

Lecture Plan
Department of Planning, School of Planning and Architecture, Vijayawada

Name of Course: Planning Techniques and Quantitative Methods(MPIS104)

Programme &Sem: **Master of Planning (PG), Semester One**
 Course Duration: July 16 to Nov 14, 2018

Course Coordinator: Samya Rakshit, Assistant Prof., Dept. of Planning
 (samya1857@gmail.com)

Number of Credits: 03
 Total Periods/Week: 03(See Time Table for details)
 Internal Assessment: 50 (minimum pass marks 50%)
 End Evaluation: 50 (minimum pass marks 50%) – Written Exam.
 Total Marks: 100 (to be converted to CGPA credit pattern as per regulations)

Subject Objective: *To acquire proficiency in statistical techniques and able to conduct empirical studies employing statistical software.*

| Week | Lecture / Session Topic (Teaching-Learning Objective aimed) | Session Mode (Optional) | References / Suggested Readings |
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| Week 1 (starting August 01-03) | Unit 1: Introduction to Statistical Methods Statistical data—Types of data: nominal, ordinal, interval and ratio; Discrete vs. Continuous Data; Numerical data—properties and measures; Standard Notation; Data collection, coding and decoding methods, tabulation and graphic presentation of data; Frequency distribution | Lecture | 1. Anderson, Sweeney, Williams (2011) <i>Essentials of Statistics for Business and Economics</i> . South Western Cengage Learning. Mason, USA. 2. Meier, Brudney, Bohte (2012) <i>Applied Statistics for Public and Nonprofit Administration</i> . Wadsworth Cengage Learning. Boston, MA, USA. 3. Walpole, Myers, Myers, Ye (2011) <i>Probability and Statistics for Engineers and Scientists</i> . Prentice Hall. Boston, MA, USA. 4. Hines, Montgomery, Goldman, Borror (2003) <i>Probability and Statistics in Engineering</i> . John Wiley and Sons, Inc. USA. |
| Week 2 (starting August 06 - 10) | Measures of central tendency: mean, median and mode; Measures of dispersion—range, variance, standard deviation; skewed distribution, kurtosis; Introduction to spreadsheets and statistical software | Lecture | |
| Week 3 (starting August 13-14) | Unit 2: Probability, Sampling distributions and Testing of Hypothesis: Introduction to probability; discrete random variables and probability distribution; | Lecture | |
| August 16-21 | Internal Assessment – 1 : Time-bound Test | | |
| Week 4 (August 24) | Sampling distributions: T and F distributions, | Lecture | |
| Week 5 (starting August 27-31) | Tests of Hypothesis—Type I and II errors One-tailed and two-tailed tests, chi-square test, student's T test | Lecture | |
| Sep 03-07 | Field Work | | |
| Week 6 | Unit 3: Correlation and Regression | Lecture | |

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| (starting Sep 10-14) | Correlation—scatter plot diagrams; correlation coefficients, simple correlation, partial correlation. | | |
| Week 7 (starting Sep 17-21) | Least square method, Assumptions of regression analysis, linear regression, multiple regression | Lecture | |
| Sep 24-28 | Mid-Semester Evaluation: Time-bound Test | | |
| Week 8 (starting Oct 01-05) | Dummy variables, functional forms, Binary dependent variables, Instrument variables, Time-series analysis. | Lecture | |
| Week 9 (starting Oct 08-12) | Unit 4: Application of vital statistics in Spatial Planning Elementary association models and decision making; Index Numbers; weighted and unweighted index numbers | Lecture | |
| Oct 15-19 | Dussehra Break | | |
| Oct 22-26 | Assessment – 3 : Assignment | | |
| Week 10 (starting Oct 29-Nov 02) | Application of index number in spatial planning; calculation techniques of vital events | Lecture | |
| Week 11 (starting Nov 05-09) | Unit 5: Demography Methods of demography and population studies – population projections. | Lecture | |
| Week 12 (Nov 12-14) | Introduction to Census data and sample surveys. | Lecture | |
| Nov 14 | Finalisation of Internal Marks | | |

Note:

1. Any other closed holidays as declared by SPAV shall supercede the above lecture plan. Holidays shown above may alter as per Notice from time to time.
2. Assessment Sessions may be re-scheduled, with prior intimation.
3. Reading lists provided is not exhaustive and is subject to addition – students are advised to follow progression of class to keep abreast of the new reading lists, if any.