Email Policy

Email is the official means of communication at Westminster College. Please feel free to contact me via email, but be sure that you email the correct Dr. Richardson! All messages received after 4:00PM may not be answered until the following day.

Prerequisite

This course has prerequisite of MTH 361.

Text

We will cover material from a variety of abstract algebra texts and *p-adic Numbers* by Fernando Gouvea.

Course Description:

This course is an introduction to p-adic Numbers and related structures with the aim of completing an undergraduate research project in the p-adic setting.

Student Learning Outcomes:

By the end of the semester, students must demonstrate the ability to

- Interpret and employ the appropriate vocabulary and notation used in algebra and number theory.
- Accurately describe the fundamental theorems in algebra and number theory covered in this course.
- Correctly apply theorems and definitions to prove new theorems and solve new problems.
Construct proofs, including direct proofs, proofs by contradiction, proofs by contrapositive, and if-and-only-if proofs.

**Homework:**

At each meeting, the student and professor will mutually agree on a course of study for the week, depending on progress up to that point. This may include readings, creating programs, creating examples, and writing proofs.

**Project:**

The culmination of this course will be to work on an undergraduate research project in the subject matter. A paper summarizing results will be due at the end of the semester and will be graded, taking into account the unpredictable nature of mathematical research.

**Course Grades:**

Your course grade will be determined by the following distribution:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework</td>
<td>40%</td>
</tr>
<tr>
<td>Project</td>
<td>60%</td>
</tr>
</tbody>
</table>

The grading scale will be:

- **B+:** 88-89
- **C+:** 78-79
- **D+:** 68-69
- **A:** 92-100
- **B:** 82-87
- **C:** 72-77
- **D:** 62-67
- **F:** 0-59
- **A-:** 90-91
- **B-:** 80-81
- **C-:** 70-71
- **D-:** 60-61

**Academic Integrity:**

*Central to the purpose and pursuit of any academic community is academic integrity. All members of the Westminster community, including students, faculty, staff, and administrators, are expected to maintain the highest standards of honesty and integrity, in keeping with the philosophy and mission of the College.*

Westminster College 2017-18 Undergraduate Catalog, p. 65

Some forms of academic dishonesty include (but are not limited to): copying a classmate’s work (homework, extra credit, or exams), divulging answers or information to another student during or about an exam, and using unauthorized aids (e.g., professors, textbooks, internet sites) on an assignment or exam. Please note that **presenting a solution found online as your own work is plagiarism.** Academic dishonesty will not be tolerated in this class. The penalty for academic dishonesty is a grade of 0 on the assignment. Any event of academic dishonesty is reported to the Dean of the College. Other details of violations and consequences are given in the Catalog.
Students with Disabilities:

Westminster College actively strives for the full inclusion of all our students. Students with disabilities who require access solutions for environmental or curricular barriers should contact Faith Craig, Director of Disability Resources, located in 209 Thompson-Clark Hall. You may reach her at 724-946-7192 or craigfa@westminster.edu. No accommodations can be given without documentation from the Disability Resources Office.