

## Course outline

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

**Instructor:** Prof. Khalaf S. Sultan

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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 Marija Norse's. . Latest version
3. Hector Guerrero. Excel Data Analysis: Modeling and Simulation, Springer. . Latest version
4. SPSS Survival Manual: A Step by Step Guide to Data Analysis Using IBM Spss. Latest version
5. Alain F. Zuur I 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.

<b>Week</b>	<b>Date</b>	<b>Topics Covered</b>
<b>1</b>		Introduction to statistical analysis using excel
<b>2</b>		Some mathematical, statistical and logical functions in excel
<b>3</b>		Descriptive statistics using excel
<b>4</b>		Statistical tests using excel
<b>5</b>		Correlation and regression using excel
<b>6</b>		Introduction to Minitab- Descriptive statistics using Minitab
<b>7</b>		Statistical distributions in Minitab
<b>8</b>		Statistical tests using Minitab
		Correlation and regression using Minitab
<b>9</b>		Introduction to SPSS
<b>10</b>		Descriptive statistics using SPSS
<b>11</b>		Statistical tests using SPSS
		Correlation and regression using SPSS
<b>12</b>		Introduction to R

		Statistical and mathematical functions in R
		Descriptive statistics using R
<b>13</b>		Statistical distributions in R
<b>14</b>		Statistical tests using R
<b>15</b>		Correlation and regression using R
		Programming and simulation in R

**Assignments and Tests:**

<b>Assignments and Labs</b>	<b>Will be given during the classes</b>	<b>10 marks</b>
<b>Midterm test I</b>		<b>25 marks</b>
<b>Midterm test II</b>		<b>25 marks</b>
<b>Final Exam</b>		<b>40 marks</b>

**Attendance:**

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