

**Marshall University
Syllabus**

Course Title	<i>Calculus with Analytic Geometry II</i>
Course Number	<i>MTH 230- Section 501- CRN 5085</i>
Semester/Year	Summer II 2017
Days/Time	MTWRF 10:00-12:20pm
Location	SH 516
Instructor	Dr. Michael Otunuga
Office	WAEC 3229
Office Hours	MTWRF 9-10am; others by appointment. To make an appointment, email in advance when possible.
Phone	304 696-3049
E-Mail	otunuga@marshall.edu
Textbook	Calculus , Early Transcendental , 3rd edition by Jon Rogawski
Course Description	A brief but careful review of the main techniques of integrations and its applications, differential equations, infinite series and Parametric Equations. Using graphing calculators and Mathematica to help solve problems.
Calculator	TI-83 or higher, graphing calculators may not be allowed for some problems in exam
University Policies	By enrolling in this course, you agree to the University Policies listed below. Please read the full text of each policy by going to www.marshall.edu/academic-affairs and clicking on "Marshall University Policies." Or, you can access the policies directly by going to http://www.marshall.edu/academic-affairs/?page_id=802 Academic Dishonesty/ Excused Absence Policy for Undergraduates/ Computing Services Acceptable Use/ Inclement Weather/ Dead Week/ Students with Disabilities/ Academic Forgiveness/ Academic Probation and Suspension/ Academic Rights and Responsibilities of Students/ Affirmative Action/ Sexual Harassment See the University Academic Calendar (http://www.marshall.edu/calendar/academic/) for course withdrawal dates.

Course Goals:

Course Goals:	<ul style="list-style-type: none"> ➤ An understanding of fundamental concepts of calculus and an appreciation of its applications ➤ Developing critical thinking skills by applying calculus skills to real world problems ➤ Obtaining an understanding of the theory in science and engineering mathematics ➤ Being able use technology to help solve problems. ➤ Satisfying program requirements for mathematics, science, and engineering majors
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Course Contents

Chapter 5	Review of the definition and properties of the definite integral.
Chapter 6	Creating applications of integrals: Area and Volumes of Revolutions
Chapter 7	Different Method/techniques of Integrations
Chapter 8	Further Application of Integrals
Chapter 9	Introduction to Differential Equations
Chapter 10	Infinite Series
Chapter 11	Parametric Equations, Polar Coordinates, Conic Sections

How each student learning outcome will be practiced and assessed in the course

MTH 230 Student Learning Outcomes	How students will practice each outcome in MTH 230	How student achievement of each outcome will be assessed in MTH 230
Students will be able to identify definite and indefinite integrals and how to evaluate it	Students will complete homework, classwork, and quizzes to get practice and feedback.	Students' understanding of functions will be evaluated through questions on 3 in-class tests and the comprehensive final exam.
Students will be able to calculate definite and indefinite integrals and interpret them as limits of sample sums	Students will complete brief, low-stakes writing assignments as part of daily classwork and quizzes. Students will engage in peer review of written and oral explanations of concepts.	Students will be assessed on written communication through questions on 3 in-class tests, 1 project and the comprehensive final exam.
Students will be proficient at finding limits, derivatives and integrals of functions. Students will understand the concept of functions and their applications.	Students will complete homework, classwork, and quizzes to get Practice and feedback.	Students will be assessed on solving equations through questions on 3 in-class tests, and the comprehensive final exam.
Students will be able to apply integrals to solve real world problems.	Student will complete assigned mathematical projects on homework.	Students will be assessed on their modeling skills on 3 in-class tests
Students will be able to find infinite series expansion of functions	Students will complete homework, classwork, and quizzes to get Practice on modeling questions.	Students will be assessed on Model analysis, derivation and verification through questions on homework.
Student will be able to test for convergence of infinite series	Students will complete homework, classwork, and quizzes to get Practice on modeling questions.	Students will be assessed on Model applications through questions on Exams
Students will be able to solve differential equations, graph parametric equations, interpret & solve problems leading to differential equations	Students will complete projects, homework and quizzes to get practice and feedback	Students' understanding of applied calculus will be evaluated through questions on Exams.

Course Requirements / Due Dates

Attendance: Attendance is compulsory for this class. **Coming late to class and leaving class early, playing with cell phone, sleeping in class will be counted as an unexcused absent.**

Unexcused absences from **3** classes will result in a reduction of one letter grade for the semester; unexcused absences from **4 or more** classes will result in an F

Homework: Homework will be assigned in class every week.

Quizzes: There will be some brief quizzes **every Wednesday**. Make-up quizzes are only given in the event of a university-excused absence.

Tests and Final Exam: There will be 3 in-class tests during the semester (on **June 12, June 19, June 26**) and a comprehensive Final Exam on **July 7**. If you know in advance that you will have an excused absence on a test date, please inform me on time and make arrangements to take the test early. Make-up exams will only be given in the event of a university-excused absence.

Grading Policy

Attendance	25 points
Quizzes	50 points
Homework	75 points
Three major exams	300 points
Final (comprehensive) exam	150 points

The grading scale is rigid.

90.00 – 100	A
80.00 – 89.99	B
70.00 – 79.99	C
60.00 – 69.99	D
Below 60.00	F