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| **Course Name:** Statistics for Psychology | | |
| **Course Code:** PSYC 220 | **Course Type:** Major | **Course Credits:** 4 |
| **Class Timings:**  M (11:00 – 11:50 AM) Lab  TR (12:30 - 13:45) Class | **Section:** A | **Student Meeting Hours/ Office Hours:**  WF (10:00 – 11:00 AM) |
| **Instructor Name:** Noor Ul Huda | | |
| **Instructor Contact Details**  Email: [noorulhuda@fccollege.edu.pk](mailto:noorulhuda@fccollege.edu.pk)  Office: E348 (2)  Office Hours: WF (10:00 – 11:00 AM) | | |
| **Course Description**: This course will provide you with the necessary knowledge of statistical concepts and skills for conducting research and an adequate quantitative foundation for understanding psychological literature and SPSS software. This course will cover (a) descriptive statistical techniques including frequency distributions, graphs, measures of central tendency and variability; and (b) inferential statistical techniques including correlation, t-test, analysis of variance, and chi-square.  The emphasis in this course is upon the psychological application of statistical techniques rather than the mathematical basis of statistics. The application of these techniques to research and the interpretation of the results will be emphasized.  Pre-requisite: PSYC 100  Mode of Instruction: Blended | | |
| **Main Mode of Instruction:** *Moodle – everything will be posted on Moodle*  **Technology Requirements**: Please check your emails and Moodle regularly for any course update. Everything will be posted on Moodle, however, the instructor may direct your attention to something posted on Moodle via email.  **Considerations for Students with Limited Internet/Technology Access:** The content (files, PowerPoints, links, videos) will all be posted on Moodle which the students can access when they have internet. Recordings of lectures will also be posted on Moodle. | | |
| **Course Objectives or** [**Student Learning Outcomes**](https://docs.google.com/document/d/1me9vpl8iKR_zNX9gIODm7gkVFY9VkuSKpUJe1VyI57M/edit) **(SLOs)**  At the end of the course the student should be able to:   1. Demonstrate an understanding of basic statistical concepts, vocabulary, theories, and applications used in psychology (Class Participation, Quizzes). 2. Understand graphical and tabular representation of data (Lecture, Class Discussion, SPSS Lab). 3. Calculate and understand how to interpret descriptive and basic inferential statistics (Lecture, Class Discussion, SPSS Lab). 4. Carry out basic statistical procedures on SPSS software (SPSS Lab). 5. Display enhanced critical thinking skills in analyzing and critiquing statistical information related to psychology (Class Participation, Research Assignment). | | |

**Course Content, Learning Material & Activities Schedule**

(Please modify as needed)

Note: The dates provided for assessments are tentative and may be changed according to the circumstances.

