

Instructor: Dr. Chris Black  
Office: Snoqualmie Hall #302B  
Office Hours: M 2:00 - 3:00, Th 10:15 - 11:45 and by arrangement  
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Required Text: *Introduction to the Practice of Statistics*, Fifth Edition, Moore & McCabe, W.H. Freeman & Company, 2006

Required Materials: TI-83+ or TI-84 calculator, and Microsoft Excel or equivalent spreadsheet software, such as the free equivalent CALC available at <http://www.OpenOffice.org>.

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#### GOALS FOR COURSE:

MATH 311 will introduce the basic ideas of descriptive and inferential statistics. Students will learn to intelligently analyze statistical data and arguments, and become informed consumers and producers of statistics.

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#### PROBABLE COURSE TOPICS:

- ▷ Data distributions described by graphs, numbers and density curves
  - ▷ Examining relationships through scatterplots, graphs, correlation & regression
  - ▷ Designing experiments and producing data
  - ▷ Probability models and random variables
  - ▷ Sampling distributions
  - ▷ Estimation with confidence: confidence intervals and significance tests
  - ▷ Inference for distributions
  - ▷ Inference for proportions
  - ▷ Analysis and inference for two-way tables
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#### COURSE PHILOSOPHY:

**On statistics:** The primary goal of statistics is to convey information gathered or inferred from numerical data. While it is important to master the computational skills in the course, it is more important for you to develop the ability to present an argument using the language and tools of statistics. Thus, daily homework will not be collected or assessed, but you will be assessed on the lab projects described below, as well as on exams and quizzes.

**On online courses:** The success of this course depends on your willingness to participate fully in the online discussion forum. I am a firm believer that learning happens through discussion (yes, even in a math class), not solely through reading a text or even working through problems. For you to develop your ability to analyze and create statistical arguments, you need to discuss statistics in context. As such, participation in the online discussion forum is **mandatory**.

## COURSE EXPECTATIONS:

As a student in this online course, you can expect:

- Collected assignments to be graded and returned within one week.
- Response to email within 24 hours Monday to Friday. Email will be checked evenings and weekends, although less frequently.
- Constant accessibility during office hours, either by phone, by email, or in person.

As a student in this online course, you will be expected to:

- Be proactive in seeking help when needed.
- Complete all assignments to the best of your ability, whether or not they are collected or assessed by the instructor.
- Be a contributing member of class discussions, providing timely responses to the specified discussion questions and respectfully analyzing the responses of others.
- Notify the instructor *immediately* of any circumstances impeding your success.
- Adhere to Central Washington University's Student Judicial Code (posted on Blackboard under 'Expectations'), particularly the section on Proscribed Conduct and academic dishonesty.

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## COURSE STRUCTURE:

In lieu of lecture, you are expected to thoroughly read your text. Supplementary materials, called "demonstrations", provided by the instructor will expand upon the material in the text through real-life examples and data. Follow these steps to master the course material:

- Read the appropriate section(s) of material from the text.
- You must take and pass a short vocabulary quiz in order to proceed with the demonstration.
- Once the vocabulary quiz has been mastered, follow through the examples in the demonstration file. The examples will use both Excel and the TI-83+ calculator to illustrate the material in the text.
- Participate in the online discussion as indicated in the demonstration file in red text. Some sections of material may be presented entirely through the discussion forum. Follow the discussion schedule to keep the discussions dynamic.
- Work through the assigned homework exercises, and take the weekly quizzes before Wednesday of each week at midnight.
- Work through the periodic lab projects, in which we use the statistical material and methods in context. Lab reports will be done in Excel (or equivalent) and submitted electronically.

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## GRADING:

Lab Projects:	200 points
Quizzes:	120 points
Proctored Exams (2):	100 points each
Proctored Final Exam:	100 points
Discussion & Participation:	50 points
Citizenship:	20 points

#### READING QUIZZES:

In order to access each demonstration file, you must first pass a short reading quiz. You will have 10 minutes to complete the quiz, but you may take it as often as is necessary to master it. You need to have a score of at least 90% to pass the quiz; this means that if the quiz has fewer than 10 questions, you must get them all correct. Although they must be passed for you to progress in the course, these quizzes do not count toward your course grade.

