



# MTH 482

## Topics in Number Theory

### Spring 2019

### Course information

**Room:** BH 306A

**Time:** Tuesday, Thursday 16:00 - 17:50

**Credits:** 3.0

**Prerequisites:** A grade of C or better in MTH 301

**Description:** This course presents advanced topics in number theory. Topics include congruences, some Diophantine equations, rational points on curves, as well as Lagrange's theorem on sum of four squares.

**Online resources:** Visit Blackboard for up-to-date information about this course.

### Instructor

**Name:** Federico Galetto

**E-mail:** [f.galetto@csuohio.edu](mailto:f.galetto@csuohio.edu)

**Phone:** 216-687-4696

**Office:** Rhodes Tower 1528

**Office hours:** Tuesday 14:00 - 15:30, Thursday 10:00 - 11:30, or by appointment

### Materials

Notes and other materials will be distributed on Blackboard. The following is a classic reference for number theory (it is not required).

**Suggested reading:**

- I. Niven, H.S. Zuckerman, H.L. Montgomery, *An Introduction to the Theory of Numbers*, 5th edition, John Wiley & Sons, 0471625469

## Grading

**Grade calculation:** All grades will be posted on Blackboard. Your percentage grade will be computed according to the following breakdown and converted to a letter grade as indicated below.

30%	Homework	A	93%-100%	C+	76%-79%
30%	Tests (x1)	A-	90%-92%	C	70%-75%
35%	Final exam	B+	87%-89%	D	60%-69%
5%	Participation	B	83%-86%	F	0%-59%
<hr/>	<hr/>	B-	80%-82%		
100%	Total				

### Homework:

- Homework will be assigned (roughly) every other week. Due dates will be announced in class and on Blackboard.
- All assignments must be submitted on Blackboard by the due date. Assignments submitted within 24 hours after a deadline are subject to a 20% penalty. Assignments submitted between 24 and 48 hours after a deadline are subject to a 50% penalty. Assignments submitted 48 hours after a deadline or later will receive a grade of zero.
- You are expected to solve all problems on each assignment, however only a subset of problems might be graded.
- You are expected to work independently on all assignments. Clearly indicate your name and student number on all assignments.
- Your writing must be legible and clearly organized. You are expected to use proper grammar and correct spelling. Failure to comply may result in a lower grade.

**Tests:** There will be 1 test held in class on the following (tentative) date:

- Thursday, February 21, 2019

Topics will be announced in class. You are required to bring student identification. Should you miss a test because of an excused absence, the percentage of that test will be added to the final exam.

**Final exam:** A cumulative final exam will be (tentatively) held in class on Tuesday, April 2, 2019, 16:00 - 17:50. You are required to bring student identification.

**Participation:** Active participation is encouraged and will contribute positively to your grade. Such participation includes answering questions in class, asking good questions in class, etc. Repeated unexcused absences will lower your participation grade.

**Grade appeal:** You are responsible for checking corrections on assignments and tests, and for ensuring grades are reported correctly on Blackboard. Any appeal request must be submitted within one week after the assignment/test is returned.

## Policies

**Attendance:** You are expected to attend all classes. If you are unable to attend a class, it is your responsibility to notify your instructor in advance and to inquire about any topics covered and announcements made during that class.

**Electronic devices:** The use of electronic devices such as (but not limited to) phones, smartwatches, computers, tablets, and headphones is prohibited during class, unless otherwise indicated. If you wish to use an electronic device for note taking, you need to receive explicit consent from your instructor and you may occasionally be asked to submit a sample of your notes.

**Excused absence from tests:** You may only be excused from a test in case of university sanctioned activities (such as conferences, competitions, etc.) or in case of medical conditions. With the exception of unforeseen medical emergencies, you must notify your instructor of your absence and present sufficient documentation in advance. Sufficient documentation includes an invitation to attend an event or a doctor's note indicating you cannot take the test on the scheduled date.

**Extra credit and makeups:** There is no extra credit in this class. There are no makeup tests/assignments in this class.

**Academic integrity:** Cheating and/or plagiarism will not be tolerated. Cheating includes copying or receiving help from another student on quizzes, tests or exams, as well as allowing another student to copy from your work. Receiving help from someone else by using an electronic device such as a mobile phone or a smartwatch constitutes cheating. Copying another student's homework, or allowing someone else to do your homework for you, is also considered cheating. If cheating occurs in a quiz or test, the student will receive a grade of 0 for that component of the course. If a student cheats a second time during the course, the student will receive an F for the course. If cheating occurs on the final exam, the student will receive a grade of F in the course. Any cheating activity may be reported for further action. Information regarding the official CSU Policy on Academic Misconduct can be found at [https://www.csuohio.edu/sites/default/files/3344-21-02\\_0.pdf](https://www.csuohio.edu/sites/default/files/3344-21-02_0.pdf).

**Accommodations:** Educational access is the provision of classroom accommodations, auxiliary aids and services to ensure equal educational opportunities for all students regardless of their disability. Students who feel they may need an accommodation based on the impact of a disability should contact the Office of Disability Services at 216-687-2015. The Office is located in BH 147. Accommodations need to be requested in advance and will not be granted retroactively.

**Course modifications:** The instructor retains the right to modify the contents of the course, including grading criteria and course policies. Reasonable notice will be given for all time sensitive matters. Course changes will be communicated in class and on Blackboard.