

# STAT 250: Introductory Statistics I

Fall 2009

## Course Goals

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1. To expose the student to the ideas and concepts of statistics and probability and the statistical models used for decision support in different areas of our life.
2. To give the student mastery of the concepts and tools of data representation, probability models, and statistical inference by solving problems.
3. To encourage the student to learn the methodologies and techniques of statistics to solve typical problems.
4. To enable the student to:
  - understand a situation and recognize the type of problem and/or the kind of analysis required;
  - formulate the problem quantitatively;
  - associate the appropriate probabilistic models and statistical techniques;
  - understand and interpret the model results and obtain the required solution to problems using a statistical package (MINITAB for Windows).
5. To foster the communication and presentation of statistical results and inferences.
6. To provide a sound basis in statistics for the student's future academic and professional careers.

## General Education Program

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This course meets the Quantitative Reasoning requirement, one of the Foundation requirements of the University General Education program. The goal of the Foundation requirement is to help ensure that students develop the ability to use and critically evaluate numerical information, and to create logical arguments using quantitative reasoning. For more information on General Education, please see the University Catalog, pp. 69-71, and the Provost's Office General Education website, <http://www.gmu.edu/departments/provost/gened/index.html>

## Textbook and Software

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You will need access to the following three components:

- **Textbook: *The Basic Practice of Statistics*, by David S. Moore, 5<sup>th</sup> Edition, W.H. Freeman and Company**
- **StatsPortal (you will need to purchase an access code)**
- **Software: MINITAB 15**

There will be Homework Assignments and MINITAB Assignments (see the Assignments section below for more details). You will need to use *StatsPortal* for Homework Assignments, MINITAB Assignments, and quizzes. You will need **MINITAB 15** for your homework and the MINITAB Assignments.

## Blackboard Campus Edition 6 (CE6) and Email

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### Blackboard Campus Edition 6 (CE6)

This course uses Blackboard Campus Edition 6 (CE6), which you can access at <http://courses.gmu.edu>. You should make sure you have access to the folder for this course through CE6, since documents, assignments, and other important information will be distributed through this web page. Your Mason email user name is also your CE6 ID (e.g. the CE6 ID for jdoe@gmu.edu would be jdoe). Your Mason email password is also your CE6 password. You must first establish a Mason email account before you can access CE6. Please go to the URL above for more information about CE6.

Blackboard is where all general questions should be posted.

### Email

For administrative or personal questions or issues, send an e-mail to your professor. ***Please type STAT 250 and your section number*** in the Subject area of the email.

## Technology Requirements

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You are required to master a variety of technologies as a part of this course.

First, you must be able to navigate through CE6. There will be important information and answers to many commonly asked questions.

You must get into the StatsPortal and maneuver in it's environment because your homework assignments and quizzes will be completed and submitted electronically.

You must demonstrate competence in the use of the MINITAB statistical software system. This includes but is not limited to the following: properly installing the software on your own computer (if you choose to do so) or understanding how to access the software on GMU Lab computers (if you choose to take that option); understanding how to use MINITAB; understanding how to create "professional" style graphics and how to insert those graphics into your answers.

You must demonstrate competence in the use of a word processor such as Microsoft Word. In particular, you must be able to import graphics from MINITAB, create a report, and print it.

You must demonstrate the ability to manage files and use the Internet.

## Important Information About How We Present Information to You

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We will present information to you in several different ways. Some information is contained in the textbook for this class. This may be the only source of this information. You must read and study the text to absorb this information. Some information is presented in class only. You must attend class and listen carefully to your professor to absorb this information. Some information might be given in the answers to your homework problems only.

Regardless of the manner by which we convey the information to you, you are responsible for its application for homeworks, quizzes, and tests.

You are expected to attend all lectures, work on homework, and participate in classroom discussion. Class participation includes questions and answers.

Students are expected to read the chapters *before* the scheduled lecture dates.

## Assignments

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You will have Homework Assignments and MINITAB Assignments.

Homework Assignments will be assigned almost every **week**. Homework Assignments will be available and must be completed using the StatPortal. Your answers are submitted electronically through the StatPortal which will be due at a designated time. No late Homework Assignments will be accepted.