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#### HOMEWORK:

Daily homework is an integral part of this course. That having been said, homework for this course will not be collected and graded. You are responsible for keeping up with the assigned homework, checking your answers in the back of the text, and seeking help when needed. There is a homework discussion forum for questions – you can freely ask and answer homework questions there. Homework problems will often necessitate the use of your calculator or Excel.

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#### LAB PROJECTS:

There are 5 lab projects to be done in Excel (or equivalent software), in which you will analyze real data using the statistical methods of the course. The assignments are stored in the appropriate section of Blackboard. As statistics is a tool for communicating results, the lab projects are written reports that explain the results of your calculations. *Calculations alone are not enough to receive full credit on lab projects.* Due dates are noted on the course schedule. These 4 lab projects are worth 50 points each. Grammar, spelling and professional presentation count.

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#### CONTENT QUIZZES:

There will be content quizzes every week (unless it's an exam week) based on the reading and homework. Quizzes will be administered electronically through Blackboard. These quizzes will assess your understanding of the basic ideas & computational skills of the course. You may take a quiz at any point up to the specified date, allowing you to work ahead, but not to lag behind. The deadline for the weekly quiz is Wednesday at midnight. Consult the course schedule for the content covered on each weekly quiz. *Be sure you have set aside ideal quiz conditions: quizzes must be completed within 30 minutes of beginning, and may only be attempted one time.* Each of the 7 quizzes are worth 20 points. The lowest quiz score will be dropped in your final grade calculation.

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#### EXAMS:

Students need to arrange for a proctor to administer exams on specified testing days. Exams may be taken at any time before 5:00 pm, at the student's and proctor's convenience. Have the proctor complete the "MATH 311 PROCTOR INFORMATION FORM" and return to the instructor. These forms are available on Blackboard under "EXAMS". Acceptable proctors cannot be relatives of the student, and must fall into one of the following categories:

- Official testing service of an accredited university or college (there may be a fee)
- Dean, academic department head, registrar, principal or superintendent of educational service region, school or district, either public or parochial
- Educational officer (armed service, government, or corporate personnel)
- Full-time high school or college instructor or librarian
- Office staff from a CWU center

No substitutions are allowed for proctors without the instructor's permission *before the date of the exam.*

#### FINAL EXAM:

The final exam will be proctored in the manner of the regular course exams on Tuesday 3/17/2009. If you are on or near the Lynnwood center, the instructor will proctor an exam at a time and location to be announced.

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#### PARTICIPATION:

The demonstration files contain discussion questions, indicated by text in red font. These questions need to be answered in the discussion forum in Blackboard. You must participate in at least 80% of the discussions. Students will be assigned to open the discussion for each question, and you must comment on at least one question from each demonstration file in order to receive full participation points. The schedule of who-answers-first will be posted on Blackboard in the SYLLABUS section.

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#### CITIZENSHIP:

Citizenship addresses your behavior and comportment with other class members and the instructor. We each need to be respectful of other students, other cultures, and differing ideas within our learning community. In particular, in a class where we are expected to debate and discuss, we need to keep our comments constructive.

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#### ACADEMIC HONESTY:

Each of us should consider our placement at this institution to be a privilege. We need to have respect for one another, and for ourselves. In light of these facts, cheating in any form will not be tolerated. You are encouraged consult with each other using the online discussion forums, however anything you turn in with your name on it should have been written by you alone. The word “plagiarize” is defined by Merriam-Webster as “to steal and pass off (the ideas or words of another) as one’s own: use (another’s production) without crediting the source.” This is a very serious offense that I absolutely do not tolerate. The first instance of plagiarism results in a score of 0 on that assignment, and the second is grounds for failing the course.

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#### DISABILITY SERVICES:

Students with disabilities may arrange for academic adjustments by providing the instructor with a copy of the “Confirmation of Eligibility for Academic Adjustments” from the Disability Support Services Office as soon as possible. To obtain this form, contact the Disability Support Services Office at the main campus at [dssrecept@cwu.edu](mailto:dssrecept@cwu.edu) or (509) 963-2171.