<u>**SYLLABUS – STAT 243 SECTION 002**</u>   **Spring 2017**

Lecture Time: TR 4.40 – 6.30 pm   **Lecture Room:** Neuberger Hall 96

Instructor	Nadeeshani Jayasena (Preferred: Nadee)
Office Hours	Tuesday & Thursday 12.30 – 1.30 pm or by appointment
Office Location	Neuberger Hall, Room **M**305 (Mezzanine, 3rd floor)
email	nadeej2@pdx.edu, 503-725-8296

Teaching Assistant	Jess Millar
Office Hours	Monday 10.15 - 11.15 am Tuesday 3.30 - 4.30 pm
Office Location	Neuberger Hall, Room 354B
email	jmillar@pdx.edu
Open Tutorial	Tuesday 6.30 - 8.00 pm NH 96

Open Tutorial: You are encouraged to work on your labs and homework assignments, and get help from Jess during this session. Jess will give hints but never presents a detailed solution for your assignments. Further, you will not be able to clarify all of your questions during the class and Jess will help you to clarify those during this session.

Required Textbook
<u>Elementary Statistics, A Step by Step Approach</u>, **Custom PSU 9ᵗʰ edition**, Bluman, McGraw Hill, 2013; This is a loose-leaf textbook that comes with the Connect code. can be purchased at http://shop.mheducation.com/mhshop/productDetails?isbn=1260145867 for $75.00. The Connect code gives you access to the **required homework, quizzes** and optional interactive <u>Smartbook</u>. Note that if you purchase the Connect code separately without the textbook bundle it will cost you $104 for just the code.

Calculator: Graphing Calculator with advanced statistical program is required. The TI-83 Plus, TI-84 or TI-89 models are most widely used. However, cell phones and computers may <u>NOT</u> be used for calculators during exams and quizzes (unless otherwise noted by the instructor). Students will receive a zero on the exam(s) and quiz(s) if such use occurs. Cell phones must be turn off or put on the silent option.

Prerequisites: Minimum Grade of C- for undergraduate level MTH 095, or D, E or F for ALEKS Math Placement Test.

STAT 243: This is the first course in a sequence of two: Stat 243 and Stat 244 which must be taken in sequence. This is a basic course in statistical analysis including presentation of data probability, probability distributions, sampling distributions, estimation, tests of significance, experimental design and analysis of variance, regression and correlation, nonparametric statistics, and use of statistical software. **This is designed primarily for non-math students who need to utilize the subject in their own fields.** This course lays the foundation for many upper-level courses in most majors.

Attendance: Students are required to attend all lectures in order to be successful in the course. If you happen to miss class, it is your responsibility to retrieve what you missed.

Lectures: Lecture handouts are incorporated in all lectures. Incomplete handouts will be posted on D2L/ Course Content weekly. Students are encouraged to bring these handouts or use a laptop (you will have to type mathematical formula) in class, and complete handouts or make additional notes. You should know what is not on your lecture notes and make additional notes during the class. **Completed lecture notes will be posted in D2L after every class.** Lecture notes are not a substitution for lecture, reading, and practice homework. They are intended to be guide line for the text, outlining some important topics in each section.

Software: We use SPSS for classroom activities and labs. SPSS is not a free software ☹. You can use SPSS available in the computers of NH 96. This computer lab is open 8.00 am – 8.00 pm every weekday during the term. **You can use the computers in this lab when there is no session**. The schedule of this computer lab is available at http://www.pdx.edu/math/math-computer-lab-schedule

Free Tutoring: Free tutoring is available at the Learning Center and the schedule of these tutors can be found at http://www.pdx.edu/tutoring/tutoring-schedule. Free Statistics tutors are also located in the back room of the computer lab in NH 96 and other rooms in NH. The schedule of these tutors is available at http://www.pdx.edu/math/stat-tutor-schedule

Overall course goals:
The purpose of this course is to introduce you to statistics. By the end of this course, you should know
- ➢ Why statistics is important (even if you'll never use it in your career)
- ➢ The uses of statistics
- ➢ The various ways data are collected
- ➢ How to use and interpret basic statistical procedures
  - o Plots and graphs
  - o Descriptive statistics (mean, median, 5-number summary, variance, etc.)
  - o Interval estimation
  - o Hypothesis testing
- ➢ How to use SPSS for statistical analyses and read SPSS outputs

