friday 11:00 - 11:50 WIL 1-132

Course Materials

Textbooks:
*Calculus: Early Transcendentals (3rd ed)*, by Jon Rogawski.

Online: [http://www.math.montana.edu/malo/](http://www.math.montana.edu/malo/)

D2L (Brightspace) will be used for grade information, and only grade information. Please do not email me through D2L, I do not check it regularly.

About the course

Prerequisite: M 172 Q.

Learning Outcomes:

Upon completion of this course, a student will be able to:

- Interpret and draw inferences from mathematical models such as formulas, graphs, diagrams or tables.
- Represent mathematical information numerically, symbolically and visually.
- Employ quantitative methods in symbolic systems such as, arithmetic, algebra, or geometry to solve problems.
- Explain three-dimensional coordinate systems, dot and cross products, equations of lines and planes, cylinders and quadric surfaces;
- Explain vector-valued functions and space curves, their derivatives, arc length and curvature, and motion in space;
- Explain limits, continuity and partial derivatives of functions of several variables;
- Explain tangent planes to surfaces and linear approximations;
- Explain the chain rule, directional derivative and gradient vector, extreme values and Lagrange Multipliers;
- Explain double and triple integrals over general regions, and their applications;
- Explain triple integrals in cylindrical and spherical coordinates;
- Explain vector fields, line integrals and the Fundamental Theorem of Line Integrals;
- Define Green’s Theorem;
- Explain curl and divergence of vector fields;
- Explain surface integrals, Stokes Theorem, and the Divergence Theorem.
Grades

Grades will be determined according to the following table:

<table>
<thead>
<tr>
<th>Quizzes</th>
<th>Best Exam</th>
<th>2nd Best Exam</th>
<th>3rd Best Exam</th>
<th>Final Exam</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 %</td>
<td>25 %</td>
<td>20%</td>
<td>15 %</td>
<td>25%</td>
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</tbody>
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Course grades:
The final grade will be determined by the weighted percentage earned in the course (see above). Earning an average of 90 % or higher guarantees a grade of A- or better, 80-89 % guarantees B- or better, etc.

Course Policies and Requirements

Attendance and Class Participation: Attendance is expected. You are expected to actively participate in class by asking questions, making comments, working on the assignments, and explaining your solutions to others.

Quizzes: In-class quizzes will be given each week except weeks with an exam, typically on Friday. An announcement will be made in class at least one day prior. Additional in-class worksheets, collected homework assignments, and other miscellaneous work will be given out sporadically as the situation requires. Regardless of the work being a regularly scheduled Friday quiz or a random Tuesday worksheet, each will be equally weighted and counted as a “quiz.” The lowest couple of scores will be dropped. The remaining will be scaled to be worth 15% of your grade. Because I drop a number of quiz scores, there will be no makeups. Solutions to quizzes will be posted to my webpage.

Homework: Homework will be assigned regularly, but will not be graded. The purpose of the assignments is for you to actively engage in learning the methods, techniques, and problem-solving skills in the course. The expectation is that you will complete the homework to learn the material in order to prepare for the quizzes and exams.

Homework for this week: The full list is in progress, this is enough to get us started.
12.1: 1- 4, 7, 8, 10, 11, 13, 15-17, 20, 23, 24, 27, 29, 31, 40, 41, 48, 57, 58, 59
12.2: 5, 8, 13, 19, 20, 25, 27, 30, 33, 34, 38, 39, 41, 43, 44, 47, 51, 52, 53
12.3: 3, 4, 6, 10, 11, 13, 14, 23, 24, 27, 28, 31, 33, 49, 50, 52, 53, 59, 60, 63, 66, 77, 78
12.4: 7, 9, 11, 15, 21, 23, 25, 29, 30, 37, 39, 45, 47, 49, 57, 69, 71

Exams: There will be three exams during the semester.
- Exam 1 Tuesday, September 27, 6-7:50 pm, LINH 125
- Exam 2 Monday, October 24, 6-7:50 pm, REID 402
- Exam 3 Wednesday, November 30, 6-7:50 pm, REID 402

Please take the time to check for conflicts with the exam times during the first two weeks of classes. Contact the Student Success Coordinator Dr. Christina Hayes about any conflict ASAP. christina.hayes@montana.edu

Extended time and quite room exams: If you have a documented need for special accommodation please let me know well in advance.

Missed Exams: Any conflicts with an exam must be discussed with Dr. Christina Hayes prior to missing the exam. The only valid reasons for missing an exam are documented serious illness or a serious family emergency. Most other reasons (employment conflicts, travel plans, etc.) are not valid. Contact Dr. Christina Hayes about any missed exam ASAP. christina.hayes@montana.edu

Final Exam: Your Final Exam is worth 25% of your grade.
The final exam is Monday, December 12, 10:00 -11:50 am. Room TBD.

Arrive alive: Don’t text and Derive.

Pokemon: NO!

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1Last fall I gave 20 quizzes and dropped the four lowest scores. I expect it will be similar this semester.
2Unless you talk to me ahead of time, and we can find a mutually available time and place for the makeup to be taken, and you don’t start abusing the privilege.
3Unless there is a Snorlax, in which case you should probably alert the class.