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| Week | Topic | Teaching Learning Activities | | Assessments |
|  |  | Synchronous  (In person) | Asynchronous  (Off campus) |  |
| 1 & 2 | Introduction: Review of course outline, Key concepts, Role of statistics in research, Scales of Measurement | Powerpoint presentation + Lecture | Online lecture + recorded session available |  |
|  | Lab: Introduction to SPSS, generating a codebook | Class demonstration + hands on SPSS activity | Online demonstration + hands on SPSS activity |  |
| 3 | Descriptive Statistics: Describing Data, Kinds of Variables, Frequency Tables, Graphs | Powerpoint presentation + Lecture | Online lecture + recorded session available | Quiz 1 on Moodle |
|  | Lab: Entering Data; Importing and Screening Data | Class demonstration + hands on SPSS activity | Online demonstration + hands on SPSS activity | Lab activity 1 due (to be checked in class or submitted on Moodle if online) |
| 4 | Descriptive Statistics: Measures of Central Tendency, Variance, Standard Deviation | Powerpoint presentation + Lecture | Online lecture + recorded session available | Quiz 2 on Moodle |
|  | Lab: Descriptive Statistics | Class demonstration + hands on SPSS activity | Online demonstration + hands on SPSS activity | Lab activity 2 due (to be checked in class or submitted on Moodle if online) |
| 5 | Descriptive Statistics: Z-Scores | Powerpoint presentation + Lecture | Online lecture + recorded session available | Quiz 3 on Moodle |
|  | Lab: Creating Graphs | Class demonstration + hands on SPSS activity | Online demonstration + hands on SPSS activity | Lab activity 3 due (to be checked in class or submitted on Moodle if online) |
| 6 | Descriptive Statistics: Probability | Powerpoint presentation + Lecture | Online lecture + recorded session available | Quiz 4 on Moodle |
|  | Lab: Manipulating Data | Class demonstration + hands on SPSS activity | Online demonstration + hands on SPSS activity | Lab activity 4 due (to be checked in class or submitted on Moodle if online) |
| 7 | Inferential Statistics: Introduction and Hypothesis Testing | Powerpoint presentation + Lecture | Online lecture + recorded session available | Quiz 5 on Moodle |
|  | Lab: Choosing the Right Statistic | Class demonstration + hands on SPSS activity | Online demonstration + hands on SPSS activity | Lab activity 5 due (to be checked in class or submitted on Moodle if online) |
| 8 | Tests of Inferential Statistics: Introduction to the *t*-test | Powerpoint presentation + Lecture | Online lecture + recorded session available | Quiz 6 on Moodle |
|  | Lab: Independent Samples *t*-test | Class demonstration + hands on SPSS activity | Online demonstration + hands on SPSS activity | Lab activity 6 due (to be checked in class or submitted on Moodle if online) |
| 9 | Tests of Inferential Statistics: The *t-*test for Independent Samples and Related Samples | Powerpoint presentation + Lecture | Online lecture + recorded session available | Assignment due  Quiz 7 on Moodle |
|  | Lab: Paired Samples *t*-test | Class demonstration + hands on SPSS activity | Online demonstration + hands on SPSS activity | Lab activity 7 due (to be checked in class or submitted on Moodle if online) |
| 10 | Tests of Inferential Statistics: Analysis of Variance (ANOVA) | Powerpoint presentation + Lecture | Online lecture + recorded session available | Quiz 8 on Moodle |
|  | Lab: One-Way Between Groups ANOVA | Class demonstration + hands on SPSS activity | Online demonstration + hands on SPSS activity | Lab activity 8 due (to be checked in class or submitted on Moodle if online) |
| 11 | Tests of inferential statistics: ANOVA | Powerpoint presentation + Lecture | Online lecture + recorded session available | Quiz 9 on Moodle |
|  | Lab: One-Way Repeated ANOVA | Class demonstration + hands on SPSS activity | Online demonstration + hands on SPSS activity | Lab activity 9 due (to be checked in class or submitted on Moodle if online) |
| 12 | Test of Inferential Statistics: Correlation and Regression | Powerpoint presentation + Lecture | Online lecture + recorded session available | Quiz 10 on Moodle |
|  | Lab: Correlation | Class demonstration + hands on SPSS activity | Online demonstration + hands on SPSS activity | Lab activity 10 due (to be checked in class or submitted on Moodle if online) |
| 13 | Tests of Inferential Statistics: Chi-square | Powerpoint presentation + Lecture | Online lecture + recorded session available | Lab assignment due |
|  | Lab: Chi-square | Class demonstration + hands on SPSS activity | Online demonstration + hands on SPSS activity | Lab activity 11 due (to be checked in class or submitted on Moodle if online) |
| 14 | Review | Group discussions, Q/A sessions | Breakout rooms, Q/A sessions on MS Teams Recorded session |  |
|  | Lab: Choosing the Right Statistic | Class demonstration + discussion | Online demonstration + discussion on MS Teams chat | Viva |

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### **Textbooks**

(PDF versions of the three textbooks listed below will be provided by the instructor)

