Washtenaw Community College Comprehensive Report

BMG 265 Business Statistics
Effective Term: Winter 2018

Course Cover

Division: Business and Computer Technologies
Department: Business
Discipline: Business Management
Course Number: 265
Org Number: 13210
Full Course Title: Business Statistics
Transcript Title: Business Statistics
Is Consultation with other department(s) required: No
Publish in the Following: College Catalog , Time Schedule , Web Page
Reason for Submission: Course Change
Change Information:
Consultation with all departments affected by this course is required.
Course description
Outcomes/Assessment
Objectives/Evaluation
Rationale: 1. Course assessment results indicated a need to focus strongly on inference. 2. The College of Business at Eastern Michigan University, our primary transfer institution, is changing their single Business Statistics course to a two course sequence: DS250 and DS 251. EMU faculty have agreed to accept BMG 265 as the equivalent of DS 251, given the modifications to the course syllabus found in this course change form. EMU has also agreed to accept MTH 160 as the equivalent of DS 250.
Proposed Start Semester: Winter 2018
Course Description: This course introduces the concepts of inferential statistics and their application to business decisions. Topics include one and two sample confidence intervals and hypothesis tests, ANOVA, chi-square tests, and simple and multiple regression. Emphasis is on the application of appropriate statistical methods and statistical software to analyze real-world data for the purpose of making sound business decisions.

Course Credit Hours

Variable hours: No
Credits: 3
Lecture Hours: Instructor: 45 **Student:** 45
Lab: Instructor: 0 **Student:** 0
Clinical: Instructor: 0 **Student:** 0

Total Contact Hours: Instructor: 45 **Student:** 45
Repeatable for Credit: NO
Grading Methods: Letter Grades
Audit
Are lectures, labs, or clinicals offered as separate sections?: NO (same sections)

College-Level Reading and Writing

College-level Reading & Writing

College-Level Math

Level 4

Requisites

Prerequisite
Academic Math Level 4
or
Prerequisite
MTH 125 minimum grade "C"
or
Prerequisite
MTH 160 minimum grade "C"
and
Prerequisite
CIS 100
or
Prerequisite
CIS 110

General Education

Request Course Transfer

Proposed For:

Central Michigan University
College for Creative Studies
Eastern Michigan University
Ferris State University
Grand Valley State University
Jackson Community College
Kendall School of Design (Ferris)
Lawrence Tech
Michigan State University
Oakland University
University of Detroit - Mercy
University of Michigan
Wayne State University
Western Michigan University

Student Learning Outcomes

1. Recognize the conditions, limitations, and risks associated with the selection of specific statistical methods and models to analyze data sets and make business decisions.

Assessment 1

Assessment Tool: Departmentally-developed final exam
Assessment Date: Fall 2020

Assessment Cycle: Every Three Years
Course section(s)/other population: All sections
Number students to be assessed: All enrolled students
How the assessment will be scored: Answers will be scored against an answer key.
Standard of success to be used for this assessment: 70% of students must achieve a score of 70% or higher on the exam.
Who will score and analyze the data: Answers will be blind-scored using software. Data will be analyzed by the lead instructor for the course.

2. Use statistical software in the calculation of confidence intervals, hypothesis tests, and regression analysis.

Assessment 1

Assessment Tool: Departmentally-developed final exam
Assessment Date: Fall 2020
Assessment Cycle: Every Three Years
Course section(s)/other population: All sections
Number students to be assessed: All enrolled students
How the assessment will be scored: Answers will be scored against an answer key.
Standard of success to be used for this assessment: Seventy percent of students must achieve a score of 70% or higher on the exam.
Who will score and analyze the data: Answers will be blind-scored using software. Data will be analyzed by the lead instructor for the course.

3. Interpret the results of statistical analysis in context of the business situation or business decision, from both statistical and practical perspectives.

Assessment 1

Assessment Tool: Departmentally-developed final exam
Assessment Date: Spring/Summer 2020
Assessment Cycle: Every Three Years
Course section(s)/other population: All sections
Number students to be assessed: All enrolled students
How the assessment will be scored: Answers will be scored against an answer key.
Standard of success to be used for this assessment: Seventy percent of students must achieve a score of 70% or higher on the exam.
Who will score and analyze the data: Answers will be blind scored using software. Data will be analyzed by the lead instructor for the course.

Course Objectives

1. Make inferences about a population mean through constructing confidence intervals and performing hypothesis tests using a single sample.
2. Make inferences about a population proportion through constructing confidence intervals and performing hypothesis tests using a single sample.
3. Determine correct sample sizes for a specified error and confidence level.
4. Make inferences about differences in population means through constructing confidence intervals and performing hypothesis tests based on two independent samples.
5. Make inferences about the difference between two population proportions based on independent sampling.
6. Make inferences about the mean difference based on matched-pairs sampling.
7. Test for a difference between the means of three or more (k) populations using ANOVA.

8. Perform a chi-square test for independence.
9. Determine the sample regression equation using simple linear regression and multiple regression.
10. Find and interpret correlation coefficients and coefficient of determination.
11. Construct confidence intervals and perform hypothesis tests for regression parameters.
12. Develop confidence intervals for the estimated mean.
13. Construct prediction intervals for future observations.

New Resources for Course

Online proctoring service

Course Textbooks/Resources

Textbooks

Jaggia/Kelly. *Business Statistics Communicating with Numbers*, 2nd ed. New York: McGraw Hill, 2016, ISBN: 9780078020551.

Manuals

Periodicals

Software

Excel. Microsoft, 2013 or higher ed.

Equipment/Facilities

Level III classroom

Testing Center

Reviewer	Action	Date
Faculty Preparer:		
Rosemary Wilson	*Faculty Preparer*	*Aug 18, 2017*
Department Chair/Area Director:		
Julianne Davies	*Recommend Approval*	*Aug 21, 2017*
Dean:		
Eva Samulski	*Recommend Approval*	*Aug 22, 2017*
Curriculum Committee Chair:		
Lisa Veasey	*Recommend Approval*	*Oct 17, 2017*
Assessment Committee Chair:		
Michelle Garey	*Recommend Approval*	*Oct 18, 2017*
Vice President for Instruction:		
Kimberly Hurns	*Approve*	*Oct 25, 2017*