# Jordan University of Science and Technology
## Faculty of Architecture And Design
## City Planning And Design Department

| URP381 Statistics |
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| First Semester 2024-2025 |

| Course Catalog |
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| 2 Credit Hours. An integrated course enables the students to understand and learn basic elements of descriptive and inferential statistics such as sampling techniques, methods of data collection, analysis of time series data, display and presentation of statistical data in addition to the methods of hypothesis and significance tests, correlation, linear regression, analysis of variance and the basic concept of probability. |
| **Teaching Method:** Blended |

| Text Book | |
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| **Title** | Statistics explained |
| **Author(s)** | ? Hinton, P. R. |
| **Edition** | 1st Edition |
| **Short Name** | 1 |
| **Other Information** | 2014 |

**Course References**

| Short name | Book name | Author(s) | Edition | Other Information |
|---|---|---|---|---|
| 2 | Excel 2016 for Social Science Statistics | Quirk, T. J., & Quirk, T. J. | 1st Edition | 2016 |

| Instructor | |
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| Name | **Dr. Nermeen Dalgamoni** |
| Office Location | A3L3-305 |
| Office Hours | Sun : 09:00 - 10:00<br>Mon : 09:00 - 10:00<br>Tue : 09:00 - 10:00<br>Wed : 10:00 - 11:00<br>Thu : 10:00 - 12:00 |
| Email | nadalgamoni@just.edu.jo |

| Class Schedule & Room |
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| Section 1:<br>Lecture Time: Wed : 08:30 - 09:30<br>Room: A3132 |

| Prerequisites | | |
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| **Line Number** | **Course Name** | **Prerequisite Type** |
| 821011 | HSS101MATH Calculus I | Prerequisite / Study |
| 901010 | MATH101 Calculus I | Prerequisite / Study |

| Tentative List of Topics Covered | | |
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| **Weeks** | **Topic** | **References** |
| Week 1 | Introduction to Statistics in Urban Planning | |
| Week 2 | Data Types and Collection for Urban Environments | |
| Week 3 | Descriptive Statistics for Urban Analysis | |
| Week 4 | Sampling Techniques in Urban Surveys | |
| Week 5 | Probability and Risk Assessment in Urban Planning | |
| Week 6 | Visualizing Urban Data | |
| Week 7 | Hypothesis Testing in Urban Studies | |
| Week 8 | Correlation and Regression in Urban Spatial Relationships | |
| Week 9 | Spatial Regression Models in Urban Planning | |
| Week 10 | Time Series Analysis for Urban Growth Projections | |
| Week 11 | ANOVA for Comparing Urban Groups and Zones | |
| Week 12 | Nonparametric Methods for Urban Planning Surveys | |
| Week 13 | Forecasting and Planning for Future Urban Development | |
| Week 14 | Ethical Considerations in Urban Planning and Design | |

| Mapping of Course Outcomes to Program Outcomes | Course Outcome Weight (Out of 100%) | Assessment method |
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| Master Descriptive and Inferential Statistics: Students will be able to calculate, interpret, and apply key descriptive statistics (mean, median, mode, variance) and inferential statistics (hypothesis testing, confidence intervals) in urban datasets. | 25% | |
| Apply Sampling Techniques and Data Collection Methods: Students will effectively apply sampling techniques and data collection methods within urban planning contexts. | 15% | |

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| Conduct Time Series Analysis and Forecasting: Students will analyze time series data (e.g., urban population growth or traffic patterns) to identify trends and forecast future developments in city planning contexts. | 20% | |
| Perform Linear Regression and Correlation Analysis: Students will apply linear regression and correlation analysis to assess relationships between key urban variables such as land use, transportation, and economic development | 20% | |
| Present and Interpret Statistical Data for Urban Planning: Students will demonstrate the ability to effectively present statistical findings using visual tools (charts, graphs, tables) and interpret these findings in the context of urban planning challenges. | 20% | |

| **Evaluation** | |
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| **Assessment Tool** | **Weight** |
| Quiz 1 | 5% |
| Quiz 2 | 5% |
| Midterm | 30% |
| Final Exam | 30% |

| **Policy** | |
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| Attendance and Participation | Regular attendance is required, and active participation is expected. Students are encouraged to engage in discussions and contribute to group work. Missing more than 3 classes without valid reasons may impact the final grade. |
| Assignment Deadlines | All assignments must be submitted by the specified due dates. Late submissions will incur a 10% deduction per day, up to a maximum of 5 days, unless prior approval is obtained. |
| Academic Integrity | Plagiarism, cheating, and other forms of academic dishonesty are strictly prohibited and will result in disciplinary action, which may include a failing grade. |
| Fieldwork and Project Collaboration | Group projects require full cooperation from all members. Any disputes or issues should be addressed with the instructor early in the process to ensure fair assessment. |
| Use of Technology | Laptops, tablets, and phones should be used for educational purposes only during class sessions. Disruptive or inappropriate use of technology will result in a warning and potential further action. |
| Examinations | The midterm and final exams are mandatory. Any absence due to emergency must be documented, and makeup exams will be scheduled at the instructor's discretion. |
| Communication | All class announcements, updates, and feedback will be communicated via the university?s email system. Students are responsible for checking their emails regularly. |

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