



Colegio de San Juan de Letran
Dominican Avenue, Abucay, Bataan
Library and Media Services

RESEARCH GUIDE: STATISTICAL ANALYSIS AND SOFTWARE

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RESEARCH GUIDES

STATISTICAL ANALYSIS AND SOFTWARE

I. SCOPE NOTE

This course covers the basic statistical concepts such as descriptive measures, tabular and graphical representation of data, inferential statistics, sampling, hypothesis testing, correlation and regression analysis and the time series analysis. Case studies, spreadsheets, and Excel Add-in Data Analysis Toolpak computer software is used. studocu.com

II. SEARCH AIDS (BT: Broader Term, RT: Related Term, NT: Narrow Term)

BT:

- Statistical Analysis
- Statistical Software

RT:

- Statistical Concepts
- Descriptive Measures
- Descriptive Statistics
- Inferential Statistics
- Time Series Analysis
- Computer Software
- Microsoft Excel
- Case Studies
- Spreadsheets
- Hypothesis Testing
- Regression
- Correlation
- Sampling

NT:

- Basic Formula
- Graphs
- Variables
- Scale of Measurement
- Population
- Measure of Central Tendency
- Measure of Dispersion
- Frequency Distribution
- Probability Distribution
- Probability Density Function
- Cumulative Density Function
- Inverse Function
- Sampling Distribution

- Z-Testing
- T-Testing
- Variance Testing
- Simple Linear Regression
- Multiple Regression
- Time Series Data
- Cross-sectional Data
- Univariate
- Multivariate
- Forecasting

III. INFORMATION RESOURCES

A. LIBRARY RESOURCES

Note: For the appropriate access credentials, please contact the Letran Bataan Library

➤ E-BOOKS

- Munro, B. (2006). Statistical techniques (2nd. ed. ed.). New York: Springer Publishing Company. Retrieved from <https://search.proquest.com/docview/189468475?accountid=190548>
- Grasman, S. E., Gosavi, A., & McConky, K. (2016). Operations research. 2nd edition; engineering management handbook, 2nd edition, huntsville (2nd edition ed., pp. 105-130). Huntsville: American Society for Engineering Management (ASEM). Retrieved from <https://search.proquest.com/docview/2173843846?accountid=190548>
- Jenkins, T. (2006). 11: Managing the information resource. Swindon: BCS Learning & Development Limited. Retrieved from <https://search.proquest.com/docview/189252656?accountid=190548>

➤ E-JOURNALS

- Pattern Recognition and Image Analysis. <https://www.proquest.com/publication/54522?accountid=190548>
- Measurement and Evaluation in Counseling and Development. <https://www.proquest.com/publication/34423?accountid=190548>
- Journal of Online Learning and Teaching. <https://www.proquest.com/publication/2030650?accountid=190548>
- Quality. https://search.proquest.com/central/publication/publications_35812
- The American Statistician. https://search.proquest.com/central/publication/publications_41811
- The Journal of the Operational Research Society. https://search.proquest.com/central/publication/publications_31386
- Information and Software Technology. https://search.proquest.com/central/publication/publications_41979
- Bioinformatics. https://search.proquest.com/central/publication/publications_36124

- The Journal of Experimental Education.
https://search.proquest.com/central/publication/publications_40928
- Educational and Psychological Measurement.
https://search.proquest.com/central/publication/publications_40846

