

ST550: Environmental Statistics

SPRING SEMESTER 2012

Tue-Thu 12:30 - 1:45 a.m. (ILB 405)

- Instructor:** Dr. Madhuri Mulekar, Professor
ILB 301 (inside ILB 325)
Phone: 251-460-6391
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- Office Hours:** Tue-Thu 11:00 am - 12:00 noon, Wed 2-3 pm or by appointment
- Textbook:** *Statistical Methods for Environmental Pollution Monitoring*, by Richard Gilbert, Wiley Publications.
- ST550 web page:** Policies, supplemental course materials, announcements, and assignments will be posted at www.southalabama.edu/mathstat/personal_pages/mulekar/st550
Students are responsible for information posted on this page. They are encouraged to check this page daily.
- Final Exam:** Thursday, May 10, 2012, 1:00 – 3:00 p.m. ILB 405
- Coverage:** All or parts of the textbook listed above. Refer to tentative class schedule for topics.
- Bulletin description:** Sampling environmental populations, parametric and nonparametric estimation; applications of lognormal distribution; locating hot spots; censored data; outlier detection; trend analysis, seasonality; estimation of animal abundance (time permitting). **Prerequisite:** ST 540 or permission of instructor
- Learning objectives:** Activities of man introduced contaminants of many kinds into the environment: air pollutants from industry, exhaust emissions from vehicles, radionuclides from nuclear discharge, and pesticides, sewage, detergents, and other chemicals that enter lakes, rivers, surface water and ground water. Many monitoring and research studies are conducted to quantify the amount of pollutants, determine trends, and identify potential problems. The purpose of this course is to equip the student with appropriate statistical techniques that can be used to determine how pollutants distribute and persist in air, water, soil and biota and to assess the effects of pollutants on man and the environment.
- Technology:** A scientific calculator is highly recommended. Students are advised to bring a calculator to every class and every exam. Statistical software Minitab will be used in class, and is highly recommended for home-works and exams. It is available on computers in ILB405 for students.
- Attendance:** Students are expected to attend all classes. Students are strongly advised to avoid class time to make planned visits to the doctor's office or any other appointments.
- Assignments:** A few homework assignments, quizzes, or computer assignments will be given. No make-up assignments will be given.

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Final Grade: The grade will be determined by work on assignments (individual and group), participation in class (or group) discussions and presentations, and scores on 2 one-hour examinations and a final examination whereby the student demonstrates his/her ability to communicate statistical ideas and uses problem solving skills to investigate and solve statistical problems. A final letter grade of A, B, C, D, or F will be assigned based on 90, 80, 70, or 60% breakdown. The following weights will be used in calculating the percentage.

Assignments	Exam1	Exam2	Project	Final Exam	Total
20%	20%	20%	20%	20%	100%

Make-ups: No make-up home-work assignments or exams will be given. However, with a prior notification or a valid doctor's excuse for emergency, students will be allowed to use the final exam grade for only one missed exam grade. The lowest grade on one homework assignment will be excluded from final grade.

Reading: Students are expected to read appropriate sections of the textbook every day before coming to the class. Student will be responsible for getting materials from the instructor for any missed classes and catching up with the rest of the class.

Grade posting: Grades will not be posted, emailed, or given over the phone. Do not call the department for your grades. The office assistants do not have access to your grades. Final grades will be available on-line from the Registrar's office.

Disabilities: Any student with a qualified disability requiring special accommodations should talk with the instructor immediately so that proper arrangements can be made. Note that, before any arrangements can be made the student must have verification documentation from the *Special Student Services Office (460-7212)*.

Academic Disruption: The University of South Alabama's policy regarding Academic Disruption is published annually in *The Lowdown* <http://www.southalabama.edu/lowdown/>

Student Academic Conduct: The University of South Alabama's policy regarding Student Academic Conduct Policy (cheating and plagiarism) is published annually in *The Lowdown* <http://www.southalabama.edu/lowdown/>

A policy disclaimer: The requirements and policies may be modified as circumstances dictate. Such changes will be provided to the students in class and in writing.