<table>
<thead>
<tr>
<th><strong>Course</strong></th>
<th>Math 33: Differential Equations &amp; Linear Algebra</th>
<th><strong>Instructor</strong></th>
<th>Mary Beth Pattengale</th>
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</thead>
<tbody>
<tr>
<td><strong>Section</strong></td>
<td>86457</td>
<td><strong>Office</strong></td>
<td>V-311C</td>
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<td><strong>Email</strong></td>
<td><a href="mailto:mpattengale@sierracollege.edu">mpattengale@sierracollege.edu</a></td>
<td><strong>Office Hours:</strong></td>
<td><strong>Mondays &amp; Wednesdays:</strong> 9:30 - 11am <strong>Thursdays (online only):</strong> 2 - 4pm</td>
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**Course Description:** First and second order ordinary differential equations, linear differential equations, series solutions, Laplace transforms, modeling, systems of linear differential equations, matrices, determinants, vector spaces, linear transformations, orthogonality, eigenvalues and eigenvectors.

**Prerequisite:** Completion of Math 31 or equivalent with a grade of a "C" or better. (However, successful completion of Math 32 is STRONGLY advised!)

**Course Outcomes**

1. Solve first and higher order ordinary and linear differential equations; using numerical, Laplace transformations, and series methods.
2. Write, state, and utilize theorems from linear algebra and use matrices to solve systems of equations, including differential equations.
3. Write, state, and utilize theorems from linear algebra to classify sets and mappings.
4. Logically present clear, complete, accurate, and sufficiently detailed solutions to communicate reasoning and demonstrate the method of solving problems.

**Grading:**

| **Tests** | 5 x 100 pts | 500 pts |
|**Quizzes** | 10 Quizzes x 25 pts | 250 pts |
|**Final Exam** | | 250 pts |
| | | **1000 points** |
### Tests:
We will have 5 exams. The dates for each exam are listed on the schedule. The best way to study for the exams is to look over the homework and quizzes.

***In fairness to other students, make-up exams will only be allowed in documented emergency situations.***

### Honesty:
Any student caught cheating will earn a ZERO on that assignment and a potential report with the Student Discipline Office, per Sierra College Honesty Policy. Any assignment which has been completed dishonestly is NOT eligible to be one of the dropped low scores.

### Homework:
Homework will be assigned, but not graded. You are responsible for knowing how to do each problem that is assigned, so please make sure you do more problems than you think you might need to do to master a concept. For each section we cover, I will post a list of problems you should master.

### Technology:
You should likely have 2 calculators for this class: a graphing calculator with matrix capabilities (the TI 84 is great!) and a scientific calculator with logarithmic and trigonometric functions (the TI 30IIxs!) are great choices.

### Quizzes:
10 quizzes are on the schedule. However, several additional **unannounced** quizzes will be given as replacement quizzes to drop other low quiz scores. This is intended to accommodate students who miss a quiz due to illness, car trouble, or other unexpected reasons. Please don’t count on these as “bad” quiz replacement.

**** No make-up quizzes will be allowed.****

### Final Exam:
Our final exam will be cumulative.

### Student Confidentiality Policy:
As an instructor, one of my responsibilities is to help create a safe learning environment for my students and for the campus as a whole. Under Title IX as a member of the college community, I have the responsibility to report any instances of sexual harassment, sexual or domestic violence, and/or other forms of prohibited discrimination. If you would rather share information about sexual harassment, sexual violence or discrimination to a confidential counseling employee who does not have this reporting responsibility, please let me know so that I can get you in contact with them.