**Course outline**

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

**Dr: Walid Emam**

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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. Excel 2010 guide to accompany understanding basic statistics

sixth edition

1. SPSS Guide to Data Analysis by Marija Norse’s. . Latest version
2. Hector Guerrero. [Excel Data Analysis: Modeling and Simulation](http://gigapedia.com/items:view?eid=PSzlbSN0CmvClEeThfk6Xhg4yelZo0WIMtfMb9Bg%2BBo%3D), Springer. . Latest version
3. SPSS Survival Manual: A Step by Step Guide to Data Analysis Using IBM Spss. Latest version
4. 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 – SAS – 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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| **Date** | **Topics Covered** |
| **20/1/2020** | Introduction to statistical analysis using excel  Some mathematical functions in Excel |
| **27/1/2020** | Statistical and logical functions in excel |
| **3/2/2020** | Descriptive statistics using excel |
| **10/2/2020** | Statistical tests using excel |
| **17/2/2020** | Correlation and regression using excel  Introduction to Minitab |
| **24/2/2020** | Descriptive statistics using Minitab |
| **2/3/2020** | Statistical distributions in Minitab |
|  | 5/3/2020 Mid-1 Exam |
| **9/3/2020** | Statistical tests using Minitab |
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| **16/3/2020** | Correlation and regression using Minitab  Introduction to SPSS |
| **23/3/2020** | Descriptive statistics using SPSS |
| **30/3/2020** | Statistical tests using SPSS  Correlation and regression using SPSS |
|  | 2/4/2020 Mid-2 Exam |
| **6/4/2020** | Introduction to R  Statistical and mathematical functions in R |
| **13/4/2020** | Descriptive statistics using R  Statistical distributions in R |
| **20/4/2020** | Statistical tests using R  Correlation and regression using R |
| **27/4/2020** | Applications, Programming and simulation in R |
| **Final exam :** | |

**Assignments and Tests:**

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| Assignments and Labs | Will be given during the classes | 10 marks |
| Midterm test I | Thursday, 5/3/2020 (17/7/1441), 7:00-8:30PM | 25 marks |
| Midterm test II | Thursday, 2/4/2020 (16/8/1441), 7:00-8:30PM | 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.