

**SYLLABUS FOR MATH 3211 INTRODUCTION TO NUMBER THEORY  
FALL 2018**

Instructor: Associate Professor Dr. David J. Gryniewicz  
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Office: Dunn Hall 376  
Office Hours: TRF by appointment  
Website: [www.diambri.org/NumberTheory](http://www.diambri.org/NumberTheory)

Class Meeting Times: TR 14:40 – 16:05  
Room: Dunn Hall 109  
Final: Tuesday December 11, 13:00 – 15:00

**Textbook:** *An Introduction to the Theory of Numbers* by Niven, Zuckerman, and Montgomery.

**Course Summary:** This is an introductory course in Elementary Number Theory. The study of the natural numbers  $1, 2, 3, \dots$  is one of the most ancient branches of mathematics, encompassing problems both simple and exceptionally difficult. While the integers are now familiar to students from an early age, we will go beyond simply using them for counting and calculation purposes, investigating the most elementary underlying structures present.

It is a proof based course. Prior exposure to similar level courses is helpful, but not required. One of the goals of the course is to introduce basic proof writing skills in the setting of Elementary Number Theory. We will cover Chapters 1 and 2 as well as selected topics from Chapters 3, 4 and 5.

**Grades:** Attendance will contribute to each student's grade (10%). Excused absences do not count against the percentage of classes attended, but an excused absence must be granted in advance apart from extreme circumstances. There will be periodic (proof based) homework assignments (10%), two mid-term exams (20% each) and one Final Exam (40%).

Students may collaborate and help each other on the homework, but each student must write up the solution independently and unaided in *their own words*. Simply copying another person's work can have serious academic consequences.

Exams adhere to current standards for all math courses at Memphis: No watches, cell phones or other communication devices are allowed. Students are advised to use the restroom before taking the exam as students leaving the classroom will not be allowed to return (apart from those with validated medical reasons).