SYLLABUS

MATH 258-A

12:30 - 1:50 T,Th
(Van Gogh)

Instructor: Dr. Michael Aristidou **Phone:** 425-895-4400, ext.4464
Office Hours: 3:30-4:00 M,W **E-mail:** maristidou@digipen.edu

Textbook: *Discrete Mathematics and Its Applications*, by K.H. Rosen, 6th Edition, Mc Graw Hill, 2007.

Course Overview: This course gives an introduction to several mathematical topics of foundational importance in the mathematical and computer sciences. Topics include:

Propositional and First Order Logic, introductory Set Theory, basic Number Theory, Permutations and Combinations, Equivalence Relations, and basic Probability Theory. In this course, students will also be introduced to the concepts of Modular Arithmetic, Groups, and Fuzzy Sets.

Course Outline: The following chapters, time permitting, will be covered:
Ch.1, Ch.2, Ch.3, Ch.5, Ch.6, Ch.8 (and topics from Ch.9 and Ch.12 if time permits)

Goals and objectives:
(1) Teach students how to think logically and mathematically, and help them understand mathematical reasoning in order to be able to read, understand, and construct mathematical arguments.
(2) Familiarize them with certain discrete structures, such as sets, numbers, matrices, groups, graphs, etc, and encourage them to apply them in their projects of interest.
(3) Improve their problem–solving skills, develop their ability to present material and answer questions, coherently, completely and accurately, and enabling them to explain things to others clearly.
(4) Developing skills for team work by working in groups.

Grading: 60% - 3 Tests
20% - 2 take-home Homework assignments
20% - Final Exam (or Project)
(All Test dates will be announced in class on due time and **NO** test scores will be dropped)

Project: There are a few projects available for students of this course. Some of them come out of the Rosen's's book and are related to the concepts taught (some require the use of computers). The student(s) can choose the project of his/her preference, always in cooperation with the instructor. Nevertheless, not all students are eligible for these projects. Only students that score high on their tests are eligible. A project like that will waive the Final Exam, and it will have the same grade weight as the Final (20%). The project is **due** on Thursday April 17th, 2008.

Grading Scale: The grade *G* for the course is then determined as follows:

A if $90\% \le G \le 100\%$
A- if $85\% \le G < 90\%$
B+ if $83\% \le G < 85\%$
B if $77\% \le G < 83\%$
B- if $75\% \le G < 77\%$
C+ if $73\% \le G < 75\%$
C if $67\% \le G < 73\%$
C- if $65\% \le G < 67\%$
D if $50\% \le G < 65\%$
F if $0\% \le G < 50\%$.

Test Make-up Policy: Speak to me **before** the test or leave a telephone or an e-mail message. If you are not able to contact me before the test, contact me within the **next** couple of days. Documentation to verify the reason you missed the test is required. Only one make-up test will be allowed for the semester and that if there are extremely special circumstances.

Special needs: DigiPen Institute of Technology will provide reasonable accommodations and academic adjustments for persons with documented disabilities, as indicated in the catalog. Students need to contact the Student Services Director at the beginning of the semester to ensure that classroom and academic accommodations are implemented in a timely fashion. All communication between students, the Director of Student Services, and the professor, concerning special needs will be strictly confidential.

Class Policy: Attendance in class is expected, although not mandatory. Keep in mind, though, that if you are absent for 2 weeks, or more, you are considered to have withdrawn from the course. Also, repeated absence might result to complications with financial support for some students. If you decide to drop the course it is your responsibility to do the paperwork and follow the correct procedures. Only pencil is to be used on tests. Calculators like TI-89, or TI-83, are useful to have, but are not required. All tests must be your work. Cell phones, pagers, laptops, ipods, etc, are expected to be turned off during class. No food or drinks are allowed in class.

Academic dishonesty: Academic dishonesty (including cheating and plagiarism) is a serious matter, and will not be tolerated. It will be dealt with appropriately as indicated in the student handbook. Homework and solutions of problems should be your own work, and not be copied. It is fine to consult others and discuss problems with each other, but the final solution should be your own work and in your own words, with your own drawings and your own explanations.

***Notes*:** (1) There will be **tutoring** available for this class and we encourage you to take advantage of the opportunity. Tutoring schedules will be announced later in class.
(2) More useful material regarding this course, or other courses, you may here: https://digipen.edu/~maristidou/
(3) Changes, if any, to this syllabus will be announced in class.