You also have MINITAB Assignments. For MINITAB Assignments you are required to type all homework solutions. That is, you must integrate in a word processor the MINITAB commands used to solve the problem, the MINITAB results (including any graphs) used to solve the problem, and all written answers you provide. You will use the “copy and paste” features of Windows to accomplish the required integration of material. You must print out MINITAB assignments and submit them in class **before** the lecture begins. Please make sure your submission is stapled with your name on your assignment. (points will be taken off if paper is not stapled and/or your name is not present). Late MINITAB Assignments will not be accepted.

## Quizzes and Tests

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### Quizzes:

There will be quizzes approximately **every week**. Quizzes are approximately fifteen minutes in duration. Quizzes are on line. You will have up to three attempts. The final score will be the average of each attempt. (So if you get a 100 on your first try, you should not take the quiz again).

### Tests:

There will be two tests and a final exam. You should bring a calculator (cell phones and computers are not acceptable during tests and the final), a scantron form NO.882-E, an 8x11 formula sheet that you must make, tables, and #2 pencil and eraser. Tables can be downloaded from *StatsPortal*. You are not allowed to use other materials, including scrap paper.

**TESTS ARE CLOSED BOOK.** Even though the quizzes are on-line, please try not to use the book. If you use the book, you will not finished the quiz.

## Policies

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### Homework Due Dates and Times:

All Homework assignments should be submitted electronically in the StatPortal and will be due *before the class begins*. After that time, you will be unable to submit them. MINITAB will be collected in class.

### Extra Credit:

Only **one** extra-credit assignment will be given.

### The GMU Honor Code:

**Read the George Mason University Honor Code and follow it.** You may work in groups on the homework (unless otherwise indicated) and in fact, you are encouraged to do so. Please note that working together does not mean handing in photocopies of someone else's work. Also, working together does not mean handing in a single “group” copy of the assignment with multiple names. Each individual must submit his/her own work to receive credit.

You are required to work alone on tests and quizzes. No communication (except with your professor) is allowed during quizzes or tests. Do not communicate with students who have not taken a quiz or test after you have taken it. ***Using the work of another student, whether that student is taking the course this semester or has taken it during some previous semester, is a violation of the Honor Code.*** All violations of the rules of this class and the GMU Honor code will be referred to The Honor Committee. Your instructor takes the Honor Code seriously and so should you.

**Religious Holidays:**

If an exam is scheduled on a religious holiday that you observe, see your instructor to make alternative arrangements at least a week in advance.

**Disability:**

If you have a disability that requires academic accommodation, contact the Office of Disability Services (993-2474) for authorization.

**Grading**

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1. Homework (10%): The 3 lowest Homework Assignment grades will be dropped.
2. MINITAB assignments (15%).
3. Quizzes (10%)
4. Two In-Class Tests (20% each)
5. Cumulative Final Exam (25%)

Letter grades will then be assigned according to the following scale:

Numeric Score	Letter Grade
98 – 100	A+
91 – 97	A
90	A–
88 – 89	B+
81 – 87	B
80	B–
78– 79	C+
71 – 77	C
70	C–
60 – 69	D
0 – 59	F

## Final Exam

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The final exam must be taken during the allotted time. If you have a conflict or a reasonable reason not to take the exam at the appointed time, you must request and get the Dean's approval for a change of time and date.

Where to get form for Request for change of date for Final Exam:

[http://volgenau.ite.gmu.edu/forms/final\\_examination\\_reschedule.pdf](http://volgenau.ite.gmu.edu/forms/final_examination_reschedule.pdf)

Directions for students are available at:

[http://volgenau.ite.gmu.edu/forms/reschedulefinalexaminstruct\\_072002.pdf](http://volgenau.ite.gmu.edu/forms/reschedulefinalexaminstruct_072002.pdf)

Final examinations must be rescheduled if:

1. More than one examination is scheduled at the same time on the same day.
2. More than two examinations are scheduled within 24 hours.
3. Illness on day of examination makes attendance at the scheduled time impossible. (In this case, documentation by a physician may be required by the instructor and/or Dean).

Rescheduling of final examinations for other reasons requires the following:

1. Exceptional circumstances beyond the control of the student.
2. Willingness of the course instructor to reschedule the examination.
3. Approval of the Assistant Dean, IT&E Student Services