

MATH 4502 - Spring 2015

Statistics for Process Control

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| Instructor: Lirong Yu | Class: TR 1:40pm-02:55pm P115 |
| Office: Sequoya 234 | CRN: 20377 |
| E-mail: lyu@daltonstate.edu | Office Hours: MW 8:15am-9:15am and 1:30 pm- 3:30 pm |
| Office Phone: 702.272.2161 | TR 9:40am- 10:40am or by appointment |

Textbook

Intro To Statistical Quality Control, Montgomery. ISBN 1118146816

Prerequisite: MATH 2181 and MATH 2200.

Course description:

Introduces application techniques used in quality/process control with particular application to area industries. Topics include probability, sampling distributions, control charts for variables and attributes, lot-by-lot sampling plans, acceptance sampling for variables, elementary reliability calculations, and an introduction to the concept of quality costs.

Student Learning Objectives:

Upon successful completion of this course, the student should be able to:

- demonstrate an understanding of descriptive statistics, probability distributions, and statistical inference.
- use linear and linear and multiple regression to examine the relationship between variables and make predictions.
- demonstrate an understanding the use of various control charts in SPC.
- demonstrate a fundamental understanding of the concepts used in experimental design.
- demonstrate familiarity with the concept of reliability analysis.
- demonstrate familiarity with the concept of sampling theory.

Attendance

Class attendance is required. If you are absent from a class, you will be responsible for all material covered and all announcements made. If you are absent from a test, the percentage you score on the final exam will count as your score on the missed test.

Notes on the Calendar

There will be no classes on January 19th (MLK holiday), March 2 - 6th (Spring Break). The Last Day to Drop Without Academic Penalty is March 23rd.

Homework

There will be chapter homework assigned on GA view.

Grading

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| Four in-class tests | 50% |
| A final exam | 20% |
| Homework | 20% |
| class participation | 10% |

Grade=0.5*(test average)+0.2* (final exam)+0.2*(homework average)+0.1*(Class participation)

F: 0-59%, D: 60 - 69%, C: 70 - 79%, B: 80 - 89%, A: 90 - 100%

Make-up Policy:

Make-up exams will be given only at the discretion of the instructor and only for emergencies and other unavoidable situations. Work and vacation are not acceptable excuses to miss an exam. If possible, you must notify me in advance if you need to miss an exam so that we can schedule a make-up time. If an emergency unexpectedly causes you to miss an exam, you must contact me (by e-mail or in person) within 24 hours of the absence in order to be able to make up the exam. Documentation must be provided at the time of the make-up exam for certain situations. Such documentation depends on the reason for the absence.

Academic Dishonesty:

Cheating and plagiarism are a part of the Dalton State Code of Student Conduct, which can be found in its most updated form at <http://daltoncampuslife.com/student-conduct/>. ANY assistance provided or given in any way toward work in a class constitutes cheating, unless such behavior is authorized by your instructor. Additionally, any use of the ideas or words of others should be noted, or this will constitute plagiarism. For more details on what Dalton State considers to be Academic Dishonesty, please review the Code of Student Conduct. Instructors will assign grades based on classroom performance. Additional sanctions may be provided as a learning experience from the Student Conduct process.

Classroom Behavior:

Dalton State is committed to respect via the Roadrunner Respect pledge. To learn more, please visit <http://daltoncampuslife.com/roadrunner-respect/>.

I pledge to show my fellow Roadrunner students, faculty, staff, and administration respect by treating others the way they want to be treated and by thinking about others first before making decisions that might affect them.

Inclement Weather/College Closure Emergency Instructional Plan:

In the event the college is closed due to inclement weather or another unforeseen event, students will consult the schedule provided at the beginning of the semester to determine which sections would be covered during the time the college is closed. Students will be responsible for reading those sections and completing the online WebAssign homework associated with them. Exams will be moved in the class schedule to accommodate the curtailed schedule. Check your e-mail for additional information. Your instructor may be available via e-mail for questions on a limited basis when the college is closed.

Drop/Withdrawal Statement:

The last day to drop this class is March 23. After this date, withdrawal without penalty is permitted only in cases of extreme hardship as determined by the Vice President for Academic Affairs; otherwise a grade of WF will be issued. The proper form for withdrawing from all classes at the college after the official drop/add period but before the published withdrawal date is the Schedule Adjustment Form. All students must meet with a staff member at the Office of Academic Resources in the Pope Student Center to initiate the withdrawal process. After meeting with the staff member, students will then finalize the withdrawal process in the Enrollment Services office. Before dropping any class, the college strongly advises that students meet with their academic advisor to discuss the impact of a withdrawal on their graduation plans. The college also strongly advises students who are receiving any type of financial aid to visit the Financial Aid Office in the Pope Student Center to discuss the impact a withdrawal may have on their financial aid status.

Disability Support Services Statement

Students with disabilities or special needs are encouraged to contact Disability Support Services. In

order to make an appointment or to obtain information on the process for qualifying for accommodations, the student should visit the Disability Support Services Library Guide <http://libguides.daltonstate.edu/Disability> or contact the Coordinator of Disability Support Services.

Contact information:

Andrea Roberson

Pope Student Center, lower level

(706) 272-2524

aroberson@daltonstate.edu

Workforce Development Statement

If a student receiving aid administered by the DSC Workforce Development Department drops this class or completely withdraws from the College, the Schedule Adjustment Form must be taken to the Workforce Development Office first. The office is located in the Technical Education Building, Room 112 and their hours are 9:00 AM - 12:15 PM and 1:30 PM - 3:00 PM, Monday, Tuesday, and Thursday, and 8:30 AM - 12:00 noon on Friday. Their phone number is (706) 272-2635.

Disclaimer:

This syllabus provides a general outline for the course. Deviations may be necessary.