Tentative Course Content:
- **Ch 1, Ch 2 and Ch 3**-Introduction to Statistics and Data Analysis (sample, population, observational and experimental studies, measures of location and variability, basics of data cleaning, graphical methods and data description)
- **Ch 4**-Probability (sample space, events, independent and disjoint events, probability of an event, and probability rules)
- **Ch 5**-Some Discrete Probability Distributions (binomial and Poisson distributions: definitions, probability formulas, expectation and variance)
- **Ch 6**-Some Continuous Probability Distributions (uniform, triangular and normal distributions:

definitions, probability formulas, expectation and variance; Central Limit Theorem and its applications)
- **Ch 7**-One-Sample Estimation Problems (statistical inference, confidence intervals for the mean, and proportion)
- **Ch 8**-Hypothesis Testing Problems (Steps of a hypotheses test)

To better meet the course goals, a number of activities are incorporated in addition to the lectures. All the assignments will be posted on D2L. These activities include in-class quizzes, group work, and exams, as well as outside of the class activities such as homework and SPSS labs. Below each activity is described in detail. All activities except in-class group work are scheduled in advance, as is listed in the Tentative Course Calendar, and should be submitted by the due date/time. The students are expected to check D2L regularly. The instructor may change the type of any assignment and the deadline. In these cases, all students will be notified via D2L/News.

Further, a set of practice problems will be posted in D2L and students will work on these problems in groups of 2 or 3 during the class before each Exam. The answer keys for these will be posted in D2L after class discussion. No credit is given for completing these practice problems.

Answers for SPSS labs and midterm exam will be posted on D2L or discussed in class shortly after the due date/time. **Students are allowed to use formula sheets available on D2L and one page of notes (self-prepared, 8½ by 11 inches, typed or handwritten or both) in addition to a graphing calculator during exams.** Formula sheets are posted on D2L/ Course Content/ Formula Sheets module for the students to print out. No formula will be provided by the instructor during any in-class activity.
In case of an emergency, contact instructor for alternatives. In other cases, if a student can't meet the deadline, then he/she should notify the instructor (with a valid official document) before the activity's deadline (including missing a lecture). Otherwise, 0 points will be given for each missing assignment.

IN-CLASS ACTIVITIES:

Quizzes and Group work: All quizzes will be in-class and completed in Connect Math online tool. Students can use only formula sheets during the quiz. Quizzes help develop critical thinking skills. All quizzes are equally weighted. Any missed quiz is given 0 points. There is an extra credit quiz in week 10. Each quiz will have multiple choice and entering answer questions with only one attempt.
There will be in-class group work for collecting and analyzing data from time to time. These groups work are used to engage students in data collection and analysis using the methods learn in this class.

Exams: There are 2 mandatory exams during the term. The exams are the main "check points" of students' progress in the course, and contain problems similar to the ones solved in class or assigned for all the other assignments. Students are not allowed to use lecture notes or the textbook during exams. Each exam lasts for 100 minutes and consists of multiple choice and TRUE/FALSE questions. All exams are equally weighted. The final exam may be comprehensive. Instructor has right to provide a seating arrangement during exams and different questions on exams and quizzes. **No wireless-capable devices may be used during exams and quizzes**.

OUTSIDE-OF-CLASS ACTIVITIES:

Homework: We will be using the Connect Math online homework and assessment tool. Directions for accessing the Connect Math can be found under the Week 1 module in D2L/Course Content. Each homework will have about 10 questions and each question has only 2 attempts. The homework consist of multiple choice and entering answer questions. There will be about 6 homework assignments and all are equally weighted. One lowest homework grade is replaced by the highest homework grade. If you get stuck on a homework problem and you've been stuck for more than twenty minutes, post to D2L/ Activities/ Discussion. Tell us what you are trying to do, what happened, and where you are stuck. The class and I will respond.

SPSS Labs: These labs are developed to present modern problems with data which can be solved using the course material and a statistical software SPSS. Each lab assignment consists of two parts where one should be completed using SPSS while the other should be done without using SPSS. There will be about 4 labs throughout the course. These labs help illustrate the importance of presented concepts, application of concepts using SPSS, and eliminate possible background differences. The TA will give hints but never presents a detailed solution for the labs during the Open Tutorial sessions. All lab assignments are equally weighted and should be turned in as a printed document by the due date.

Grading Policy and Conversion Guidelines for % Grade to Letter Grade:

Table 1	Activity	%
In-class	Exams	60
	Quizzes/Group work	15
Outside-of-class	Homework	15
	Labs	10

The overall grade will be calculated using a formula displayed in the Table 1. The current grade (calculated via this formula) is displayed on D2L so the students can monitor their achievements at any time.

