OAKLAND UNIVERSITY
COLLEGE OF ARTS AND SCIENCES
DEPARTMENT OF MATHEMATICS AND STATISTICS
STUDENT INFORMATION SHEET AND SYLLABUS

COURSE: **APM 2555, Introduction to Differential Equations with Matrix Algebra, 4 Credits**

TERM: Winter 2018

Instructor	Office	Phone	Email	Section	Time		Room
Nghia Tran	347 MSC	248-370-4030	nttran@oakland.edu	012	1:20-2:27	MWF	120 MSC

Attendance at every class is expected.

OFFICE HOURS: 12:15 – 1:15 pm on MF and 4:25-5:25 W.

COURSE DESCRIPTION: An introduction to ordinary differential equations. Laplace transforms, linear systems, matrices, independence, eigenvalues and eigenvectors, and applications.

PREREQUISITES: A 2.0 grade or higher in MTH 1555 or an equivalent course at another accredited institution. In order to do well in this course, you need to have mastered the basic differentiation and integration techniques taught in one year of calculus. Theory and proof play a larger role in this course than in 100 level courses.

COURSE OBJECTIVES: The student should learn methods of solving certain differential equations, become familiar with mathematical models that lead to these types of differential equations, and master the necessary linear algebra to apply these methods and analyze solutions.

TEXT: Differential Equations and Linear Algebra by Edwards and Penney, Pearson Prentice Hall, 4th Edition. We will cover most of Chapters 1-5 and 10. See the detailed syllabus below. You are expected to purchase a copy of the textbook.

CALCULATOR POLICY: You may use a calculator on all exams and homework assignments; however, this is not a course in calculator operation. To receive full credit on exams, you are required to show all of the mathematical work necessary for setting up a calculation before using the calculator. Using a calculator to store formulas for an exam is not permitted.

HOMEWORK: Homework will be assigned daily but it will be not collected or graded. However, it is imperative to do the homework in order to do well on all the exams.

EXAMS: There will be three midterm exams on **Wednesdays: Jan 24, Mar 07, and Mar 28**. These exams and the final examination (see below) are closed book, closed notes exams. Each is worth 100 points.

FINAL EXAM: The final examination is comprehensive. It is scheduled for **Monday, April 23 at 3:30-6:30 p.m**. in the regular classroom.

EMERGENCY CLOSING: If the University is closed at the time of a scheduled exam or quiz, it will be given during the next class period when the University reopens. Closures during the final exam period require rescheduling by the Registrar. The Oakland University emergency closing number is 248-370-2000.

GRADING POLICY: Your course grade will be based on the percentage of total points you have earned out of the 500 points available (3 tests: 300 points, and 1 final exam: 200 points). There is no fixed grading scale for this course, a conversion method will be determined at the end of the course. However, the following list the lowest possible grade that a given percentage will earn: 95%→4.0, 90%→3.6, 80%→3.0, 65%→2.0, 50%→1.0. You can interpolate for the lowest possible grades for intermediate percentages.

MAKE-UP POLICY: **No make-up exams will be given**. If you miss an exam and promptly present legitimate documentation for a valid excuse, your final exam will be worth 300 points; otherwise the missed test will be counted as a 0. Travel and vacation plans do not constitute a valid excuse in this context.

ACADEMIC HONESTY: Cheating is a serious academic crime. Oakland University policy requires that all suspected instances of cheating be reported to the Dean of Students Office for possible adjudication by the Academic Conduct Committee. Anyone found guilty of cheating in this course by the Academic Conduct Committee will receive a grade of 0.0, in addition to any penalty assigned by the Academic Conduct Committee. Working with others on a homework assignment does not constitute cheating. Handing in an assignment that has essentially been copied from someone else or from an instructor's solution manual does. Receiving help from someone else or from unauthorized written material during an exam is cheating as is using a physical or electronic "crib sheet."

STUDY HABITS: Cultivating good work and study habits is necessary for doing well in mathematic courses. You should keep on top of the subject by doing large amounts of homework (frequently working on problems not assigned), regularly reviewing earlier material (and material from previous courses), asking questions in class, and making good use of your instructor's office hours and the Tutoring Center. If you are having difficulty with some concept or mathematical procedure, you should get it clarified as soon as possible. If you make mistakes on exams, rework these problems with the idea that you will not make similar mistakes later. Regular reviewing of older material in the course will put you in good stead when the final exam comes around. This will help you to avoid the usual non-retention problems that students encounter at the end of the course. You should expect that doing all of these things will take more than two hours of work out of class for each hour in class. Many students find it helpful to spend some of this time working with others in study groups.

TENTATIVE SYLLABUS:

Below is a tentative syllabus. It is likely that we will deviate from it, but we will get through all of the material. See the text for the topics covered in each section.

Monday	Tuesday	Wednesday	Thursday	Friday
01/01/2018		Syllabus 1.1		1.2
01/08/18 1.4		1.5		2.1
01/15/18 MLK (No class)		2.2		2.3
01/22/18 **REVIEW**		**EXAM I**		3.1
01/29/18 3.2		3.3		3.3, 3.4
02/05/18 3.4		3.5		3.5, 3.6
02/12/18 3.6		4.1		4.2
02/19/18 **Winter Recess** **NO CLASS**		**NO CLASS**		**NO CLASS**
02/26/18 4.3		4.3, 4.4		4.5
03/05/18 **REVIEW**		**EXAM II**		5.1
03/12/18 5.1, 5.2		5.2		5.3
03/19/18 5.4		5.4, 5.5		5.5
03/26/18 **REVIEW**		**EXAM III**		10.1
04/02/18 10.1, 10.2		10.2		10.3
04/09/18 10.3, 10.4		10.4		10.5
04/16/18 **REVIEW**		**NO CLASS**		**NO CLASS**
04/23/18 **FINAL EXAM 3:30-6:30 pm**				

Please also visit HYPERLINK "http://www.oakland.edu/important-dates"http://www.oakland.edu/important-dates for other **IMPORTANT DAYS.**