MATH 346 SYLLABUS: SPRING 2018 NUMBER THEORY

Professor: Dr. Cheryl Beaver Office: MNB 123 Webpage: <u>http://www.wou.edu/~beaverc</u> Phone: 503-838-8404 Email: <u>beaverc@wou.edu</u>

Class meets: MTWF 3:00 – 3:50 PM in MNB 130 **Final Exam: Thursday June 14th, 2:00-3:50 PM**

Time	Mon	Tue	Wed	Th	Fri
9-1		Available	by	Appointment	
1:00	Office hour				
2:00	Meeting	Office hour	Meeting	Available	Office hour
3:00	MTH 346	MTH 346	MTH 346	Ву	MTH 346
4:00	Meeting*	Meeting	Office hour	Appointment	
5:00-	MTH 495		MTH 495		
6:50					

Please feel free to drop by my office during my office hours for help. You do not need to make an appointment to come to office hours. At times other than my listed office hours you are welcome and encouraged to call or email me with questions about the course. If you have direct scheduling conflicts with my office hours and would like further help, please let me know.

COURSE PREREQUISITE

• Math 280 with a grade of C- or better.

REQUIRED TEXT

• Number Theory: A Lively Introduction with Proofs, Applications, and Stories by Pommersheim, Marks, and Flapan

LEARNING OBJECTIVES AND GOALS

- Demonstrate the effective use of proof-based skills to solve a variety of number-theoretic problems.
- Demonstrate effective written communication of mathematical concepts.
- Demonstrate deep understanding of properties of integers including the division and Euclidean algorithms, Diophantine equations, prime numbers and congruences.

About this course:

Number theory is concerned with the study of numbers, their properties and relationships. Of special importance is the set of positive numbers. We will explore properties of the integers including divisibility, primality, and congruences. We will explore key ideas including the Euclidean Algorithm, Diophantine equations and the Chinese remainder theorem. We will work on increasing our level of sophistication in understanding, reading, writing and proving mathematics. Number Theory is an elegant subject and may appear deceptively simple - many problems exist which are extremely simple to state, but extraordinarily complicated to solve. I hope that you will enjoy exploring this topic.

COURSE WEB PAGE

There will be a link for the Math 346 webpage on my home page where course reference items, homework and due dates will be posted.

COURSE REQUIREMENTS AND GRADING

- Homework (30%)
- Quizzes and other in-class work or special assignment (10%)
- Midterm Exams $(2 \times 20 = 40\%)$
- Final Exam (20%)

Homework Assignments

Homework is very important to this course and much of your understanding of the concepts will come from working out the problems. Homework will be assigned almost daily. I expect the solutions to be well-written both mathematically and grammatically. It can be helpful to work with others, but you should be sure that you understand the material and write up the solutions independently. Be sure to come to office hours anytime you feel you don't completely understand a concept. Don't wait until you feel behind.

Homework is due at the beginning of class and <u>late homework will not be accepted</u>, however your lowest homework score will be dropped.

Quizzes and other in-class work or special assignments

Quizzes will be given on occasion and often without warning. You can expect the frequency to be about once a week. There will also be assignments given during class or special assignment that you may be given to work on and present to the class. This type of assignment and the quizzes may not be made up so be sure to come to class!

Midterm and Final Exam

There will be two in-class midterms and an in-class cumulative final exam in this course. The final is on Thursday, June 14th 2:00-3:50 pm. Make up exams are generally not given Error! Bookmark not defined.

INCOMPLETE POLICY

An Incomplete can only be granted for a student who is passing a class and has a documented emergency that prevents them from completing the course.

LEARNING DISABILITIES

If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both your instructor and the Office of Disability Services, APSC 405, or at 503-838-8250, as early as possible in the term. Students needing medical or mental health care can access the Student Health and Counseling Center by calling 503-838-8313, emailing at health@wou.edu, or by walking in to schedule an appointment.

STUDENT SUCCESS SPECIALIST

If the instructor determines your performance in this class is placing you at academic risk, you may be referred to a member of the Student Success Team. A student success specialist will offer to work with you to address issues and develop a student success strategy. Regardless of whether a referral has or has not been made, you are ultimately responsible for tracking your own progress in this course. If you would like to meet with a student success specialist regarding any academic struggles you are experiencing, please contact Student Success and Advising at 503-838-8428 or at studentsuccess@wou.edu.

VETERANS AND ACTIVE MILITARY PERSONNEL with special circumstances are welcome and encouraged to communicate these, in advance if possible, to the instructor. For WOU Veteran resources; please see wou.edu/veterans/.

YOUR STUDENT WOU EMAIL ACCOUNT

All official university and class business and announcements will be directed to your WOU student email account. If you do not regularly check this account, please log in to this account and FORWARD your WOU email to an account that you do regularly access.

APPROPRIATE CLASSROOM BEHAVIOR

You are ultimately responsible for your own attendance and performance. Disruptive classroom behavior of any kind, such as talking during lecture or consistently coming to class late etc., is not appropriate. <u>Cell phones should be silenced and put away</u>. It is not appropriate to text during class. Proscribed Conduct for all students is described in the University Catalog.

In particular for this course any student found cheating on an exam or copying from another student's exam paper will receive a <u>zero score</u> on that exam and a report of this activity will be sent to the Student Affairs office.