

Math 305 Fall 2006

Monday	Wednesday	Friday	Monday	Wednesday	Friday
August 21 Text: <i>Fraleigh</i> "A First Course in Abstract Algebra" Seventh Edition	August 23	August 25 <i>Introduction and Examples</i> <i>Section 1</i>	August 28 <i>Binary Operations</i> <i>Section 2</i>	August 30 <i>Isomorphic Binary Structures</i> <i>Section 3</i>	September 1 <i>Groups</i> <i>Section 4</i>
September 4 <i>Subgroups</i> <i>Sections 5</i>	September 6 <i>Cyclic Groups</i> <i>Section 6</i>	September 8 <i>Generators and Cayley Digraphs</i> <i>Section 7</i>	September 11 <i>Review for Exam 1</i> <i>Sections 1-7</i>	September 13 <i>Exam 1 Groups and Subgroups</i> <i>Sections 1-7</i>	September 15 <i>Groups of Permutations</i> <i>Section 8</i>
September 18 <i>Orbits, Cycles, Alternating Groups</i> <i>Section 9</i>	September 20 <i>Cosets, Theorem of Lagrange</i> <i>Section 10</i>	September 22 <i>Direct Products Finitely Generated Abelian Groups</i> <i>Section 11</i>	September 25 <i>Plane Isometries</i> <i>Section 12</i>	September 27 <i>Homomorphisms</i> <i>Section 13</i>	September 29 <i>Factor Groups</i> <i>Section 14</i>
October 2 <i>Factor-Group Computations, Simple Groups</i> <i>Section 15</i>	October 4 <i>Group Action on a Set</i> <i>Sections 16</i>	October 6 <i>Applications of G-Sets to Counting</i> <i>Section 17</i>	October 9 <i>Review for Exam 2 Mid-Semester</i> <i>Sections 8-17</i>	October 11 <i>Exam 2 Homomorphisms and Factor Groups</i> <i>Sections 8-17</i>	October 13 <i>Rings and Fields</i> <i>Section 18</i>
October 16 <i>Fall Break</i>	October 18 <i>Integral Domains</i> <i>Section 19</i>	October 20 <i>Fermat's and Euler's Theorems</i> <i>Section 20</i>	October 23 <i>Field of Quotients of an Integral Domain</i> <i>Section 21</i>	October 25 <i>Rings of Polynomials</i> <i>Section 22</i>	October 27 <i>Factorization of Polynomials over a Field</i> <i>Section 23</i>
October 30 <i>Noncommutative Examples</i> <i>Section 24</i>	November 1 <i>Ordered Rings and Fields</i> <i>Section 25</i>	November 3 <i>Homomorphisms and Factor Rings</i> <i>Sections 26</i>	November 6 <i>Prime and Maximal Ideas</i> <i>Section 27</i>	November 8 <i>Gröbner Bases for Ideals</i> <i>Section 28</i>	November 10 <i>Review for Exam 3</i> <i>Sections 18-28</i>
November 13 <i>Exam 3 Applications</i> <i>Sections 18-28</i>	November 15 <i>Introduction to Extension Fields</i> <i>Section 29</i>	November 17 <i>Vector Spaces</i> <i>Section 30</i>	November 20 <i>Algebraic Extensions</i> <i>Section 31</i>	November 22 <i>Thanksgiving</i>	November 24 <i>Thanksgiving</i>
November 27 <i>Geometric Constructions</i> <i>Section 32</i>	November 29 <i>Finite Fields</i> <i>Section 33</i>	December 1 <i>Automorphisms of Fields</i> <i>Section 48</i>	December 4 <i>The Isomorphism Extension Theorem</i> <i>Section 49</i>	December 6 <i>Course Review</i>	Text: <i>Fraleigh</i> "A First Course in Abstract Algebra" Seventh Edition
Dec 12, Tue <i>Final Exam</i> Tue, Dec 12, 9-11 am <i>Sections 1-33</i>	<i>Math 305 Algebra I MWF 10:00-10:50 Parrish, Fall 2006</i>		Grading Scheme: <i>points</i> exams 60 points homework 20 points <u>final exam</u> 20 points total: 100 points		