

## Math 324—Complex Variables

### Fall 2016

Meeting Time/Place: 10:00 – 10:50 am TRF in Science D228

Instructor: Matthew Welz

Text: *Complex Variables and Applications (9e)* by James Ward Brown and Ruel V. Churchill

Office Hours: MF 11 – 11:50 am and TR 2 – 2:50 pm (and others by appointment!)

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Web page: <http://www4.uwsp.edu/math/mwelz/>  
Check here for assignments, solutions, calendar, and announcements in general.

Course Description: This course is an introduction to the theory of functions of a complex variable. The theory itself is beautiful in its own right, and the applications are myriad; researchers in number theory, algebraic geometry, applied mathematics, and physics all rely on the techniques and theorems we will discuss. In particular, we will cover the basic properties of the complex numbers, power series, elementary functions, conformal mappings, integral theorems, Laurent expansions, the theory of residues, and various applications (some of which **you** will discover and share with the class).

Grading: Your grade in this course will be based on:

Definitions	– 5%
Assignments	– 35%
Two Tests	– 44% (22% each)
Final Project	– 16%.

The “definitions” portion of your grade will come from **very** brief definition/theorem quizzes at the beginning of one class per week. The “assignments” portion of your grade is made up of weekly homework sets. The final project will be a group paper and presentation on an interesting topic or application of complex analysis that we do not cover in class. The project will be completed at the end of the semester – we’ll talk more about my expectations and your options as the semester unfolds. The majority of your energy will be spent on the homework sets; this is where you will really hone your proof-writing. In addition to studying complex analysis, we really want to focus on communicating mathematics effectively. You are encouraged to work in small groups (giving credit to those in the group) and use your notes and textbook, but you are not to receive solutions from outside sources; much of your *learning* will occur while working these sets.

**The two tests will (tentatively) be on Friday, October 14<sup>th</sup> and Friday, December 2<sup>nd</sup>.**

**The Final Exam is scheduled for Friday, December 16<sup>th</sup>, 8 am -10:00 am.**

D2L: This will not be a big part of the course but all your grades will be entered there.

Grading Scale:

A	93-100	B+	87-89	C+	77-79	D+	67-69
A-	90-92	B	83-86	C	73-76	D	60-66
		B-	80-82	C-	70-72		

In most cases, I will use the scale above but I may, on occasion, assign a grade that is **higher** than specified by the scale if circumstances warrant it.

Academic Integrity/Conduct: You are expected to be familiar with the *UWSP Community Bill of Rights and Responsibilities*:

<http://www.uwsp.edu/dos/Documents/CommunityRights.pdf> as well as the *Student Academic Standards and Disciplinary Procedures*:

<http://www.uwsp.edu/stuaffairs/Documents/RightsRespons/SRR-2010/rightsChap14.pdf>. In particular, **don't cheat!!**

Also, students are expected to respect each other, instructor, and the above codes of conduct. This includes **turning off cell-phones and all other noise making devices** for the 50 minutes you are in class.

Attendance:

Regular attendance is expected; make-up tests will be given only for an emergency. In which case, you have until class begins on the day of the test to contact me. Otherwise, you will receive a grade of 0%.

Other Help:

Outside of my office hours, tutoring may be available through the Tutoring-Learning Center in LRC 018. Please, don't hesitate to talk with me about setting up a plan.

The Americans with Disabilities Act (ADA) is a federal law requiring educational institutions to provide reasonable accommodations for students with disabilities. For more info on UWSP's policies:

<http://www.uwsp.edu/disability/Pages/toQualifyForDisabilityServices.aspx>

If you have a disability and require classroom and/or exam accommodations, please register with the Disability and Assistive Technology Center (on the 6<sup>th</sup> floor of the Learning Resource Center) and then contact me at the beginning of the course. Without documentation I cannot give you accommodations. For more information, refer to their webpage here:

<http://www.uwsp.edu/special/disability/>