

Economics and Business Statistics
ECON 156 A MWF 12:50 – 2:00, PPHAC 112
ECON 156 B MWF 2:20 – 3:30, PPHAC 112
Spring 2007
Moravian College

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Office Hours: MWF 10:30 am – 12:00 nn

Course Goals:

1. Develop a research topic that is feasible and that you are interested in examining.
2. Collect a data set, identify the sampling method used, and recognize potential bias.
3. Describe the dataset with tabular, graphical, and numerical methods.
4. Test various hypothesis and construct confidence intervals.
5. Scrutinize and interpret your results and draw meaningful conclusions.
6. Present your data and results in a way that is concise, visually appealing, and provides information to the reader.

Course Topics:

1. Introduction to Statistics
 - Introduction to Research
 - Developing Hypotheses
 - Normal Probability Distributions
 - Populations and Samples
 - Sampling and Sampling Distributions
 - Statistics Terms
2. Descriptive Statistics
 - Tabular and Graphical Methods
 - Numerical Methods
3. Statistical Inference
 - Interval Estimation
 - Hypothesis Testing
 - Comparisons Involving Means
4. Regression Analysis
 - Simple Linear Regression
 - Multiple Linear Regression

Learning Materials:

Textbook: “Essentials of Modern Business Statistics with Microsoft Excel,” 2e, Anderson, Sweeney, and Williams; South-Western Publishing, 2004.

Supplementary Reading: “Freakonomics,” by Steven D. Levitt and Stephan J. Dunbar (HarperCollins Publishers).

Assessment: (see semester calendar on the next page for dates)

Exams: Four exams will contribute to 60% of your final grade (15% each).

Research Projects: Four projects and one final research project will contribute to 30% of your final grade (5% for each project and 10% for the final project).

Assignments: Assignments will be made periodically and will contribute to 5% of your final grade. Assignments may include in-class work that you will need to be present to complete.

Participation and Professionalism: This includes attending class, being on time, being prepared, being attentive, asking questions, contributing to discussions, communicating with me and fellow students, and conducting yourself in a respectful and considerate manner. Participation and professionalism will contribute to 5% of your final grade.

Grades will be assigned to exams, projects, and assignments as follows:
(The grading scales may be adjusted during the semester.)

| <u>Exams and Graded Assignments</u> | | <u>Projects</u> | | <u>Assignments for Completion</u> | |
|-------------------------------------|--------------|-----------------|------|-----------------------------------|------|
| A | 92-100% | A+ | 100% | √ + | 100% |
| A- | 89-91% | A | 95% | √ | 85% |
| B+ | 86-88% | B | 85% | √ - | 70% |
| B | 82-85% | C | 75% | X | 0% |
| B- | 79-81% | D | 65% | | |
| C+ | 76-78% | F | 0% | | |
| C | 72-75% | | | | |
| C- | 69-71% | | | | |
| D+ | 66-68% | | | | |
| D | 62-65% | | | | |
| D- | 59-61% | | | | |
| F | 58% or below | | | | |

Academic Honesty Policy: Please refer to the College's Policy on Academic Honesty in the Student Handbook. www.moravian.edu/studentLife/handbook/academic2.htm.

Colleagues: Introduce yourself to two fellow students and exchange contact information

Name: _____ # _____ email: _____

Name: _____ # _____ email: _____

Economics and Business Statistics

| Semester Calendar: | | | Material (tentative): | Important dates (tentative): |
|--------------------|-----|---|---------------------------------|------------------------------|
| January | 15 | M | Syllabus | |
| | 17 | W | Introduction to Statistics | |
| | 19 | F | Computer/Discussion/Application | Freakonomics Introduction |
| | 22 | M | Introduction to Statistics | |
| | 24 | W | Introduction to Statistics | |
| | 26 | F | Computer/Discussion/Application | Freakonomics Chapters 1 & 2 |
| February | 28 | M | Introduction to Statistics | |
| | 31 | W | Introduction to Statistics | |
| | 2 | F | Computer/Discussion/Application | Freakonomics Chapters 3 & 4 |
| | 5 | M | Introduction to Statistics | |
| | 7 | W | Project 1, Review | Project 1 due |
| | 9 | F | Exam 1 | Exam 1 |
| | 12 | M | Tabular and Graphical Methods | |
| | 14 | W | Tabular and Graphical Methods | |
| | 16 | F | Computer/Discussion/Application | Freakonomics Chapters 5 & 6 |
| | 19 | M | Numerical Methods | |
| | 21 | W | Numerical Methods | |
| | 23 | F | Computer/Discussion/Application | Freakonomics Epilogue |
| March | 26 | M | Numerical Methods | |
| | 28 | W | Project 2, Review | Project 2 due |
| | 2 | F | Exam 2 | Exam 2 |
| | 5 | M | No Class (Spring Recess) | |
| | 7 | W | No Class (Spring Recess) | |
| | 9 | F | No Class (Spring Recess) | |
| | 12 | M | Interval Estimation | |
| | 14 | W | Interval Estimation | |
| | 16 | F | Computer/Discussion/Application | |
| | 19 | M | Hypothesis Testing | |
| | 21 | W | Hypothesis Testing | |
| | 23 | F | Computer/Discussion/Application | |
| | 26 | M | Comparisons Involving Means | |
| | 28 | W | Comparisons Involving Means | |
| | 30 | F | Computer/Discussion/Application | |
| April | 2 | M | Project 3, Review | