

**MATH 4713 INFORMATION**  
**Section 1, MWF 12:30 PM, ES 111**

**Instructor:** David Wright, MS 527, 744-5688

Email: [wrightd@math.okstate.edu](mailto:wrightd@math.okstate.edu),

URL: [klein.math.okstate.edu/~wrightd/4713](http://klein.math.okstate.edu/~wrightd/4713)

Online Classroom (D2L): [oc.okstate.edu](http://oc.okstate.edu)

**Office hours:** MWF 1:30–3:00 PM at MS 527 and by appointment. I will always be in my office for help during these scheduled office hours. You can always call on the phone or knock on the door at any other time. I would be very happy if you drop by for help or any other reason.

**Text:** *Elementary Number Theory and its Applications, 6th edition*, by Ken Rosen, Monmouth University.

**Prerequisites:** At least MATH 3013: Linear Algebra, and preferably also MATH 3613: Introduction to Modern Algebra.

**Course objectives:** Number theory, the science of whole numbers, is the most ancient and fundamental subject within mathematics. It simultaneously provides a source of fascination for very young children and a wealth of challenges for the best pure mathematicians of each generation, and in the digital age has proved to be a cornerstone of the mathematics of information processing and security. We shall try to do justice to all these aspects of the subject.

**Syllabus:** See the next page for a tentative plan.

**EXAMINATIONS:** Two one-hour exams will be given, on Friday, *Oct. 1* and Wednesday, *Nov. 10*. A final exam is also scheduled on *Friday, Dec. 17, at 10:00–11:50 AM*. There will be no scheduled makeup exams; you should give me at least a week's prior notice of any absolutely compelling reason why you might need to reschedule an exam.

**Homework:** All students will be expected to complete and turn in written solutions to all the regularly assigned homework. There will be about 7 assignments.

**Group Projects:** Smaller projects that will usually involve some computation will be assigned. These will be carried out in assigned groups of three or four students. I will provide instructions and computational resources later.

**Grading:** Examinations and homework are weighted according to the following system. The one-hour exams and final will be worth 100 and 200 points, respectively. The homework and projects will be worth a maximum of 200 points, for a grand total of 600 points for all coursework. Students who achieve at least 90%, 80%, 70%, 60%, respectively, of the total score will receive at least an A, B, C, D, respectively. Depending on the median scores and the instructor's judgment, these cutoffs may be lowered.

**STANDARD OPERATING PROCEDURE:** All students must complete a minimum of six hours of work each week outside attending lectures. This work is to consist of reading in detail all sections of the book covered in class and performing all assigned homework problems and enough additional problems to make sure that you understand the material. It is very important that you contribute this six hours of work every week. If you cannot solve a problem completely, give as much of a partial solution as you can. Try to write down the exact point in the solution that you cannot understand. Try to record all theorems and examples from the class or the text that are possibly relevant to the problem. It is far better to learn this process of self-analysis than to depend on the collaboration of others. On all examinations and assignments, all steps necessary to prove that your solution is true must be given.

It is a point of academic integrity that written work submitted under your own name should be prepared entirely by yourself. Informal discussion between students is permitted. You are also encouraged to seek help on the homework from myself during office hours. However, academic misconduct includes organized collaboration between students on homework assignments that involve jointly writing solutions on the blackboard and then copying down the alleged solutions on each individual's paper. Also, examination of another student's written work before an assignment has been collected and graded is strictly forbidden.

**Attendance Policy:** Attendance of lectures is mandatory in the sense that you are responsible for all announcements of changes in schedule made during class, as well as all material covered during lectures. Roll will periodically be taken, but not every class. If you're missing a lot of classes, you can expect to be contacted.