

**MAT 654: Linear Models (Fall, 2017)**  
**MW 3:45-5:05, Carnegie 100**

**Instructor:** Professor H. Hyune-Ju Kim    Carnegie 304E  
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Office Hours: M 11-noon, T 11 -noon

**Course Description:** The course will discuss general procedures of estimation and hypothesis testing for linear models, especially simple and multiple regression models and analysis of variances models. The assumptions underlying the linear models of our interest and various methods of testing the validity of these assumptions will be considered. Also, applications will be discussed.

**Text:** Linear Regression Analysis, Seber and Lee, 2<sup>nd</sup> edition, Wiley

References:    Draper and Smith, Applied Regression Analysis, Third Edition  
Searle, Linear Models

**Prerequisites:** Mathematical Statistics at the level of MAT 525 or higher,  
Linear Algebra at the level of MAT 531 or higher,  
Knowledge of one of the statistical packages (such as MINITAB, SAS, R)

**Grading Policy**

Homework (30 %), Midterm Exam (25 %), Project (15 %), Final Exam (30 %)

**Exams:**            Midterm (in Class): October 18, 2017 (Wednesday)  
Final exam: December 15, 2017 (Friday) 10:15 a.m.-12:15 p.m.

There will be no make-ups for any reason. If you miss the midterm exam for a valid reason with supporting documents, the final will count correspondingly more.

**Homework:** Homework will be assigned and collected in class. You are encouraged to discuss homework problems with your classmates, but each of you is expected to write up your solutions independently.

**Project:** Students will conduct research and/or survey by applying and extending what he/she learned in class. Project will be evaluated based upon originality, creativity, completeness, and the quality of the written report and presentation. During the last two classes of the semester, each student will present his/her project.

**Attendance:** You are expected to attend every class, the midterm exam, and the final exam. If you miss a class, it is your responsibility to obtain a copy of the lecture notes for that class from another student. You are also responsible for any announcements about changes to the course schedule, the exam schedule, or the course requirements made during that class.

**Students with Disabilities:** If you believe that you need academic adjustments (accommodations) for a disability, please contact the Office of Disability Services (ODS), visit the ODS website– <http://disabilityservices.syr.edu>, located in Room 309 of 804 University Avenue, or call (315) 443-4498 or TDD: (315) 443-1371 for an appointment to discuss your needs and the process for requesting academic adjustments. ODS is responsible for coordinating disability-related academic adjustments and will issue students with documented Disabilities Accommodation Authorization Letters, as appropriate. Since academic adjustments may require early planning and generally are not provided retroactively, please contact ODS as soon as possible.

**Academic Integrity:** Syracuse University’s Academic Integrity Policy reflects the high value that we, as a university community, place on honesty in academic work. The policy defines our expectations for academic honesty and holds students accountable for the integrity of all work they submit. Students should understand that it is their responsibility to learn about course-specific expectations, as well as about university-wide academic integrity expectations. The policy governs appropriate citation and use of sources, the integrity of work submitted in exams and assignments, and the veracity of signatures on attendance sheets and other verification of participation in class activities. The policy also prohibits students from submitting the same work in more than one class without receiving written authorization in advance from both instructors. Under the policy, students found in violation are subject to grade sanctions determined by the course instructor and non-grade sanctions determined by the School or College where the course is offered as described in the Violation and Sanction Classification Rubric. SU students are required to read an online summary of the University’s academic integrity expectations and provide an electronic signature agreeing to abide by them twice a year during pre-term check-in on MySlice.

The Violation and Sanction Classification Rubric establishes recommended guidelines for the determination of grade penalties by faculty and instructors, while also giving them discretion to select the grade penalty they believe most suitable, including course failure, regardless of violation level. Any established violation in this course may result in course failure regardless of violation level. For more information and the complete policy, see <http://class.syr.edu/academic-integrity/>

**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.