Faculty of Science
DEPARTMENT OF MATHEMATICS AND STATISTICS
Course Information Sheet

1. **Course**:   **STAT 213**   **Fall 2004**

    Lecture/Time/Location: L05   TR   9:30   **Room:** ST 143

                                    L07   TR   11:30   **Room:** ST 143

    Course Website   http://blackboard.ucalgary.ca/

    Instructor: Joan Stellmach

    Office: MS 378   **Phone:** 220-6326

    E-mail/Website: joans@math.ucalgary.ca   www.math.ucalgary.ca/~joans/

Office Hours:	Monday	Tuesday	Wednesday	Thursday
	13:00 – 13:50	11:00 – 12:15	12:00 – 14:00	14:00 – 15:00

2. **Prerequisite:**   Mathematics 30, Pure Mathematics 30, Mathematics II (Cont. Ed.) or equivalent

    NOTE: The Faculty of Science policy on pre- and co-requisite checking is outlined in the current University Calendar (see www.ucalgary.ca/pubs/calendar) *Faculty of Science, Section 5C.* **It is the students' responsibility to ensure that they have the pre- and co-requisites for the course. If they do not, they will be withdrawn from the course without notice.**

3. **Fee policy:** After the last day to drop/add courses, there will be no refund of tuition fees if a student withdraws from a course, courses or the session.

4. **The University policy on grading and related matters** is described in the current University Calendar, *Academic Standings.* In determining the overall grade in the course, the following weights will be used:

Quizzes	[Best 4 of 5]	40%
Mid-term Test		15%
Assignments		5%
Final Exam		40%

    While a failing grade on any component of the course will not automatically result in an F grade for the course, students should be aware that successful completion of the course will be extremely difficult if any component contributes less than half of the marks available for that component.

    There will be a final examination scheduled by the Registrar's Office. A calculator and one formula sheet will be the only aids permitted for the midterm and final examinations.

5. **Missed Components of Term Work.** The regulations of the Faculty of Science pertaining to this matter are outlined in the current University Calendar, *Faculty of Science, Section 6A.* It is the student's responsibility to familiarize herself/himself with these regulations.

Academic misconduct (cheating, plagiarism, or any other form) is a very serious offence that will be dealt with rigorously in all cases. A single offence may lead to disciplinary probation or suspension or expulsion. The Faculty of Science follows a zero tolerance policy regarding dishonesty. Please read the sections of the current University Calendar "Student Misconduct". Information about 'academic integrity' may be found on a new University web page http://www.ucalgary.ca/honesty/

6. **There will be no out-of-class-time activities.**
    REGULARLY SCHEDULED CLASSES HAVE PRECEDENCE OVER ANY OUT-OF-CLASS-TIME-ACTIVITY

7. There is no <u>required</u> text for this course.
    Recommended Text: **<u>Introductory Statistics</u>** Seventh Edition
             Neil A. Weiss
             Pearson/ Addison Wesley

8. **Support materials:** The syllabus, as presented in the accompanying 'course outline', has been divided into five "blocks" for easy reference.
    The *Course Documents* on the Stat 213 *Blackboard* site (<u>http://blackboard.ucalgary.ca/</u>) will be grouped by 'block'. Each block will include
    - a <u>Tutorial</u> sheet which will introduce computer skills required for the current material
    - a <u>Sample Quiz</u> to indicate the typical level of problem to be expected on the quiz for that 'block'
    - a <u>Worksheet</u> which will provide additional practice problems. Often, these will be more challenging than the typical quiz questions and may include topics from previous 'blocks' to highlight relationships between various parts of the course.
    - <u>Solutions</u> to all the problems presented.

    Among the *Course Documents* there will also be a <u>Review</u> section which will provide additional exercises and a past exam for midterm and final review.
    If you have difficulty accessing any of these files, copies will also be available on the instructor's web site, <u>www.math.ucalgary.ca/~joans/</u> .

    It is the student's responsibility to access and download the various documents. Nothing will be distributed in hard copy. If requested, solutions can be posted in the glass case across from MS372 and a master copy of any document may be borrowed for photocopying.

    These lecture sections will also be 'piloting' the use of *WebWork* for statistics. This is web-based testing tool which will be used to provide 'practice exercises' for basic calculations required in statistics and a 'preliminary quiz' for each 'block'. The preliminary quiz results will contribute the *Assignment* marks to your overall course grade. Detailed instructions will be provided.

    Success in any mathematics course requires staying current with the lecture presentations and practicing as many problems as possible.

9. **When you need help**, take advantage of the course support services available. Ask early and ask often. Don't expect a miracle the night before an exam!

    Lecturers and lab instructors have **office hours** for the sole purpose of answering your questions.

