Marshall University
Syllabus

Course Title	*Complex Variables I*
Course Number	*MTH 640- Section 201-CRN 4107*
Semester/Year	Spring 2016
Days/Time	MWF 3-3:50pm
Location	WAEC 3119
Instructor	Dr. Michael Otunuga
Office	WAEC 3229 (Engineering building)
Office Hours	MTWR 1-2, 4-5:00pm others by appointment. To make an appointment, email in advance when possible.
Phone	(304) 696-3049
E-Mail	otunuga@marshall.edu
Textbook	**Complex Analysis: A modern First Course in Function Theory by Jerry Muir. ISBN 9781118705223**
Sections Covered	**1.2-1.7; 2.1-2.5; 2.7-2.9; 3.1-3.6; 4.1-4.3; 5.1-5.4**
Course	Complex Functions; Analytic Functions; Cauchy's Integral; The Residue Theorem
Course Description	A study of algebra, topology, and geometry of the complex plane; holomorphic functions; conformal mapping; analytic functions and analytic continuation; complex integration; representation theorems; convergence theorems and related topics
University Policies	By enrolling in this course, you agree to the University Policies listed below. Please read the full text of each policy be going to http://www.marshall.edu/academic-affairs/?page_id=802 for policies. See the University Academic Calendar (http://www.marshall.edu/calendar/academic/) for course withdrawal dates.
Coming late	Students should come on time and stay in the class for entire class. If you are late by more than 5 minutes, you will be considered to be absent. You will get a grade reduction if you make a total of 10 unexcused absence

Course Requirements / Due Dates

Homework: Five (5) Homework assignments will be given and collected.

Presentation: Students are required to present some theorems and problems in class.

Tests: There will be 2 exams given in class during the semester.

Final Exam: There will be a two-hour final exam on May 2, 3:00-5:00pm

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

Student Learning Outcome	**How students will practice each outcome in MTH 640**	**How student achievement of each outcome will be assessed in MTH 640**
Students will describe the concept of the algebra, topology, and geometry of the complex plane	Students will complete homework, and give a class presentation.	Students' understanding will be evaluated through presentations and Exams
Students will be able to define and identify analytic functions, compute derivatives, integrals of analytic functions and describe analytic continuation of functions	Students will complete homework, and give a class presentation.	Students' understanding will be evaluated through presentations and Exams
Students will be able to identify the differences between conditions for differentiability and continuity of real and complex functions	Students will complete homework, and give a class presentation.	Students' understanding will be evaluated through presentations and Exams
Students will be able to compute Taylor's and Laurent series of appropriate functions	Students will complete homework, and give a class presentation.	Students' understanding will be evaluated through presentations and Exams
Students will be able to compute singularities, zeros, the integral of appropriate functions using the poles, zeros, residues.	Students will complete homework, and give a class presentation.	Students' understanding will be evaluated through presentations and Exams
Students will be able to write and present orally the theory of complex variables.	Students will complete homework, and give a class presentation.	Students' understanding will be evaluated through presentations and Exams

Grading Policy

Homework (5)	200pts
Presentation	50pts
Two major exams	200pts
Final (comprehensive) exam	150pts

The grading scale **A:** 90 – 100%, **B:** 80 – 89, **C:** 70– 79, **D:** 60 – 69, **F:** 0-59

Tentative Course Schedule:

Week 1: 1.2-1.3
Week 2: 1.4-1.5
Week 3: 1.6-1.7
Week 4: 2.1-2.2
Week 5: 2.3-2.4
Week 6: 2.7-2.8, Test 1
Week 7: 2.9, 3.1
Week 8: 3.2-3.3
Week 9: 3.4, 4.1
Week 10: 4.2-4.3, Test 2
Week 11: Spring Break
Week 12: 5.1
Week 13: 5.2
Week 14: 5.3
Week 15: 5.4