Course number: Stat 405/505  
Course title: Introduction to Data Handling  
Credit hours: 1.00  
Prerequisites: Stat 330 or 310-331 or 431/531 or equivalent  
Instructor name: Norou Diawara  
Instructor contact information: Phone: 757-683-3886, e-mail: ndiawara@odu.edu, webpage: www.odu.edu/~ndiawara  
Course: W 5:45-7:50 pm Education Building Room: 0131  
Textbook: There are many textbooks and documents available online.  
  

The following web sites give great information  
  
- http://www.r-project.org/  
- http://www.stat.auckland.ac.nz/~paul/ItDT/  
- http://www.sosc.i.mcmaster.ca/jfox/Books/companion/  
- http://www.ats.ucla.edu/stat/R/  

Course material: R and SAS Software with a focus on R.  
Office hours: M-W-F: 11:00 am- 12:00 pm 2317 ECSB or by appointment  

Course description: This course is intended as a guide to data analysis and computing with R system. It requires some previous studies of statistics, although some principles will be discussed. The capabilities of R and SAS will be shown in their performance of data analysis while focusing on the written commands, programs, and graphs. We will discuss exploratory and transformation of data, the use of R in fitting and testing linear models, including dummy variables, ANOVA. The checking of assumptions of models will be studied. Topics of Generalized Linear Models and Time Series will be referenced for personal complete reading, but the discussion will be mainly of the data manipulation.
Course Outline: Chapters and Sections:
Chapter 1: Introduction: Getting Started with R
Sections include: The R command line, Packages, Function calls, vectors and variables,
Getting help, Data Structures and Import/Export, Reading data
Chapter 2: Exploring Data - Simple Inference
Chapter 3: Linear Regression
Chapter 4: Analysis of Variance-Multiple Comparisons
Chapter 5: Multiple Regression- Design of Experiments
Chapter 6: Logistic Regression and Generalized Linear Models
Chapter 7: Time Series Analysis

Attendance is mandatory. All absences must be justified. So is academic honesty. Refer to
the ODU honor code. You are encouraged to work with each other on homework
assignments. However, each should produce his/her own work to be graded, and verbatim
copying of homework is not allowed.

You will have 2 to 3 homework assignments this semester, each will be due one week from
when it is assigned, and they will be due in class on the announced due date. No late
homework assignment will be graded. They will be the basis of the tests and final exam.
You will also have 2 or 3 chapter tests, and a final exam. Please, be aware that you must
present your work neatly and in detail on paper since that is all I will have to grade.
There will be no make up test. No homework or test will be dropped for graduate students.
For the undergraduate students, the test with the lowest grade will be dropped.
Please contact me via e-mail if you have a question that does not require an appointment.

Chapter tests (2 or 3): 45%
Homework assignments (2 or 3): 20%
Classes begin: August 23rd
Holiday: September 1st (Labor Day)
Last day of class: October 16th
Departmental Final Exam: December 10th: 3:45-6:45 pm : 35%
Grades: A ⇔ 90 – 100 ; B ⇔ 80 – 89 ; C ⇔ 70 – 79 ; D ⇔ 60 – 69 ; F ⇔ Below 60