SYLLABUS

(Fall 08)

MATH 250-B

Linear algebra

10:30 - 11:50 T,Th

(Van Gogh)

Instructor: Dr. Michael Aristidou
Office Hours: 12:00-1:00 M,W
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Textbook: *Linear Algebra*, by L. Smith, 3th Ed, Springer 1998.

Other sources: (1) *Elementary Linear Algebra*, by H. Anton and C. Rorres, 9th Ed, Wiley 2005.
(2) *Linear Algebra (Shaum,'s Series)*, by H. Anton and S. Lipschutz and M. Lipson, 3th Ed, McGraw Hill 2005.

Course Overview: The purpose of this course is to present the mathematical foundations of Linear Algebra. It extends, and describes, in more detail many of the topics covered in MAT 140. The more substantial part of the course includes Vector Spaces, Subspaces, Bases, and Linear Transformations. Further topics include Change of Basis, Eigenvalues and Eigenvectors, Inner Product Spaces, and Orthogonality. Applications may include topics from Game Theory, Fractals, Chaos, Fourier Series, and Cryptography.

Course Outline: Sections from the following chapters will be covered:
Ch.1-Ch.12, Ch.14, Ch.15.

Tests: 4 Tests (80%), 1 Final Exam (20%).
An extra 3% for small Homeworks will be given.
(**NO** test scores will be dropped)

The test schedule is, approximately, as follows:

Test 1	Tuesday	Sept 25, 2007
Test 2	Thursday	Oct 18, 2007
Test 3	Tuesday	Nov 13, 2007
Test 4	Thursday	Nov 29, 2007
Final	Finals Week	Dec 10 – 14

Project: There are a few projects available for students of this course. Most of them come out of the Anton's book and are related to the concepts taught (some require the use of computers). The student 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 Dec. 4th, 2008.

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

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\begin{aligned}
&\text{A} \quad \text{if} \quad 90\% \le G \le 100\% \\
&\text{A-} \quad \text{if} \quad 85\% \le G < 90\% \\
&\text{B+} \quad \text{if} \quad 83\% \le G < 85\% \\
&\text{B} \quad \text{if} \quad 77\% \le G < 83\% \\
&\text{B-} \quad \text{if} \quad 75\% \le G < 77\% \\
&\text{C+} \quad \text{if} \quad 73\% \le G < 75\% \\
&\text{C} \quad \text{if} \quad 67\% \le G < 73\% \\
&\text{C-} \quad \text{if} \quad 65\% \le G < 67\% \\
&\text{D} \quad \text{if} \quad 50\% \le G < 65\% \\
&\text{F} \quad \text{if} \quad 0\% \le G < 50\% .
\end{aligned}
$$

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.