**Course outline**

**STAT 328 (Statistical Packages) 3 credit hours**

**Instructor:  Sana Abunasrah**

**Office:   Building #5- third floor ,office 67**

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**Text Books:**

1. Minitab Guide, Second Edition Desmond J. Higham and Nicholas J. Higham A-Jin Publishing Company. Latest version
2. SPSS Guide to Data Analysis by MarijaNorse’s. . Latest version
3. Hector Guerrero. [Excel Data Analysis: Modeling and Simulation](http://gigapedia.com/items:view?eid=PSzlbSN0CmvClEeThfk6Xhg4yelZo0WIMtfMb9Bg%2BBo%3D), Springer. . Latest version
4. SPSS Survival Manual: A Step by Step Guide to Data Analysis Using IBM Spss. Latest version
5. Alain F. Zuur l Elena N. Ieno Erik H.W.G. Meesters. A Beginner’s Guide to R, Springer. Latest version

**Course Scope Contents:**

Using program code in a statistical software package (Excel – Minitab – SPSS - R ) to write a program for data and statistical analysis. Topics include creating and managing data files, graphical presentation - and Monte Carlo simulations.

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| **Week** | **Topics Covered** |
| **1** | Introduction to statistical analysis using excel |
| **2** | Some mathematical, statistical and logical functions in excel |
| **3** | Descriptive statistics using excel |
| **4** | Statistical tests using excel |
| **5** | Correlation and regression using excel |
| **6** | Introduction to Minitab- Descriptive statistics using Minitab |
| **7** | Statistical distributions in Minitab |
| **8** | Statistical tests using Minitab |
|  | Correlation and regression using Minitab |
| **9** | Introduction to SPSS |
| **10** | Descriptive statistics using SPSS |
| **11** | Statistical tests using SPSS |
|  | Correlation and regression using SPSS |
| **12** | Introduction to R |
|  | Statistical and mathematical functions in R |
|  | Descriptive statistics using R |
| **13** | Statistical distributions in R |
| **14** | Statistical tests using R |
| **15** | Correlation and regression using R |
|  | Programming and simulation in R |

**Assignments and Tests:**

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| **Assignments and Labs** | **Will be given during the classes** | **10 marks** |
| **Midterm test I** | Monday 11/2/2019 | **25 marks** |
| **Midterm test II** | Monday 18/3/2019 | **25 marks** |
| **Final Exam** |  | **40 marks** |

**Attendance:**

Student missing more than 25% of the total class hours won't be allowed to write the final exam.