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Course Outline
STAT 255 (Statistics For Life Sciences I), Section A02, Fall 2010

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Course Description:

The intended audience for this course is students in Biochemistry, Microbiology, Biology, Environmental Studies combined with a Science discipline, Kinesiology, and Combined Computer Science and Health Information Science. Course content includes the following: Introduction to Statistics, Histograms using Minitab, measures of Location or Central Tendency, Sample Variance and Sample Standard Deviation, Introduction to Probability, Probability and Problem Solving, Discrete Random Variables, Continuous Random Variables, Inference on the Mean, Rules for Expectation and Variances, Inferences on Proportions, Comparing Two Means, Introduction to k-Sample procedures using Minitab, Introduction to Linear Regression using Minitab, Introduction to Analysis of Categorical Data using Minitab.

The prerequisite for this course is 1.5 units of MATH courses numbered 100 or higher. Credit will be granted for only one of STAT 255, 250, 252, 254, 260. Please also see Credit Limit – Beginning Level Statistics and Physics Courses on p. 32 of the 2010 2011 UVic Calendar.

Course Objectives:

- To develop an understanding of how findings from sample data in your major field of study can be generalized to the population of interest from which the sample was drawn.

- To develop familiarity with the basic statistical methods used by practitioners in your field.

- To emphasize examples and applications from the Life Sciences.

- To sharpen memory and reasoning ability, skills useful in all of your courses.

- To foster good work habits, responsibility and self-reliance, also useful in all courses.

Instructor:

Stephen Benecke
Office: SSM A453
Office Hours: TWF 1:30 - 2:30
Phone: 250-853-3291
Email: stephen.benecke@gmail.com

Students are encouraged to approach the instructor if they wish to discuss any aspect of the course, either during office hours, drop in or by appointment.

Assistance Centre:

If the instructor is unavailable and you need assistance, you may go to the Mathematics Assistance Centres which are located in Room A202 in the Social Sciences and Mathematics (SSM) building, and in the C.W. Lui Learning Commons in the main Library. Hours of operation for the Mathematics Assistance Centres will be announced on the department website (`http://www.math.uvic.ca`, Assistance Centre). These hours are subject to change. It is staffed by able mathematics graduate students who are paid to help you.

Computer Facilities:

Please see the UVic website (`www.uvic.ca/systems/computerssoftware/computingfacilities/`) for locations and hours of operations. PC stations in these facilities are loaded with Minitab, the software package needed to complete the STAT 255 assignments. You will need your valid Netlink account.

Timetable:

Meetings occur for a total of 3 hours per week. The first lecture is on Wednesday, September 8, and the last lecture is on Friday, December 3.

Lecture Timetable:

Day	Time	Venue
Tuesday	12:30 - 1:20	ELL 168
Wednesday	12:30 - 1:20	ELL 168
Friday	12:30 - 1:20	ELL 168

Course Webpage:

Students are encouraged to visit the course webpage on a regular basis. It is also a useful tool to convey important information regarding the course and it is expected that students visit the course webpage regularly. The page is also accessible through the Department website, under "Course Pages", or through the instructor's temporary website at `http://www.math.uvic.ca/~stephen/index.html`.

Course Material:

The following textbook will be used throughout this course:

J. Susan Milton, *Statistical Methods in the Biological and Health Sciences* (3rd ed), McGraw-Hill, 1999 [ISBN-10: 0-07-013671-8].

A Supplementary Package should be downloaded from the course webpage. It contains review material, sample tests and final examinations, suggested exercises, and the four Minitab assignments.

Students are **only** allowed to use the **Sharp EL-510-R** calculator. **No other calculators will be allowed during examinations.** These calculators may be purchased in the UVic Bookstore.

Suggested Exercises:

Suggested Exercises will be made available on the website and announced in class as the corresponding material is covered. **It is the student's responsibility to master all of these exercises and to seek assistance when needed.**

Course Assessment:

There will be two midterm tests on the dates shown below. Each of these tests contributes 15% to the final grade. Note that these tests are cumulative and may cover concepts previously tested. In addition, assignments will be presented throughout the term. The assignments contribute a total of 10% to the final grade. The final examination contributes

60% to the final grade.

