Fall 2017 - Math 104 - Differential Equations

Instructor: Steve Bitzer  
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Publisher: Prentice Hall  
Authors: C. Henry Edwards and David E. Penney

Recommended (Not Required) Text Book:  
Differential Equations and Boundary Value Problems (3rd, 4th, or 5th Edition)  
Free Online Text Book:  
http://digitalcommons.trinity.edu/mono/9/

Student Learning Outcomes:

- Identify the type of a given differential equation and apply the appropriate analytical technique for finding the solution of first order and higher order ordinary differential equations.

- Apply Existence and Uniqueness Theorems to differential equations

- Solve first, second, and higher order linear differential equations using techniques including the methods of separation of variables, undetermined coefficients, Laplace Transforms, and infinite series, at the mastery level.

- Convert higher order ordinary differential equations into systems of first order differential equations, at the introductory level.

- Apply the methods of solving ordinary differential equations to problems in spring-mass systems, electrical circuits, exponential growth and decay, mixing, and Newton's Law of Cooling, at the mastery level.

- Use graphing devices to draw direction fields and solutions to differential equations, at the introductory level.

- Use Power Series to solve a differential equation

- Solve partial differential equations by the method of separation of variables, at the introductory level.

Absences: There are NO MAKE UPS for any tests during the semester. You are required to take the test during the scheduled time. You are not allowed to take any test at an earlier date. You will receive a zero for a missed test.

Tests: There are three tests during the semester and there are no make-ups for missed tests. The tests are worth 25% each of your total grade.

Final: The final is cumulative. The final will be given in two parts. The final is worth 25% of your total grade and may replace one of your test scores. Final Part A is scheduled for Friday Dec 8th and Final Part B is scheduled for:

Wednesday Dec 13th – 7:00 to 9:00 am

Grade: The final grade in the course is calculated with cutoffs of: 90% / 80% / 70% / 60%

Tests: 75%  
Final: 25%  
Total: 100%
Math Learning Center:  
Fremont: HH-218  
Mon – Thurs  9:00 am – 8:00 pm  
Fri  9:00 am – 5:00 pm  
Sat  11:00 am – 3:00 pm  
Newark: NC2306  
Mon – Thurs  9:00 am – 6:30 pm

My Lab and Office Hrs:  
Office Hours (HH-225):  
Mon/Wed/Fri  10:45 to 11:45

Lab Hours: (HH-218):  
Tu/Thur  10:00 to 11:00

Other Help:  
Bradshaw, Smedfjeld and O’Connell’s lab hours are posted in the lab.  
They can help with the homework.

Cheating:  
http://www.ohlone.edu/org/studentservices/academicdishonesty.html

I will follow school board policies for cheating.  
An academic report will be filed if you are caught cheating and you will be dropped from the class.

Mental Health and Stress Management:

The staff and faculty of Ohlone College are here to see you succeed academically and care about your emotional and physical health. You can learn more about the broad range of confidential student services, including counseling and mental health services available on campus by visiting the Student Health Center in building 7 or http://stepupohlone.org/oncampus-resources/.

The Crisis Support Services of Alameda County offers a 24-Hour Crisis Line: 1-800-309-2131

You will need to spend at least fifteen hours per week in order to pass this class. If you have a full schedule and cannot set aside this amount of time to study you might want to consider another class. Time management and being realistic about the amount of time you have will help you make good decisions on what challenges you should take on. The students who are successful in this course put in a lot of effort to achieve their success. I realize life has many uncertainties and surprises. The above rules are black and white and do not have exceptions. During the semester I will refer you to the syllabus if you need any clarification on the policies of this class so please keep this syllabus for your reference. You will be successful if you decide to commit to this class and make it a top priority for the next sixteen weeks. Work hard and good luck!