** (In order to receive a Pass with the Pass/No Pass option, a grade of C or better *must* be earned. A grade of C- is *NOT* a passing grade.)

** Based on the overall grade (%) the letter grade will be assigned according to Table 2 after rounding your grade properly.

Table 2	Score (%)	Letter Grade	Score (%)	Letter Grade	Score (%)	Letter Grade	Score (%)	Letter Grade
	93-100	A	87-89	B+	77-79	C+	67-69	D+
	90-92	A-	83-86	B	73-76	C	63-66	D
			80-82	B-	70-72	C-	60-62	D-
							0-59	F

Disabilities: If you have, or think you may have, a disability that may affect your work in this class and feel you need accommodations, contact the Disability Resource Center to schedule an appointment and initiate a conversation about reasonable accommodations. The DRC is located in 116 Smith Memorial Student Union, 503-725-4150, drc@pdx.edu, http://www.pdx.edu/drc.

- If you already have accommodations, please contact me to make sure that I have received a faculty notification letter and discuss your accommodations.
- Students who need accommodations for tests and quizzes are expected to schedule their tests to overlap with the time the class is taking the test.
- Please be aware that the accessible tables or chairs in the room should remain available for students who find that standard classroom seating is not useable.
- For information about emergency preparedness, please go to the Fire and Life Safety webpage (http://www.pdx.edu/environmental-health-safety/fire-and-life-safety) for information.

Disturbances: Classroom disturbances that impede on other students' opportunity to learn will not be tolerated. Disturbers will first be asked to stop. If the disturbance continues, the student will be asked to leave class.

Academic Integrity Policy. Students are expected to adhere to guidelines concerning academic dishonesty outlined in University's Student Code of Conduct (http://www.pdx.edu/dos/psu-student-code-conduct). Students are encouraged to contact the instructor for clarification of these guidelines if they have questions or concerns.

You (students) are encouraged to work together on homework and SPSS lab problems, but the work you turn in must be your own (unless the assignment specifically states otherwise). Work on exams and quizzes must be your own. **Any act of academic dishonesty will result in a score of zero on the item in question** and notification of department and university officials. Further action may be taken as warranted. Subsequent offenses will result in an F in the class.

Title IX Reporting Obligations:

As an instructor, one of my responsibilities is to help create a safe learning environment for my students and for the campus as a whole. As a member of the university community, I have the responsibility to report any instances of sexual harassment, sexual violence and/or other forms of prohibited discrimination. If you would rather share information about sexual harassment, sexual violence or discrimination to a confidential employee who does not have this reporting responsibility, you can find a list of those individuals. For more information about Title IX please complete the required student module Creating a Safe Campus in your D2L.

STAT 243 -- 002 TENTATIVE CALENDAR Spring 2017
This is an approximate schedule for the course. The dates for topics, assignments and exams may change.
See D2L/Calendar for actual assignment due dates

Date	Week		Activities & Assessments
Apr 3 – Apr 9	1	Read: **Complete:**	Syllabus Chapters 1 and 2 lecture notes **Introduction in D2L/ Activities/Discussion** **Enroll in the course in ConnectMath**
Apr 10 – Apr 16	2	Read: **Complete:**	Chapter 3 lecture note **Homework 1 (Chapters 1-2)** **Quiz 1**
Apr 17 – Apr 23	3	Read: **Complete:**	Chapter 4 lecture note **SPSS Lab 1** **Homework 2 (Chapter 3)** **Quiz 2**
Apr 24 – Apr 30	4	Read: **Complete**	Chapter 5 lecture note **SPSS Lab 2** **Homework 3 (Chapter 4)**
May 1 – May 7	5	Read: **Complete:**	Lecture notes up to date **Review (Chapters 1-5) for midterm** **Quiz 3** **Midterm Exam (Thursday, May 4)**
May 8 – May 11	6	Read:	Chapter 6 lecture note
May 15 – May 21	7	Read: **Complete:**	Chapters 6 and 7 lecture notes **SPSS Lab 3** **Homework 4 (Chapter 6)** **Quiz 4**
May 22 – May 28	8	Read: **Complete:**	Chapter 7 lecture note **Quiz 5**
May 29 – June 4	9	Read: **Complete:**	Chapter 8 lecture note **Homework 5 (Chapter 7)**
June 5 – June 11	10	Read: **Complete:**	Chapter 8 lecture note Lecture notes up to date **Review for final exam** **SPSS Lab 4** **Homework 6 (Chapter 8)** **Extra Credit Quiz**
Tuesday, June 13 (5.30 – 7.20 pm)			**Final Exam (in the classroom)**