➤ E-THESES

- Collini, S. A. (2019). An experimental comparison of visual and statistical analyses (Order No. 28108283). Available from ProQuest Central. (2428565162). Retrieved from <https://www.proquest.com/dissertations-theses/experimental-comparison-visual-statistical/docview/2428565162/se-2?accountid=190548>
- Tarlow, K. R. (2017). Simulation analysis and meta-analysis of single-case experimental designs (Order No. 10800932). Available from ProQuest Central. (2021984058). Retrieved from <https://www.proquest.com/dissertations-theses/simulation-analysis-meta-single-case-experimental/docview/2021984058/se-2?accountid=190548>
- Liu, J. (2015). Statistical power in meta-analysis (Order No. 10008827). Available from ProQuest Central. (1765406976). Retrieved from <https://www.proquest.com/dissertations-theses/statistical-power-meta-analysis/docview/1765406976/se-2?accountid=190548>
- Messina, J. A. (2011). A statistical analysis of the impact of participation in living-learning communities on academic performance and persistence (Order No. 3492620). Available from ProQuest Central. (918810549). Retrieved from <https://www.proquest.com/dissertations-theses/statistical-analysis-impact-participation-living/docview/918810549/se-2?accountid=190548>
- Li, F. (2006). Statistical designs and analyses for partially controlled studies (Order No. 3213748). Available from ProQuest Central. (305319029). Retrieved from <https://www.proquest.com/dissertations-theses/statistical-designs-analyses-partially-controlled/docview/305319029/se-2?accountid=190548>
- Ozkan, B. (2008). Comparison of university researchers' and statistical consultants' diagnoses and applications on research problems (Order No. 3321044). Available from ProQuest Central. (304450068). Retrieved from <https://search.proquest.com/docview/304450068?accountid=190548>
- Goforth-Melroy, J. (2014). Universal design for learning: A program evaluation of faculty implementation (Order No. 3630003). Available from ProQuest Central. (1562948320). Retrieved from <https://search.proquest.com/docview/1562948320?accountid=190548>
- Joh, H. (2011). Quantitative analyses of software vulnerabilities (Order No. 3489881). Available from ProQuest Central. (916925550). Retrieved from <https://search.proquest.com/docview/916925550?accountid=190548>
- Xie, Y. (2006). Statistical analysis for microarray data: False discovery rate estimation, statistical testing, and integrated analysis (Order No. 3235435). Available from ProQuest Central. (305313599). Retrieved from <https://search.proquest.com/docview/305313599?accountid=190548>
- Liu, Y. (2012). Correlation of software quality metrics and performance (Order No. 3499922). Available from ProQuest Central. (964010604). Retrieved from <https://search.proquest.com/docview/964010604?accountid=190548>

B. OPEN ACCESS

➤ FREE E-BOOKS

- Hahs-Vaughn, Debbie L. (2017). Applied Multivariate Statistical Concepts. New York: Routledge: Taylor & Francis. <https://www.pdfdrive.com/applied-multivariate-statistical-concepts-e158067414.html>
- Murphy, Kevin R. (2014). Statistical Power Analysis: A Simple and General Model for Traditional and Modern Hypothesis Tests, 4th ed. New York: Routledge: Taylor & Francis Group. <https://www.pdfdrive.com/statistical-power-analysis-a-simple-and-general-model-for-traditional-and-modern-hypothesis-tests-e184616818.html>
- Schmuller, Joseph. (2013). Statistical Analysis with Excel® for Dummies®, 3rd ed. New Jersey: John Wiley & Sons, Inc. <https://www.pdfdrive.com/statistical-analysis-with-excel-for-dummies-3rd-edition-e33406041.html>
- Ekstrom, Claus Thorn. (2011). Introduction to Statistical Data Analysis for the Life Sciences. Florida: CRC Press: Taylor & Francis Group. <https://www.pdfdrive.com/introduction-to-statistical-data-analysis-for-the-life-sciences-e157891973.html>
- Pathria, R. K. (2011). Statistical Mechanics, 3rd ed. USA: Elsevier Ltd. <https://www.pdfdrive.com/statistical-mechanics-third-edition-e176294021.html>
- De Micheaux, Pierre Lafaye. (2013). The R Software: Fundamentals of Programming and Statistical Analysis. New York: Springer. <https://www.pdfdrive.com/the-r-software-fundamentals-of-programming-and-statistical-analysis-d175237392.html>
- Schmuller, Joseph. (2017). Statistical Analysis with R for Dummies. New Jersey: John Wiley & Sons, Inc. <https://www.pdfdrive.com/statistical-analysis-with-r-for-dummies-for-dummies-d158207624.html>
- McCormick, Keith. (2015). SPSS Statistics for Dummies. New Jersey: John Wiley & Sons, Inc. <https://www.pdfdrive.com/spss-statistics-for-dummies-3rd-edition-d34460729.html>
- Piergorsch, Walter W. (2015). Statistical Data Analytics. United Kingdom: John Wiley & Sons, Inc. <https://www.pdfdrive.com/statistical-data-analytics-foundations-for-data-mining-informatics-and-knowledge-discovery-d184770503.html>
- Rabe-Hesketh, Sophia. (2007). A Handbook of Statistical Analysis Using Stata. Boca Raton: Chapman. <https://www.pdfdrive.com/a-handbook-of-statistical-analyses-using-stata-fourth-edition-d157158233.html>