    A continuous tutorial is available **each weekday** in the Statistics lab room **MS 571.** This is a "drop-in" tutorial which provides a study space, access to computers, and an opportunity to receive one-on-one assistance with any aspect of the course. The continuous tutorial schedule is

Monday	Tuesday	Wednesday	Thursday	Friday
11:00-14:00	12:00-16:00	11:00-15:00	12:00-15:00	12:00-14:00

10. **Five quizzes** will be administered during the regularly scheduled <u>lab</u> times of the "Quiz weeks" shown on the course schedule below. The **best four** of these marks will constitute the "quiz" component of the final course grade. The material tested on each quiz will come from the block of corresponding number with any necessary clarification given in the lecture immediately preceding the quiz.

    Calculators may be used when writing quizzes and it is anticipated that you will use the statistical software provided on the computers in the lab rooms.

    The quizzes will be "**closed-book"** – texts, notes, aid-sheets, and statistical tables <u>will not be allowed</u>. An attempt to use any such aids or to access e-mail or the Internet during the writing of a quiz will constitute academic misconduct (Item 6) and will be dealt with accordingly.

    You will be given 45 minutes to write each quiz although the expectation is that you should be able to complete the questions in 30 minutes.

11. **Assignment** marks will be obtained from the results of the 'preliminary quizzes' taken on WebWork. Each will have a particular date on which it will be available and a date by which it must be completed. You may work on the quiz at any time within that period and submit it at your convenience prior to the closing time. Your quiz will be marked and a score recorded automatically.
Since this term is a trial period for this program, a project may be assigned in lieu of a particular quiz if (and only if!) system problems are encountered that cannot be resolved within the designated testing period. A project would require presentation of questions and solutions that demonstrate mastery of the specific topic being tested at that time.

12. **Examinations:** There will be **one 50 minute mid-term test** written during the <u>lecture period</u> on October 28. The Registrar's office will schedule **a two hour final examination**.

    One 8½" x 11" aid-sheet (content of student's choosing) and a calculator will be permitted for the <u>mid-term test</u> and for the <u>final examination</u>. Necessary statistical tables will be provided for exams.

13. The **labs,** shown on your timetable as B17, B18, …, will be held in the Statistics computer labs MS 515 and MS 521. Every second week, the lab period will be devoted to writing a quiz.
In the weeks between quizzes, this period will be used to introduce computer techniques relevant to the current lecture material, return quizzes, provide assistance with practice problems and give individual help as requested.

    The statistics labs have printers which may be used for downloading the course support materials. However, the printers are not stocked with paper so you will be required to provide your own.

    Note: An IT username and password will be required to log on to the computers in the Statistics labs. If you do not have a username and password, you must complete an account registration with Information Technologies to be prepared for the first lab. See "My IT Account" at http://www.ucalgary.ca/it/

14. **Expectations:** You will be expected to
    - become familiar with basic statistical terms and principles and to use them appropriately. You will not be asked to recite definitions.
    - demonstrate a knowledge of basic statistical measures and when to use them
    - understand the principles of probability and show you can apply them to simple situations
    - become familiar with common probability distributions and when to apply them
    - understand the basic concepts in inferential statistics.
    - present clear and logical solutions to problems presented and appropriately justify your methods.

15. **Important Dates Fall 2004**

Week of	September 8	Lectures begin
Week of	September 27	Quiz #1
	October 11	*Thanksgiving – no classes*
	October 14-15, 18-19	Quiz #2
	October 28	**Midterm Test**
Week of	November 1	Quiz #3
	November 11-12	*Midterm break - no classes*
Week of	November 15	Quiz #4
Week of	November 29	Quiz #5
	December 9	Last day of lectures

Course Outline
Fall 2004

	Topics	Textbook Sections *	Quiz Week
Block 1	Introduction, Sampling; Organization; presentation of data; Characteristic Measures	Chapter 1 Chapter 2 Chapter 3	September 27
Block 2	Regression and Correlation; Basic Probability Rules; Venn diagrams, Tree diagrams; Permutations and Combinations; Bayes Theorem	Chapter 14 Chapter 4	October 14-15, 18-19
Block 3	Discrete random variables/probability distributions; Expectations, Variances; Specific distributions – uniform, binomial, hypergeometric, Poisson	Chapter 5	November 1
Block 4	Specific continuous distributions – Uniform, normal, *exponential* Approximations; Sampling distribution of the Mean; *Proportions*	Chapter 6 Chapter 7	November 15
Block 5	Inference about the Mean – confidence intervals; hypothesis tests Types of error; Student's *t* distribution; *Inference about Proportions*	Chapter 8 Sections 9.1 -9.3; 9.5-9.6	November 29

- Textbook sections refer to Introductory Statistics (Seventh Edition)

You will be responsible for material presented in class that is not in the textbook.
Italicized topics will be covered only if time permits.