### Aron, E., Coups, E. J., & Aron, E. N. (2013). *Statistics for Psychology.* (6th ed.). Pearson.

### Gravetter, F. J., & Wallnau, L. B. (2010). *Statistics for the Behavioral Sciences*. (9th ed.). Wadsworth.

### Pallant, J. (2005). *SPSS Survival Manual.* Allen & Unwin.

**Course Requirements:**

The breakup is as follows:

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| --- | --- | --- | --- |
|  | **Criteria for grading** | **Points** | **%age** |
| 1. | Attendance and participation | 20 | 10% |
| 2. | Quizzes (9 out of 10) | 90 (10 marks each) | 40% |
| 3. | SPSS activities | 55 (5 marks each) | 15% |
| 4. | Lab Assignment | 40 | 20% |
| 5. | Viva | 15 | 15% |
|  | Total | 220 | 100% |

**Grading Legend**

Below is the grading legend of FCCU (published in all catalogues and available on the FCCU website) as approved by the Academic Council and applies for Fall as well

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| --- | --- | --- | --- |
| **Grade** | **Point Value** | **Numerical Value** | **Meaning** |
| A | 4.00 | 93-100 | Superior |
| A- | 3.70 | 90-92 |
| B+ | 3.30 | 87-89 | Good |
| B | 3.00 | 83-86 |
| B- | 2.70 | 80-82 |
| C+ | 2.30 | 77-79 | Satisfactory |
| C | 2.00 | 73-76 |
| C- | 1.70 | 70-72 |
| D+ | 1.30 | 67-69 | Passing |
| D | 1.00 | 60-66 |
| F | 0.00 | 59 or below | Failing |

**Course Policies**

**Attendance and Punctuality:**

Attendance will be taken at the beginning of the session and anyone coming in late will be marked as late which will affect your marks for attendance. Therefore, it is responsibility of the students to come for class meetings regularly and on time. Students are expected to attend each session unless there is a valid reason for missing class in which case you can inform the instructor (via e-mail) in advance. SPSS activities will be held in every weekly lab, and these will constitute 15% of your grade, so please be present for these. Lack of attendance will leave you disadvantaged in terms of your learning. As you join the session on MS Teams, please make sure that you login with your screen name in the following format: Full Name (Roll no).

**Class Participation:**

Participating during the class by making a comment, asking questions, and sharing opinions is highly encouraged. Students are requested to be polite during these interactions and be respectful towards other students’ opinions. The cell phones must be turned off or put on silent before the commencement of the class. Behaviors such as side talking, sleeping, reading, and checking SMS’, will be subject to negative evaluation. Most of the classes will involve activities and your involvement in these will also contribute towards class participation.

Students attending online are also encouraged to participate when appropriate. You have the option to raise your hand, you may do that, or you may just speak. Writing in the chat for answering a question, giving an opinion/ relevant example would contribute towards your class participation.

**Quizzes:**

There will be ten quizzes for this course out of which the nine best ones will be selected, and these quizzes will consist of MCQs, True / False statements, short numerical questions (for a few topics only). The quizzes will be taken online on Moodle, and they will be opened for the duration of the day on which the quiz is due. The quiz will be timed so start accordingly. All quizzes will be of 10 marks each and you will have 15 minutes to do it. There will be no make-up quizzes for this class.

**Academic Integrity:**

It is expected of the students that they will be honest in their assignments and refrain from cheating or plagiarism. Cheating is referred to offering help to other students or any consultation under exam condition, possessing any material that will aid in the quiz/exam and looking at others answer sheets. Plagiarism is referred to use of another person’s ideas or words without acknowledging the author. This refers to any material such as websites, articles, books, or another student’s paper. Please refer to the student’s handbook for further details about plagiarism. Note any form of plagiarism will be reported to AIC and action will be taken in accordance with FCCU’s policy.

**Note:**

Please note that in case of any unforeseen circumstances the instructor reserves the right to modify the procedures, policies, and course outline mentioned in this document. The changes will be announced by the instructor well before time.