➤ FREE E-JOURNALS

- Procedia Technology. <https://www.sciencedirect.com/journal/procedia-technology>
- Software Impacts. <https://www.sciencedirect.com/journal/software-impacts>
- Software X. <https://www.sciencedirect.com/journal/softwarex>
- Journal of System and Software. <https://www.sciencedirect.com/journal/journal-of-systems-and-software>
- Journal of Statistical Software. <https://www.jstatsoft.org/index>
- Computational Statistics & Data Analysis. <https://www.journals.elsevier.com/computational-statistics-and-data-analysis>
- Open Access Search Journal: Statistics. <http://www.oajse.com/subjects/statistics.html>

- Journal of Statistical Software / Foundation for Open Access Statistics. <http://citec.repec.org/s/2017/jssistsof.html>
- Foundation for Open Access Statistics (FOAS). <http://www.foostat.org/>

➤ FREE E-THESES

- Palacci, H. (2019). Applications of Modern Statistical Mechanics: Molecular Transport and Statistical Learning. (Doctoral Dissertation). Columbia University. Retrieved from <https://doi.org/10.7916/d8-wv4t-wc44>
- Zhao, J. (2017). Statistic Software for Neighbor Embedding. (Masters Thesis). University of Helsinki. Retrieved from <http://hdl.handle.net/10138/229117>
- Guerra, G. (2016). Statistical Analysis of Differential Group Delay in Few-Mode Spun Optical Fiber. (Thesis). Università degli Studi di Padova. Retrieved from http://tesi.cab.unipd.it/53744/1/tesi_gianluca_guerra.pdf
- Dopa Pathirage, N. A. P. (2015). The Development and Validation of the Self-Efficacy in Statistical Practices Scale. (Doctoral Dissertation). University of Tennessee – Knoxville. Retrieved from https://trace.tennessee.edu/utk_graddiss/3498
- Ooms, J. (2014). Embedded Scientific Computing: A Scalable, Interoperable and Reproducible Approach to Statistical Software for Data-Driven Business and Open Science. (Thesis). UCLA. Retrieved from <http://www.escholarship.org/uc/item/4q6105rw>
- Xozwa, T. (2015). Automated statistical audit system for a government regulatory authority. (Thesis). Nelson Mandela Metropolitan University. Retrieved from <http://hdl.handle.net/10948/6061>
- Hudec, R. (2019). Statistická analýza dat v Excelu: Statistical Data Analysis in Excel. (Thesis). Brno University of Technology. Retrieved from <http://hdl.handle.net/11012/6965>
- Sievert, C. (2016). Interfacing R with Web Technologies for Interactive Statistical Graphics and Computing with Data. (Thesis). Iowa State University. Retrieved from <https://lib.dr.iastate.edu/etd/15422>
- Shahzad, M. (. t. (2015). Statistical and learning algorithms for the design, analysis, measurement, and modeling of networking and security systems. (Thesis). Michigan State University. Retrieved from <http://etd.lib.msu.edu/islandora/object/etd:2451>
- Minár, L. (2019). Analýza ekonomických ukazatelů pomocí statistických metod: Analysis of Economic Indicators Using Statistical Methods. (Thesis). Brno University of Technology. Retrieved from <http://hdl.handle.net/11012/34111>

