

Prerequisite status: -	Unit Type: Theoretical/practical	The number of units: 2	Name of the lesson: <b>Statistical analysis in rural planning</b>
Type of additional practical training: Has it <input checked="" type="checkbox"/> does not have <input type="checkbox"/> science travel <input type="checkbox"/> Laboratory <input type="checkbox"/> Workshop <input checked="" type="checkbox"/> , Seminar <input type="checkbox"/>		The number of hours: 48	Expert professor to teach: Statistics specialist in rural planning
<b>Goals:</b> Acquaintance students with the use of statistical analysis in rural planning and development, Application of statistical software in required statistical analysis, Application of statistical methods based on hypothesis testing in rural research			
<b>Headlines</b> <b>1-</b> The place of statistical analysis in rural planning 2- Statistical hypothesis and its types 3- Operational definition of concepts 4- Measurement and scale data measurement 5- Familiarity with statistical software and its Application in rural planning 6- How to enter questionnaire data into statistical software and evaluate the validity and reliability of research tools 7- Descriptive statistics and extraction of descriptive findings with the help of statistical software along with analysis - Measures of central tendency - Dispersion criteria - Types of statistical distributions - Normal distribution (skewedness and kurtosis, etc.) 8- Application of statistical tests in rural studies - Relational hypothesis testing for parametric and non-parametric data with statistical software (Pearson's correlation coefficient, Spearman's, chi-square test of independence, and link measures) - Causal hypothesis testing for parametric and non-parametric data with statistical software (Linear and non-linear regression, logit, and probit) - Difference hypotheses test for parametric and non-parametric data with statistical software (For one group: single-sample t, two groups: paired t-sample and t-test with two independent samples, Mann–Whitney Test, MC NEMAR TEST, WILCOXON TEST), Three groups and more(Kruskal-Wallis test, Friedman Test, ANOVA) 9- Statistical analysis in the form of a research project with the help of statistical software			
<b>Reference</b> 1- Taleshi, Mostafa and Parviz Nasiri, 2018, Statistical analysis in rural planning, Payam Noor			

University Publications

- 2- Mansourfar, Karim, 2015, Advanced statistical methods: along with computer programs, Tehran University Press
- 3- Kalantari, Khalil, 2015, data processing and analysis in socio-economic research, Saba Publications
- 4- Iraj, Jabari, 2006. Statistical methods in environmental and geographical sciences, Razi University Publications
- 5- Pour Taheri, Mehdi, 2014 Application of Statistics in Geographical Sciences, Qomes Publications
- 6- Rogerson, Peter A., 2017, Statistical Methods in Geography, Student's Guide, Translators: Hamid Shayan, Reza Khosrobeigi, Ali Akbar Taghilou, and Mehdi Karimi, Ferdowsi University of Mashhad Publications
- 7- McCarroll, D. (2016). Simple Statistical Tests for Geography (1st ed.). Chapman and Hall/CRC. <https://doi.org/10.1201/9781315380438>
- 8- Rogerson, P. A. (2001). Introduction to statistical analysis in geography. In Statistical methods for geography (pp. 2-17). SAGE Publications, Ltd, <https://www.doi.org/10.4135/9781849209953>
- 9- Gaur, A. S., & Gaur, S. S. (2009). Statistical methods for practice and research: A guide to data analysis using SPSS. SAGE Publications India Pvt Ltd, <https://www.doi.org/10.4135/9788132108306>