

Virginia Tech - Department of Statistics
Spring 2012- STAT 3704 – Statistics for Engineering
Applications
MW 9:05-9:55 –Tor1010

Contacting Your Professor

Instructor: Khaled F. Bedair, PhD student, Statistics Department

Office Hours: MTWR by appointment

Office Location: Hutcheson Hall, Room 403-I

E-Mail Address: khaledfb@vt.edu

Website

<http://learn.vt.edu> - Scholar You need to check the site regularly.

Announcements, grades, homework assignments, homework solutions, quiz solutions, class notes etc. will be posted here.

Course Materials

• *Statistical Methods for Engineers (Third Edition)*, Vining & Kowalski [REQUIRED]

Homework

No late homework is accepted. You may work together on homework assignments, but the work turned in must be yours alone and you must be able to reproduce it.

Some more guidelines for homework are as follows:

1. Assignments must be neat.
2. Work all problems in order.
3. Staple multiple pages together.
4. PRINT your first and last name in the upper right corner of the first page.

Quizzes

Quizzes will be given in class and may be announced. They will be open books/notes and will be on any material covered to date.

Exams

There will be two in-class midterm and a final exam. Makeup tests are normally not available unless the instructor is informed at least one week before the scheduled test and with written documentation. The make up must be taken before the regularly scheduled test date. Unexcused absences will result in a zero score on exams/quizzes. No absence can qualify as being excused unless you have a university excused absence.

Final

The final is comprehensive.

Course Outline:

The material for this class is broken into three distinct blocks, not necessary of equal length or intensity.

Block 1: *Collecting and Displaying Data, Probability (Text Chapters 2-3)*

- Visual Data Summaries
- Probability Basics
- Common Distributions
- Sampling Distributions

Block 2: *Statistical Inference and Regression (Text Chapters 4 and 6)*

- Estimation and Hypothesis Testing
- Common Hypothesis Tests
- Simple Linear Regression
- Multiple Regression
- Residual Analysis and Diagnostics

Block 3: *Experimental Design and Other Topics (Text Chapters 7, some of 8, and 5)*

- Types of Sampling
- Factorial Designs

- Other Common Designs
- Response Surface Methodology
- Control Charts

Course Grade

Homework	20percent
Quiz	5percent
Midterm Exam I	20percent
Midterm Exam2	20percent
Final Exam	35percent

.For any dispute regarding the grading for homework assignments or exams, see the instructor immediately after the assignment is returned.

Software:

This course requires the use of a complete statistical package; we require this software package to be JMP (SAS JMP) software. This software is available for free to all Virginia Tech students at the website <http://network.software.vt.edu>. If you want to link from off campus you will have to set up a VPN to the university in order to access the link. The directions are at

<http://www.answers.vt.edu/ask4help/connection/vtkb2302.htm>

Honor Code

All assignments submitted shall be considered graded work and shall be completed on an individual basis unless otherwise stated. While discussing assignments and getting help outside of class is both authorized and encouraged, copying solutions from any source is considered a violation, as is sharing or re-use of a

computer file not explicitly distributed by the instructor or textbook manufacturer. It is your responsibility to seek clarification if there is a question about how the Honor Code applies to a given assignment.

Other Issues

Students requiring special accommodations due to disability or other medical conditions should contact me as soon as possible. For information about services provided to students with disabilities, see <http://www.dos.vt.edu/SSD/default.html>. I reserve the right to modify these policies during the course. Any changes will be announced in class and posted on the course web site.