MATH 41001 - SECTION 600, INTRO TO MODERN ALGEBRA I
FALL 2006, COURSE OUTLINE

INSTRUCTOR: Dr. John Alexopoulos

OFFICE: 412 Main Hall, Tel. 330 244-3412

WEB SITE: http://www.personal.kent.edu/~jalexopo/

OFFICE HOURS: MW 05:10PM-06:55PM, TR 10:45AM-11:30AM.

COURSE HOURS AND LOCATION: MW 11:00AM - 12:15PM, RCM 315.


MATERIAL TO BE COVERED: The core consists of chapters 1 through 3. The course includes preliminary topics such as Set Theory, Elementary Number Theory, Mappings and the core topic of Elementary Group Theory.

HOMEWORK ASSIGNMENTS: Homework problems will be assigned at the end of each class. It will be collected and graded weekly.

ATTENDANCE POLICY: Regular attendance is necessary and expected.

ACADEMIC HONESTY: Cheating or plagiarism will result in receiving a failing grade for the work or course. Repeat offenses result in dismissal from the University.

STUDENTS WITH DISABILITIES: In accordance with University policy, if you have a documented disability and require accommodations to obtain equal access in this course, please contact the instructor at the beginning of the semester or when given an assignment for which an accommodation is required. Stark Campus students should contact Student Services to submit documentation.

EVALUATION: There will be four in-class exams\(^1\), and an in-class comprehensive final that will take place on Monday, December 11, at 10:30AM. All scores, including that of the final exam will be converted to and recorded as percentages. The presentation of the exams should be very neat. Grading penalties maybe imposed on sloppy work. You will receive notice of each exam, at least a week in advance. A tentative breakdown of the material in each exam is given below:

**EXAM 1**: Preliminaries (Chapter 1)

**EXAM 2**: Groups, Subgroups, Lagrange’s Theorem, Normal Subgroups, and Factor Groups (Sections 2.1-2.6)

**EXAM 3**: The Fundamental Homomorphism Theorem, Isomorphism Theorems, Direct Product Groups and Cauchy’s Theorem (Sections 2.7 - 2.9 and a light treatment of 2.10)

**EXAM 4** An Introduction to Group Actions, The Conjugacy Class Equation, Sylow’s Theorems and the Symmetric Group (handout, section 2.11 and chapter 3)

**FINAL EXAM**: The final exam is comprehensive on all the material mentioned above.

\(^1\) In the interest of time, these exams maybe taken at the testing center.
GRADE ASSIGNMENT: Each of the in-class examinations will constitute 12% of the overall grade while the final examination will constitute 30% of the overall grade. The homework will account for the remaining 22%. Grades will be assigned according to the standard scale. That is,

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<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>A</td>
<td>90 to 100%</td>
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<tr>
<td>B</td>
<td>80 to 89%</td>
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<tr>
<td>C</td>
<td>70 to 79%</td>
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<tr>
<td>D</td>
<td>60 to 69%</td>
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<tr>
<td>F</td>
<td>below 60%</td>
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MAKE-UP EXAMS: There will be NO make-ups for the final examination. A make-up for an in-class exam maybe given for very serious and well-documented reasons.