

COURSE URL: http://people.clas.ufl.edu/fgarvan/complin-summer-2017/

#### INSTRUCTOR:

Dr F.Garvan Office: 408 Little Hall Phone: 294-2305 Email: fgarvan@ufl.edu

### TEACHING ASSISTANT:

Jasmine Robinson

#### TEXTS AND SOFTWARE:

Linear Algebra and Its Applications (2015) 5th Edition by David C. Lay, Steven R. Lay, Judi J. McDonald;

MATLAB software.

Students have the option of buying/renting their own copy of the textbook or using the UF All Access Program. The MyMathLab materials are **not required** for this section, but may be used optionally. FOR STUDENTS WHO CHOOSE UF ALL ACCESS PROGRAM: Such students will have the choice to *opt-in* to MyMathLab access through Canvas once classes begin for a reduced price and pay for these materials through their student account. Students who do not choose this option will be able to purchase a stand alone code through the UF Bookstore.

### LECTURE NOTES:

Lecture note shells make note taking easier and are required in the course. They can be printed from Canvas at https://lss.at.ufl.edu/

#### SCHEDULE AND ROOM:

MTWRF 2 (9:30 - 10:45am) LIT 113

## OFFICE HOURS:

Period 3 (11:00 – 12:15) LIT 408, Monday, Tuesday and Thursday, or by appointment.

Students are welcome to call me at 294-2305 or use email fgarvan@ufl.edu.

# PREREQUISITES:

Two semesters of calculus and knowledge of a programming language.

# COURSE CONTENT:

This course is designed as an introduction to linear algebra and matrices for Science, Computer Science and Engineering majors and Mathematics minors. There are two aspects of a linear algebra course:

algorithmic and computational;

theory and proofs.

BOTH aspects are covered in this course but with less emphasis on theory and proofs. The more theoretical aspects of linear algebra are covered in MAS 4105. We hope to cover most of Chapters 1, 2, 5 and 6; and some of 3, 7 of Lay. Topics include linear systems, matrices, determinants, vectors, vector spaces, linear transformations, inner products, eigenvalues, and applications. We will also learn how to use MATLAB to do linear algebra computations.

# COURSE GOALS:

By the end of the semester, you should know:

- 1. how to communicate mathematical ideas effectively;
- 2. the basic theory and applications of linear algebra;
- 3. the algorithms of linear algebra;
- 4. how to perform the basic computations of linear algebra;
- 5. how to use Matlab.

# GRADING:

Homework will be assigned and collected. There will be unannounced quizzes based on reading and homework. There will be ONE mid-term exam and ONE final comprehensive exam. There will be Computer Projects.

Percent of grade:

Quizzes and homework	15%
MID-TERM EXAM	30%
Computer Projects	15%
FINAL EXAM	40%
TOTAL	100%

Grades will be assigned as follows:

A (90%) A- (87%) B+ (83%) B (80%) B- (77%) C+ (73%) C (70%) D+ (63%) D (60%)

#### DATES:

MIDTERM EXAM	Friday, May 26
Memorial Day	Monday, May 29
FINAL EXAM	Friday, June 16

### HOMEWORKS AND SUGGESTED EXERCISES:

Late homework not accepted.

Suggested exercises (not collected) will also be given.

#### COURSE POLICIES:

- Attendance is not required and will not be checked by the instructor. The students are responsible for taking the exams and quizzes and submitting
  the homework on time.
- 2. Late homework is not accepted.
- 3. Homework Instructions:

Write in complete sentences using mathematical symbols where appropriate.

Your reasoning should be clear. Write in such a way that the average student in the class can follow your work.

It is OK for you to discuss this homework assignment with anyone, but you must acknowledge any assistance. It is NOT OK to copy anyone else's work and it is NOT OK to copy from a book. See item 6 below.

- 4. Any **make up test** requires a written proof of medical (or other significant) emergency. If there is a scheduling conflict, the students are advised to discuss the possibility of **rescheduling** the test with the instructor at least **2 days before** the test.
- 5. Students requesting classroom accommodation must first register with the Disability Resource Center (352-392-8464, www.dso.ufl.edu/drc/ by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.
- 6. Students must comply with guidelines for Academic Honesty when taking the tests and working on the homeworks.
- The use of books and graphic calculators will not be allowed on the tests. The students will be allowed to use scientific calculators that cannot perform graphing or symbolic computations.
- 8 Class Demeanor
  - Students are expected to arrive to class on time and behave in a manner that is respectful to the instructor and to fellow students. Questions in class must be moderated through the instructor. Please do not talk while the instructor is lecturing. Please silence cell phones.
- 9. Current UF grading policies can be found at https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx

### HONOR CODE:

UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code." On all work submitted for credit by students at the University of Florida, the following pledge is either

required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Honor Code

(http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obliged to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor of this class.

# COURSE EVALUATION:

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at https://evaluations.ufl.edu.

Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at https://evaluations.ufl.edu/results/

# SUGGESTIONS:

- 1. Do all the homework! The homework really helps you to understand the material and serves as a good preparation for the tests.
- 2. **Do not procrastinate!** The homeworks may be lengthy and tedious. Keep in mind the late submission penalty.
- 3. If you have any questions, please contact the instructor. After all, the course is primarily intended for students to learn and not just earn their grades.
- 4. Attend the class. Even if you feel that the material is easy and you understand it all, the situation may change very rapidly without you knowing it.
- 5. Schedule an appointment if you cannot make it during the regular office hours.

# HEALTH AND WELLNESS RESOURCES:

Suicide Prevention Hot Line (1-800-273-8255);

To connect with a Crisis Counselor at Crisis Text Line Text "HOME" to 741741 (FREE, 24/7, CONFIDENTIAL)

U Matter, We Care:

If you or a friend is in distress, please contact umatter@ufl.edu or 352 392 - 1575 so that a team member can reach out to the student.

Counseling and Wellness Center:

 $\label{lem:http://www.counseling.ufl.edu/cwc/Default.aspx, 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.$ 

Sexual Assault Recovery Services (SARS)

Student Health Care Center, 392-1161.

University Police Department, 392-1111 (or 9-1-1 for emergencies).

http://www.police.ufl.edu

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