



Jordan University of Science and Technology
Faculty of Science & Arts
Mathematics Department

MATH331 Statistical Methods(1)

First Semester 2017-2018

Course Catalog

3 Credit Hours. Simple linear regression: estimation and inference, prediction, residual analysis, multiple regression, estimation and statistical inference, criteria for choosing best model. The concept and applications of experimental design, randomized designs.

Text Book

Title	Applied Linear Statistical Models
Author(s)	Michael H. Kutner
Edition	5th Edition
Short Name	TextBook
Other Information	

Course References

Short name	Book name	Author(s)	Edition	Other Information
Ref 1	Design and Analysis of Experiment	Douglas C. Montgomery	6th Edition	John Wiley

Instructor

Name	Dr. HANAN HAMMOURI
Office Location	Ph4 level 0
Office Hours	Sun : 13:30 - 14:30 Mon : 11:30 - 13:00 Wed : 13:00 - 14:00 Thu : 10:00 - 12:30
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Class Schedule & Room

Section 1:

Lecture Time: Mon, Wed : 10:00 - 11:30

Room: M1303

Prerequisites

Line Number	Course Name	Prerequisite Type
903300	MATH330 Mathematical Statistics	Prerequisite / Study

Tentative List of Topics Covered

Weeks	Topic	References
Week 1	The simple linear regression model: model description.	
Week 2	Estimation and testing.	
Week 3	Model diagnostics.	
Week 4	The multiple linear regression model: model description and estimation.	
Week 5	Hypothesis testing.	
Week 6	Model selection.	
Week 7	Multicollinearity and model diagnostics.	
Week 8	Experimental Design: basic principles	
Week 9	Simple comparative experiments, two independent samples and paired t-tests.	
Week 10	Experiments with a single factor: 1-WAY ANOVA, fixed effects model	
Week 11	Multiple comparisons.	
Week 12	Single factor, random effect model.	
Week 13	2-WAY ANOVA.	
Week 14	Completely randomized block design Incomplete randomized block design.	
Week 15	Review	

Mapping of Course Objectives to Program Student Outcomes¹

Assessment method

Understanding and fitting simple linear regression model and multiple regression model and perform model selection and model diagnostics. [1a, 2b, 1c]	
Understanding and Fitting 1-WAY ANOVA, fixed effect model and random effect model. And interpreting the results. [1a, 2b, 2c]	
Fitting and analyzing 2-WAY ANOVA, fixed effect model. And interpreting the results. [1a, 2b, 2c]	
Analyze a data using randomized complete and incomplete block designs. [1a, 2b, 1c]	

Relationship to Program Student Outcomes (Out of 100%)										
a	b	c	d	e	f	g	h	i	j	k
22.75	45.50	31.75								

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This new edition of Applied Linear Statistical Models retains the book's uniquely straightforward writing style and format while providing you with the latest information and knowledge. Updates include developments and methods in partial regression and residual plots, an entirely new introduction to the "Design of Experiments" section that frames and outlines the organization and concepts of design and ANOVA, and more. On VI 4s.:Vi, VI On jx buo: VI VO On. 00 M; UO ,00 UO: VO'M Ov 1^.U0,U0 Ov po, ISJ â€”â– pv OO Ov VO Ln On Ov^-> M vo.vo vo O 4Â»: 00 O >:s "vb 05 vb: 00 on VO VO VO ,VO ' NJ 01 VO VO on VO VO a-; ,5o r l" < a*. Applied Linear Statistical Models. This is one of the books available for loan from Academic Technology Services (see Statistics Books for Loan for other such books, and details about borrowing). See Where to buy books for tips on different places you can buy these books. You can download the data files used in the textbook examples here. SAS. Chapter Title. Chapter 1. Chap 1. Linear Regression with One Independent Variable. McGraw-Hill, 2004. - 1424 pages. This new edition of Applied Linear Statistical Models retains the book's uniquely straightforward writing style and format while providing you with the latest information and knowledge. Updates include developments and methods in partial regression and residual plots, an entirely new introduction to the "Design of Experiments" section that frames and outlines the organization and concepts of design and ANOVA, and more. We are also indebted to Professors James E. Holstein, University of Missouri, and David L. Sherry, University of West Florida, for their review of Applied Linear Statistical Models, First Edition; to Professors Samuel Kotz, University of Maryland at College Park, Ralph P. Russo, University of Iowa, and Peter F. Thall, The George Washington University, for their review of Applied Linear Regression Models, First Edition; to Professors John S. Y Chiu, University of Washington, James A. Calvin, University of Iowa, and Michael F. Driscoll, Arizona State University, for their review of Applied Linear ... README.md. applied_linear_statistical_models. Some solutions for Kutner's Applied Linear Statistical Models. About. Some solutions for Kutner's Applied Linear Statistical Models. Resources. Readme.

McGraw-Hill, 2004. - 1424 pages. This new edition of Applied Linear Statistical Models retains the book's uniquely straightforward writing style and format while providing you with the latest information and knowledge. Updates include developments and methods in partial regression and residual plots, an entirely new introduction to the "Design of Experiments" section that frames and outlines the organization and concepts of design and ANOVA, and more. Applied Linear Statistical Models 5th Edition. by Michael Kutner (Author), Christopher Nachtsheim (Author), John Neter (Author). Applied Linear Regression Models- 4th Edition with Student CD (McGraw Hill/Irwin Series: Operations and Decision Sciences). Michael Kutner. 3.9 out of 5 stars 53. Applied Linear. Statistical Models. Fifth Edition. Michael H. Kutner Emory University Christopher J. Nachtsheim University of Minnesota John Neter University of Georgia William Li University of Minnesota. Linear models 14-. 15 introduction to the design of experimental and observational studies 15