

# MATH 373 – MATH 578

## WVU, spring 2019

**Instructor:** Andrea Munaro; munaro@math.wvu.edu

**Office hours:** TTh 10am-11am or by appointment.

**Office:** 408K Armstrong Hall.

## Learning Outcomes and Course Goals

Students will understand the theory of selected cryptosystems (such as elementary ciphers and public-key cryptography) and the underlying mathematics (such as elementary number theory and combinatorics). In addition, students will be familiar with some of the historical development of cryptography.

## Textbook

An Introduction to Mathematical Cryptography, by J. Hoffstein, J. Pipher and J. Silverman.

## Approved Calculators

A simple arithmetic/scientific calculator is permitted during tests. Calculators with graphing capabilities, built-in programming languages, networking, or computer algebra systems are not permitted during tests.

## Homework

There will be 7 homework assignments. Late homework is not accepted. You are strongly encouraged to work on the homework with other students in the class, but your written work must be your own. Homework will be weighted equally.

## Tests

There will be 3 closed-book tests, administered in class. No make-up tests are offered. You may use an approved calculator. Each test covers roughly 1/3 of the course material.

## Final Exam

The final exam is cumulative and closed-book. You may use an approved calculator

## Graduate Credit

Most homework assignments will contain challenge problem(s). These problems are required for Math 578 students and are extra credit for Math 373 students.

## Grade

The final average is computed as follows:

$$25 \text{ \%}(\text{homework}) + 15 \cdot 3 \text{ \%}(\text{tests}) + 30 \text{ \%}(\text{final exam}).$$

Course averages are converted to letter grades according to the following scale. The instructor reserves the right to lower these thresholds.

$$0 - 59.9 \text{ \%} : F, \quad 60 - 69.9 \text{ \%} : D, \quad 70 - 79.9 \text{ \%} : C, \quad 80 - 89.9 \text{ \%} : B, \quad 90 - 100 \text{ \%} : A.$$

## Academic Integrity

You are expected to practice the highest possible standards of academic integrity. Any deviation from this expectation will, at a minimum, result in an academic penalty of a score of zero on the assignment or test in question. Additional disciplinary measures are possible. For more information, see the university's Student Conduct Code.

## University Statement on Social Justice

West Virginia University is committed to social justice. I concur with that commitment and expect to maintain a positive learning environment based upon open communication, mutual respect, and non-discrimination. Our University does not discriminate on the basis of race, sex, age, disability, veterans status, religion, sexual orientation, color or national origin. If you are a person with a disability and anticipate needing any type of accommodation in order to participate in this class, please advise me and make appropriate arrangements with the Office of Disability Services.