MATH 120 – MODERN ALGEBRA

Lectures: MWF 10:00-10:50, in Bldg. 380 - Rm. 380D

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Course description: Math 120 will be a fast-moving, high-workload class. Many students interested in this material will find Math 109 more appropriate. (Note that this is also a Writing in the Major class, which will require a 4–7 page writing assignment by the end of the term. This is a requirement for everyone in the class, whether or not you are a math major.)

This class will cover groups, fields, rings, and ideals. More explicitly I expect we will have time to talk about most or all of the following: groups acting on sets, examples of finite groups, Sylow theorems, solvable and simple groups; fields, rings, and ideals; polynomial rings over a field; PID and non-PID, unique factorization domains.

Homework: There will be weekly homework assignments posted on the course webpage. You are encouraged to work together to solve problems. But you must write up your solutions individually, and give credit for ideas that others had. You should give complete proofs. Because the grader will need to process a huge volume of homework in a small amount of time: Please staple your homework, and write your name on each page. Please note: late homework will not be accepted for any reason!

Grades: 15% of your grade will be from the Writing in the Major assignment. 20% of your grade in this course will be based on the weekly homework. 25% of your course grade will be based on the in-class midterm. The remaining 40% will be based on the final.