

Research Methods for Supply Chain Management

I. General Information

- Course number: SCM 500
- Title: Research Methods for Supply Chain Management
- Units: 3
- Prerequisites: Graduate Standing
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- Date prepared: January 18, 2013

II. Catalog Description

Applications of research methods to topics in supply-chain management and logistics, with an emphasis on descriptive and inferential statistics. Letter grade only (A-F).

III. Curriculum Justifications

The Master of Science in Global Supply Chain Management curriculum includes quantitative courses that exploit statistical concepts, such as Business Analytics, Operations Planning and Analysis, and Transportation Analysis and Logistics. Moreover, students must complete a Capstone project to graduate, and each project is likely to involve statistically-oriented research. The course outlined here provides the statistical foundation required to perform well in subsequent courses and culminating research. The course's specific subject matter will coincide with the following CBA Graduate Learning Goals:

- Critical Thinking
- Quantitative & Technical Skills

IV. Course Objectives

The course objectives directly coincide with the CBA Graduate Learning Goals referenced in Section III. Specifically those objectives are for students to

- Analyze and describe data to support supply chain management decision making
- Understand how to compile and organize real-world data used by industry firms



- Formulate a relevant hypothesis
- Use data to estimate factors relevant to decision making
- Use data to make statistical inferences relevant to decision making
- Analyze, summarize, and present data, estimates, and inferences in oral and written forms

V. Outline of Subject Matter

Specific topics for this course will include:

- Graphical Data Description
- Numerical Data Description
- Probability Distributions
- Sampling Distributions
- Statistical Estimation
- Statistical Inference and Hypothesis Testing
- Analysis of Variance
- Univariate Linear Regression
- Multivariate Linear Regression
- Discrete Choice Estimation
- Interpreting and Presenting Statistical Analyses

VI. Methods of Instruction

Instructors should use appropriate instruction methods consistent with graduate-level presentation of the topics listed in Section V and with regard to the course objectives and learning goals outlined in Sections III and IV. Possible instruction methods include:

- Classroom Lecture and Discussion
- Problem Sets assigned as Homework
- Computer Lab Exercises demonstrated in class and assigned as homework
- Individual and/or Group Term Projects

There are no specific textbooks that must be used for this course. Assigned textbooks and supplemental reading material must, however, cover most or all of the topics outlined in Section V. The following one example of an appropriate textbook:

- Keller, Gerald. BSTAT. South-Western (Cengage)

VII. Instructional Policies Requirements

- a) Instructional policies should be consistent with the course description stated in Section II, and should serve the course objectives listed in Section IV of this Standard Course Outline.



- b) Instructors should enforce policies regarding to plagiarism, withdrawal, absences, etc., that are consistent with the University policies published in the CSULB Catalog. It is expected that every course will follow University policies on Attendance, Course Syllabi, Final Course Grades, Grading Procedures, Final Assessments, and Withdrawals. If some or all sections of the course are to be taught, in part or entirely, by distance learning in the future, the course must follow the provisions of PS 03-11, Academic Technology and the Mode of Instruction.
- c) All sections of the course will have a syllabus that includes the information required by the syllabus policy adopted by the Academic Senate. Instructors will include information on how students may make up work for excused absences. When class participation is a required part of the course, syllabi will include information on how participation is assessed.
- d) **Students with Disabilities.** Students with disabilities are responsible for notifying their instructor as early as possible of their needs for an accommodation of a verified disability. A student with a disability is urged to consult with Disabled Student Services as soon as possible in order to identify possible accommodations to enhance academic success.