MATH 401 - Modern Algebra I

Fall 2016
Instructor: Ben Brewster
Office: WH 114
e-mail: ben@math.binghamton.edu
phone: 777-4201

SYLLABUS for Course

Text: Introduction to Abstract Algebra, 4th Edition by W. Keith Nicholson

The title of the text describes the nature of the material to be studied during this course. Modern Algebra differs from the algebra encountered in high school and Calculus. Linear Algebra provides some hint of the more modern approach. The idea establish concepts central to what makes algebra useful and doable and then define and interpret in such ways that generalize and expand the calculation one is used to in algebra. It becomes more abstract of course, but in ones eye, there should remain notions of symmetry, solving polynomial equations and using permutations. These will be central to our study.

The course will cover Chapters 0, 1, and 2 of the text. If time is sufficient, we will consider portions of Chapter 3 or Chapter 8. Modern Algebra is basic material for anyone going on to graduate school to study math and this course is designed to serve those with such intent.

There will be one or two quizzes, a mid-semester exam, and a final exam during the Finals period. Also from homework assigned for students to solve between classes, some will be selected to be handed in and graded. These will provide, together with attendance and class participation, the data upon which final marks in the course will be determined. I will try to keep each person fairly aware of the general direction in which he/she is headed.

Note that MATH 330 is a prerequisite for this course. Skill and experience with reading,writing, and talking through proofs is essential and will be a focus of the class. Attendance and participation is required to get full competence the material. I find this material very intriguing and, if you allow yourself, you can learn some very useful information enjoyably and fulfillingly.

Also note that the class meets 4 days in each complete week.

Tentative Weekly Schedule

Aug.26	Sec 0.1
Aug. 28- Sept. 2	0.2 , 0.3, 0.4 and Posets
Sept.6-9	More Posets, Lattices and Sec. 1.1
Sept. 12-16	More 1.1, 1.2 and 1.3
Sept. 19-23	1.3, 1.4
Sept. 26-30	Sec. 2.1, 2.2, Quiz I
Oct. 5-7	More 2.2, 2.3
Oct.10-11 & 14	2.3, 2.4, Quiz II

Oct.17-21	Sec.2.5, 2.6
Oct. 24-26	Sec.2.6, 2.7
MIDTERM EXAM in class Friday Oct.28	
Oct.31-Nov. 4	Sec.2.8, 2.9
Nov. 7-11	Sec. 2.10, 8.1
Nov.14-18	Sec.8.2, 8.3
Nov. 21-22	Review and Test
NOVEMBER 23-27 Thanksgiving Break	
Nov.28-Dec. 2	Sec. 3.1 ,3.2
Dec.5-8	Sec 3.3, Quiz III
FINAL EXAM as Scheduled by University	

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