CALIFORNIA STATE UNIVERSITY, EAST BAY

**DEPARTMENT OF STATISTICS AND BIOSTATISTICS**

**STATISTICS 4910 – Advanced Statistical Package Usage**

**STATISTICS 6250 - SAS Programming**

**FALL 2017**

**Lecture:** MW 8 – 9:50pm, Valley Bus & Tech Ctr., Room 221

**Instructor:** Prof. Eric A. Suess **Office:** ScN 319 **Phone:** 885-3879 **e-mail:** eric.suess@csueastbay.edu

**Office Hours:** MW 7:00-8:00pm or by appointment

**Class Web-page:**

* <http://www.sci.csueastbay.edu/~esuess/classes/Statistics_6250/sta6250.html>
* Google Eric A. Suess and my website should come up. Click on Classes.
* Blackboard: <http://bb.csueastbay.edu/>

**Required Texts:**

* Cody: Leaning SAS by Example, A Programmers Guide, SAS Press Series, 2007.
* Your **STATISTICS 6304** text or an equivalent introductory Statistics book.

 **Recommended Texts:**

* Cody and Smith: Applied Statistics and the SAS Programming Language, 5th ed., Prentice Hall, 2005.
* Delwiche and Slaughter: The Little SAS Book, SAS Institute Inc., 1998.
* Burley: SAS Macro Programming Made Easy, SAS Institute Inc., 2001.
* Aster: Professional SAS Programming Shortcuts, Breakfast, 2002.
* SAS manuals: Base SAS, SAS/STAT, SAS/Graph, SAS/ETS.

**Material To Be Covered:** In this course the use of statistical software will be presented to work with data. The course will focus on the use of SAS.

**Prerequisites:**

* Knowledge of the Windows operating system and experience with MS Office software (Word and Excel).
* Time outside of class to complete the computer assignments.
* STAT 4910: Completion of Stat 3502 or permission of the instructor.
* STAT 6250: Completion of Stat 6304 in the MS Statistics or MS Biostatistics Program or permission of the instructor.

**Homework:** Weekly homework assignments will be given each Monday, it is expected to be completed by the following Monday, and will be collected through Blackboard the following Wednesday. It is required that the solution to each assigned problem be prepared and edited in MS Word, LibreOffice, or in Google Docs. Hand-written solutions will not be accepted. One .docx or .pdf file will be submitted for each assignment. The file name of your submitted homework will be Lastname\_Firstname\_hw1.docx

**Grading:** Homework 30%, Project I 10%, Quiz I 5%, Midterm 20%, Project II 10%, Quiz II 5%,

Final 20%

**Policy on Make-up Exams:** You are expected to take the exams at the scheduled times. In case of genuine emergency, illness or hardship, for which you can present written documentation I may agree to arrange for a make-up exam. Make-up exams must always be arranged BEFORE the regular exam is given and always take place AFTER the regular exam.

**Stat 4910 SLOs**

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| **Student Learning Outcomes (SLO's):** |  |  |  |  |
| Students graduating with an B.S. in Statistics from Cal State East Bay will be able to: |  |  |  |
| 1. Apply basic computational skill in descriptive statistics and graphical displays; hypothesis testing and confidence intervals; modeling and error analysis |
| 2. Communicate to others results involving descriptive statistics and graphical displays; hypothesis testing and confidence intervals; modeling and error analysis |
| 3. Analyze data using appropriate statistical computer software and to interpret the results covering descriptive statistics and graphical displays; hypothesis testing and confidence intervals; modeling and error analysis |

**Stat 6250 SLOs**

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| **Student Learning Outcomes (SLO's):** |  |  |  |  |
| Students graduating with an M.S. in Statistics from Cal State East Bay will be able to: |  |  |  |
| 1. Apply statistical methodologies, including a) descriptive statistics and graphical displays, b) probability models for uncertainty, stochastic processes, and distribution theory, c) hypothesis testing and confidence intervals, d) ANOVA and regression models (including linear, and multiple linear) and analysis of residualsfrom models and trends. |
| 2. Derive and understand basic theory underlying these methodologies |
| 3. Formulate and model practical problems for solutions using these methodologies |
| 4. Produce relevant computer output using standard statistical software and interpret the results appropriately |
| 5. Communicate statistical concepts and analytical results clearly and appropriately to others; and |
| 6. Understand theory, concepts, and terminology at a level that supports lifelong learning of related methodologies. |