

**Fall 2016**  
**MAT 331: FIRST COURSE IN LINEAR ALGEBRA**

**Section 3, TTh, 11:00 – 12:20, 122 Carnegie**

**Course Instructor:** Prof. Vincent Fatica, 313A Carnegie, 443-1587,  
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**Office Hours:** MTWTh: 1:00 – 3:00

**Course Supervisor:** Prof. Jeff Meyer, 206F Carnegie, [jlmeye01@syr.edu](mailto:jlmeye01@syr.edu), 443-1479

**Course Information:** Content: systems of linear equations, linear transformations, matrices,  $n$ -dimensional Euclidean spaces, associated geometry, eigen-analysis.

Course Restrictions: Credit will not be given for both MAT 331 and MAT 485.

Prerequisites: MAT 286 or MAT 296

**Textbook:** Linear Algebra and its Applications, 5<sup>th</sup> edition, by David C. Lay, Steven R. Lay, and Judi J. McDonald; Publisher, Addison-Wesley

**Calculator Policy:** You are allowed to use a graphing calculator (such as TI-84, TI-85) on homework, quizzes, and exams for this class. Students may need to show work to receive full credit. The use of a symbolic calculator (such as the TI-89 or the TI-Nspire with CAS) is not allowed on quizzes or exams. There may be quizzes and specific exam questions that are designated *no calculator*.

**HW/Quiz Policy:** Homework will be collected on Tuesdays. Eventually, all the exercises listed on page 3 are to be handed in and will be graded. Each Thursday, the sections due the following Tuesday will be announced.

**Exams:** There will be two in-class exams and a final exam.

**Exam 1:** Thursday October 6

**Exam 2:** Tuesday November 15

**Final:** Wednesday December 14 (8:00 – 2:30, see below)

**Grading Policy:** Homework/quizzes will comprise 25% of the course grade, each in-class exam another 25%, and the final exam 25%. Letter grades will correspond to numeric grade intervals as follows.

|            |            |            |           |            |
|------------|------------|------------|-----------|------------|
| [93,100)→A | [90,93)→A- | [87,90)→B+ | [83,87)→B | [80,83)→B- |
| [77,80)→C+ | [73,77)→C  | [70,73)→C- | [60,70)→D | [0,60)→F   |

**Final Exam Date:** The final exam will be given on Wednesday, December 14, 2016 during a two-hour period between 8:00 and 2:30, and at no other time. Do not plan to leave the campus before 3 PM on this day.

**Students with Disabilities:** If you believe that you need accommodations for a disability, please contact the Office of Disability Services (ODS), <http://disabilityservices.syr.edu>, located in Room 303 of 804 University Avenue, or call 315-443-4498 for an appointment to discuss your needs and the process for requesting accommodations. ODS is responsible coordinating disability-related accommodations and will issue students with documented disabilities Accommodation Authorization Letters, as appropriate. Since accommodations may require early planning and generally are not provided retroactively, please contact ODS as soon as possible. You are also welcome to contact me privately to discuss your academic needs although I cannot arrange for disability-related accommodations.

**Academic Integrity:** The Syracuse University Academic Integrity Policy holds students accountable for the integrity of the work they submit. Students should be familiar with the Policy and know that it is their responsibility to learn about instructor and general academic expectations with regard to proper citation of sources in written work. The policy also governs the integrity of work submitted in exams and assignments as well as the veracity of signatures on attendance sheets and other verifications of participation in class activities. Serious sanctions can result from academic dishonesty of any sort. For more information and the complete policy, see <http://academicintegrity.syr.edu>

**Religious observances policy.** SU religious observances policy recognizes the diversity of faiths represented among the campus community and protects the rights of students, faculty, and staff to observe religious holidays according to their tradition. Under the policy, students are provided an opportunity to make up any examination, study, or work requirements that may be missed due to are religious observance provided they notify their instructors before the end of the second week of classes. For fall and spring semesters, an online notification process is available through MySlice (Student Services - > Enrollment -> My Religious Observances) from the first day of class until the end of the second week of class.

*Please inform me of any problems that you have with the course. Problems not satisfactorily resolved by me should then be brought to the attention of the Course Supervisor.*

| Section | Suggested Problems  |
|---------|---|
| . 1.1   | 11, 13, 15, 17, 19, 23, 24, 25                                    |
| . 1.2   | 2, 5, 6, 11, 15, 19 (find all such values of h and k), 21, 25, 26 |
| . 1.3   | 9, 11, 13, 17, 21, 23 (b-e), 25 (b, c)                            |
| . 1.4   | 1, 3, 7, 9, 11, 15, 17, 19, 21, 23 (b-e), 31, 33                  |
| . 1.5   | 1, 7, 11, 23, 29, 30, 31, 32                                      |
| . 1.7   | 1, 5, 7, 9, 11, 15, 17, 19, 21, 31                                |
| . 1.8   | 1, 3, 5, 7, 8, 9, 13, 15, 17, 19, 21, 27                          |
| . 1.9   | 1, 3, 5, 7, 9, 17, 19, 23   |
| . 2.1   | 1, 3, 5, 7, 11, 12, 15, 19, 20, 27, 28                            |
| . 2.2   | 1, 5, 9, 13, 15, 21, 22, 24, 31, 32, 33, 35                       |
| . 2.3   | 4, 8, 11, 13, 14, 15, 16, 17, 33, 35                              |
| . 2.7   | 2, 3, 5, 7  |
| . 2.8   | 1, 3, 5, 7, 9, 11, 13, 15, 17, 21, 23, 25                         |
| . 2.9   | 1, 3, 5, 9, 11, 13, 15, 16, 17, 19, 20, 21, 22                    |
| . 3.1   | 9, 11, 13, 15, 17   |
| . 3.2   | 15, 17, 19, 29, 31, 34  |
| . 3.3   | 19, 21, 23, 27, 28  |
| . 5.1   | 3, 5, 9, 13, 15, 17, 18, 19, 21, 25, 29                           |
| . 5.2   | 1, 3, 5, 7, 13, 15, 16  |
| . 5.3   | 7, 9, 11, 13, 17, 21, 23, 25                                      |
| . 6.1   | 5, 7, 9, 11, 15, 17   |
| . 6.2   | 1, 5, 9, 11, 13, 15   |
| . 6.3   | 3, 5, 7, 9, 11, 13  |
| . 6.4   | 3, 5, 7, 9, 11  |