MATH 3303, ODE, Summer 2017

Section: 01   **Hours Credit:** 3 hours

Room and Hours: Boyd 301: MW, 9:00 am – 11:30 am

Prerequisite: MATH 2644 with C or better

Instructor: Dr. Kwang Shin

Office Hours: MW (11:30 am – 2:00 pm and 4:30 pm – 5:00 pm) or by appointment.

Office: 311 Boyd   **Phone:** 678-839-4138

E-mail: kshin@westga.edu   through your campus e-mail (myUWG).
Course Webpage: http://www.westga.edu/~kshin/3303/
Course Description: This course is an introduction to the subject of differential equations and has three components:
1. Existence theory and classical methods for first order equations (Chapters 1&2)
2. Real life applications and the theory of linear equations (Chapters 3&4)
3. Techniques and methods for solving general linear equations: operator method, power series, and an introduction to the Laplace transform (Chapters 6&7).

If time permits, we will discuss some other topics.

Required Text: Differential Equations with Boundary-Value Problems, 8th Edition, by Dennis G. Zill and Warren S. Wright, Brooks-Cole Publishing Company.

Learning Outcomes: the student will be able:
1. To identify and classify a differential equation
2. To solve first order equations by using separation of variables and integrating factors
3. To solve initial value problems
4. To solve a constant coefficient homogeneous equation by using the characteristics equation
5. To solve an inhomogeneous equation by using undetermined coefficients or variation of parameters
6. To find power series solutions of linear equations with analytic coefficients
7. To solve systems of linear equations by methods of linear algebra
8. To use computer resources to solve ordinary differential equations symbolically

Hour Exams: Exam 1 (Wed, June 14), Exam 2 (Wed, June 28), Exam 3 (Mon, July 17).

Final Exam: Friday, July 21, 10:00 am -12:00 pm. The final exam will be cumulative.

Homework: Homework will be assigned every day and posted at the course website. Homework will be collected at the beginning of the next class for grade. Doing homework in timely fashion is essential for the success in this course. Partial credit will be considered for incomplete work. However, **late submission will receive zero point.** The total homework score will be converted to a 70 point scale at the end of semester.

Quizzes: There will be a quiz on almost every day, consisting of problems that are *almost identical* to homework problems. Each quiz will be 10 points and two lowest scores will be dropped. If needed, the total quiz score will be converted to an 80 point scale at the end of semester.

Grade Scale:

3 hour exams	300 points (100 points each)	
Quizzes	80 points	
Homework	70 points	
Final	200 points	

Total	650 points	

A: 585 - 650, B: 520 - 584, C: 455 - 519, D: 357 - 454, F: 0 - 356

June 23 is the last day to withdraw from a class with a grade of W.

Make-up: There will be no make-up quiz. In general, make-up exams will not be given after the scheduled exam date. There will be no make-up final except when a conflict with other finals occurs. If a conflict occurs to you, please inform the instructor at least two weeks in advance. Make-up hour exams will be granted for official university activities if the student notifies the instructor at least a week in advance and for well-documented illness.

Attendance and Pop-up Quizzes: Attendance is required and expected. Students are responsible for all material covered in class and all announcements made. An undetermined number of pop-up quizzes may be given for extra points. Such a quiz will consist of one problem, discussed during the same class. *It will count as absent if you are not present when the attendance is checked. Attendance can be used for bonus points at the end.*

Classroom Behavior: You are expected not to disturb your classmate's learning. No phone or computer use during class without instructor's permission.

Also, please carefully review the following information at http://tinyurl.com/UWGSyllabusPolicies   or http://www.westga.edu/assetsDept/vpaa/Common_Language_for_Course_Syllabi.pdf. It contains important material pertaining to your rights and responsibilities in this class.   Because these statements are updated as federal, state, university, and accreditation standards change, you should review the information each semester.