Assessment Opportunity	Percentage
Test 1 (Oct 8)	15%
Test 2 (Nov 26)	15%
Assignments	10%
Final (TBA)	60%

Once marked, midterm tests will be returned in class, or may be claimed during office hours. There will be no make-up tests. If a student misses a test due to reasons in accordance with the regulation on Illness, Accident or Family Affliction, the instructor should be notified as soon as possible. A written request to be excused, as well as the relevant supporting documentation, should be submitted within 7 calendar days after the test date. In such cases the final exam score will be used to assign a score for the missed test. There will be no supplemental examinations for this course.

Students are strongly advised to **not** make final plans for travel or employment during the exam period, since special arrangements will not be made for examinations that may conflict with such plans.

Questions or concerns regarding graded test or assignment papers should be brought to the attention of the instructor within 7 calendar days of the date when it was returned.

The nature of what you will be expected to do on the tests and final examination is largely defined by the sample problems listed in the Supplementary Package, as well as the Suggested Exercises and in-class examples.

Students are **only** allowed to use the **Sharp EL-510-R** calculator. **No other calculators will be allowed during examinations.** Students are not allowed to have in their possession during a test any paper other than what is provided to you by the invigilators. Candidates found communicating with one another in any way, or having unauthorized books, papers, or communication devices such as cell phones and PDA's in their possession, will be considered in violation of the University Policy on Academic Integrity.

Assignments:

There will be 4 Homework Assignments (to be completed using Minitab) presented throughout the course, according to the schedule below. These assignments test the student's understanding of the various concepts and his/her ability to answer various questions based on the course material. The assignments are included in the Supplemtary Package that can be obtained from the course webpage. The assignments are to be handed in at the start of the session in which they are due.

Note that late assignments will not be accepted.

Minitab Assignment	Available	Due
Assignment 1	Friday, September 10	Monday, September 21
Assignment 2	Friday, October 15	Friday, October 29
Assignment 3	Friday, October 29	Monday, November 16
Assignment 4	Friday, December 3	Friday, December 10

Solutions to the assignments will be posted on the course webpage according to the above schedule. Students are encouraged to check the website regularly for updates.

Test Dates:

The two midterm tests will take place during normal lecture sessions on the following predetermined dates. Students will be allowed 50 minutes to complete the test.

- Test 1: Friday, October 8, 12:30 - 1:20 ELL 168

- Test 2: Friday, November 26, 12:30 - 1:20 ELL 168

Final Examination:

The final examination will be scheduled by Records Services to occur during the formal examination period. The date and time of this examination will be posted on official University Bulletin Boards at least two weeks before the beginning of the formal examination period. Students must write the final examination on the date and time published by Records Services unless they qualify for a deferred examination as outlined in the UVic Calendar.

Departmental Grading Policy for Multi-Sectioned Courses:

The Department of Mathematics and Statistics has adopted the following policy in order to provide equity in grading in its multi-section courses:

> *The distribution of grades assigned in each section of a multi-section course must be consistent with the distribution of letter-grades achieved by the section on the final examination, or on the common portion of the final examination. This rule must be applied with enough flexibility to permit assigning the same grade to students in the same section who have attained the same Course Score, but with enough rigidity to guard against grade inflation or deflation.*

Students are expected to read the detailed explanation of how this policy is implemented by visiting the Department of Mathematics website (`http://www.math.uvic.ca`) and then click on Course Policies and then Multi-Section Grading Policy, or by picking up a hard copy of Explanation of the Multi-section Grading Policy of the Department of Mathematics and Statistics from the Department Office, SSM A425.

The following scale is customarily used to convert numerical scores to final letter grades: (The Department reserves the right to modify this conversion scale.):

Letter grade	Percentage
A+	$90 - 100\%$
A	$85 - 89\%$
A-	$80 - 84\%$
B+	$75 - 79\%$
B	$70 - 74\%$
B-	$65 - 69\%$
C+	$60 - 64\%$
C	$55 - 59\%$
D	$50 - 54\%$
F	$0 - 49\%$

Students are expected to attend all lectures and the course will be conducted on that basis.

This document is prepared several weeks before the beginning of classes. It is possible that some of the information in it will have to be modified as the term progresses. Any such changes will be announced in class and the web version of this document will be updated. If you miss such an announcement because you did not attend class, you must accept the consequences of not having learned of the change.