C. PROFESSIONAL ORGANIZATIONS

- The World Statistics. <https://www.worldofstatistics.org/>
- Justice Research and Statistics Association. <https://www.jrsa.org/>
- American Statistical Association. <https://www.amstat.org/>
- International Statistical Institute. <https://www.isi-web.org/>
- Institute of Mathematical Statistics. <https://imstat.org/>
- International Institutes of Analytics. <https://www.iianalytics.com/>

D. OTHER RELATED WEB PORTALS

- Statistical Discovery From SAS. https://www.jmp.com/en_au/home.html
- Source Forge. <https://sourceforge.net/software/statistical-analysis/for-nonprofit/>
- Statistical Analysis Software: SAS/STAT. https://www.sas.com/en_ph/software/stat.html
- Statistical Analysis & Software. <https://www.statisticssolutions.com/statistical-analysis-software>
- Data Melt: Computation & Visualization. <https://datamelt.org/>
- GNU Octave. <http://www.gnu.org/software/octave/>
- Statistics for All. <http://www.sofastatistics.com/home.php>
- Data Plot. <https://www.itl.nist.gov/div898/software/dataplot/homepage.htm>
- Scipy. <https://www.scipy.org/>
- Zelig. <https://zeligproject.org/>
- SciLab. <https://www.scilab.org/>

E. RELATED RESEARCH GUIDES

- University of Central Florida Libraries. <https://guides.ucf.edu/c.php?g=78295&p=515212>
- University of Tasmania Library. <https://utas.libguides.com/c.php?g=498364&p=3411966>
- San Jose State University Library. <https://libguides.sjsu.edu/c.php?g=799818&p=5716806>
- Mississippi State University Libraries.
<https://guides.library.msstate.edu/c.php?g=577988&p=3987672>
- University of Pennsylvania Libraries. https://guides.library.upenn.edu/stat_packages
- Northwestern University. <https://libguides.northwestern.edu/data2>
- Penn State University Libraries. <https://guides.libraries.psu.edu/StatSoftware>
- New York University. <https://guides.nyu.edu/quant/statsoft>
- Kent State University. <https://libguides.library.kent.edu/statconsulting>
- MIT Libraries. <https://libguides.mit.edu/stat>

IV. TUTORIALS

- Statistics Tutorials & Data Files. <https://www.stattutorials.com/>
- Software Tutorials. <https://stat.utexas.edu/training/software-tutorials>
- Tutorials. <https://analyse-it.com/docs/tutorials/overview>
- SAS Tutorial – Learn SAS Programming from Experts. <https://intellipaat.com/blog/tutorial/sas-tutorial/>
- What is SAS/STAT | SAS/STAT Tutorial for Beginners. <https://data-flair.training/blogs/stat-tutorial/>
- An Introduction to R - A Brief Tutorial for R {Software for Statistical Analysis}.
<https://www.youtube.com/watch?v=LjuXiBjxyQ>
- Tutorial: Statistics and Data Analysis. https://www.youtube.com/watch?v=XbHeCL_8UhA
- R programming for beginners – statistic with R (t-test and linear regression) and dplyr and ggplot. <https://www.youtube.com/watch?v=ANMuug502rE>
- AS Tutorials For Beginners | SAS Training | SAS Tutorial For Data Analysis | Edureka.
<https://www.youtube.com/watch?v=JPATJfQNSIQ>



Prepared by:

Mr. Marvin A. Milla

Layout

mamilla@letranbataan.edu.ph

Ms. Maria Rosiel C. Ordenes

Subject Librarian

mrcordenes@letranbataan.edu.ph

Asst. Prof. Norady Mercado Pere

Chief Librarian

ndmercado@letranbataan.edu.ph

For more inquiries, kindly e-mail us at library@letranbataan.edu.ph

