Math 3094 Syllabus
Arithmetic Functions and the Riemann Hypothesis

Course: Math 3094 Undergradutae Seminar
Lecture: Section 001, MW 3:35 - 4:50 in room CHEM T309
Instructor: Brandon Alberts
Office Hours: TuTh 11:00am-12:00pm, W 9:30-10:45am, or by appointment in room MONT 125
Contact: HuskyCT messages or email: brandon.alberts"at"uconn.edu. Please allow up to 24 hours for me to respond, especially for scheduling a meeting.

Course Description: This course will serve as a build-up to understanding the statement and the significance of the Riemann Hypothesis. We will explore arithmetic functions and their relationship to Dirichlet series like the Riemann Zeta function, and throughout the course we will touch on several important results in number theory including Möbius inversion and the Prime Number Theorem.
Prerequisites: Math 2710, 2710W, 2142Q, or any proof based course.
Required Materials (available at the UConn Bookstore):

1. *Introduction to Analytic Number Theory* by Tom M. Apostol

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Homework: I plan to assign a homework assignment every 2-3 weeks throughout the semester. The homework will require writing proofs, and while it will be based on the lecture it will also explore related concepts that we will not have time to touch on during the lecture. Your homework should be legible and organized. You are welcome to work in groups of 2-3 students and hand in a single assignment.

Take-Home Exam: During the final month of class, I will give you a take home exam for the course. It will be like a longer, cumulative homework assignment. Each student should complete their own take home exam, and solutions should be written in your own words.

Grades:

Homework	70%
Take-Home Exam	30%

Student Responsibilities and Resources: As a member of the University of Connecticut student community, you are held to certain standards and academic policies. In addition, there are numerous resources available to help you succeed in your academic work. Review these important standards, policies and resources, which include:

- The Student Code
- Academic Integrity
- Resources on Avoiding Cheating and Plagiarism
- Copyrighted Materials
- Netiquette and Communication
- Adding or Dropping a Course
- Academic Calendar
- Policy Against Discrimination, Harassment and Inappropriate Romantic Relationships
- Sexual Assault Reporting Policy

Students with Disabilities: The University of Connecticut is committed to protecting the rights of individuals with disabilities and assuring that the learning environment is accessible. If you anticipate or experience physical or academic barriers based on disability or pregnancy, please let me know immediately so that we can discuss options. Students who require accommodations should contact the Center for Students with Disabilities, Wilbur Cross Building Room 204, (860) 486-2020 or http://csd.uconn.edu/. Blackboard measures and evaluates accessibility using two sets of standards: the WCAG 2.0 standards issued by the World Wide Web Consortium (W3C) and Section 508 of the Rehabilitation Act issued in the United States federal government. (Retrieved March 24, 2013 from Blackboards website)