Math 363.3 T2 Q4 - Course Outline, 2007 Spring and Summer Session.

LECTURES: MTWRF, 1:00 PM - 3:20 PM, Thorv 128.

INSTRUCTOR: Pawel Gladki.

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OFFICE HOURS: If you want to see your instructor in his office, please make an appointment: see him before or after class, call his office or send him an e-mail.

TEXTBOOK: Joseph A. Gallian, *Contemporary Abstract Algebra*, 6th Edition, Houghton Mifflin Company, Boston 2006. Other editions of this book are suitable, but page and section references in this information sheet and homework problems are taken from the 6th edition.

LECTURES AND LABS: The M-F 1:00 PM - 3:20 PM period will be devoted to lectures on new material. There will be a 5 minutes long break at around 2:30 PM, after which selected problems will be solved and your questions re: new material will be (hopefully) answered. Homework will be also discussed. There are no tutorials scheduled for this class, but you can think of the 2:30 PM - 3:20 PM period as of a "lab".

EVALUATION: 14 assignments, counting for a total of 10% of your mark, 2 midterm tests, each counting for 20% of your mark for a total of 40% and final examination counting for 50% of your mark.

EXAMINATIONS: Midterm exams will be held during the "lab" periods on **August 3rd** and **August 10th**. Durations of each mid-term test will be 50 minutes. All exeminations will be closed book: no calculators, notes or formula sheets will be permitted. **Please be advised that cheating on an examination is considered a serious offence and can be met with disciplinary actions, including suspension or repulsion**. All examinations will be "show all work" tests of up to 5 (midterms) or 10 (final) questions. There will be no make up exams. Students who miss either one of the midterm exams for legitimate reasons will have the value of that examination transferred to the final examination thereby increasing the value of the final examination accordingly.

HOMEWORK: Problems from each section of the text will be released at least 2 or 3 days prior to discussing the topics. There are two kinds of problems: **drill exercises** and **assignments**. Drill problems will not be handed in or graded, but it is strongly advised to solve all of them (or as many as your time permits) before you start working on assignments - in order to get familiar with new definitions, theorems and examples. Assignments are to be completed and handed in for grading - there are 14 short assignments consisting of 5-6 problems, approximately each for one lecture. They will be returned in the following lecture. It is suggested that you have a look to the textbook before each class and skim the material to be instructed (see course calendar).

MATH HELP CENTRE: There is a Math Help Centre in room 144 Murray. Its hours of operation will be posted on the web page: `http://www.usask.ca/ulc/math.php`.

COURSE CALENDAR:

- **Jul. 26:** Mathematical Induction (pp. 14-17).
- **Jul. 27:** Complex Numbers (a handout will be distributed in the class).
- **Jul. 30:** Matrices (a handout will be distributed in the class).
- **Jul. 31:** Basic Set Theory. Relations and functions (pp. 17-23).
- **Aug. 1:** Groups (pp. 42-52).
- **Aug. 2:** Subgroups (pp. 59-63).
- **Aug. 3:** Cosets and Lagrange Theorem (pp. 137-140).
- **Aug. 7:** Cyclic groups (pp. 73-78).
- **Aug. 8:** Group Homomorphisms and Normal Subgroups (pp. 177-178, and 199-201, and 120-128).
- **Aug. 9:** Factor Groups, Isomorphism Theorems (pp. 179-184, and 205-210).
- **Aug. 10:** Permutation Groups (pp. 94-109).
- **Aug. 13:** Rings, Subrings (pp. 235-238).
- **Aug. 14:** Zero Divisors, Units (pp. 248-250).
- **Aug. 15:** Ring Homomorphisms and Ideals (pp. 278-281, and 261-262).
- **Aug. 16:** Factor Rings, Isomorphism Theorem (pp. 262-265)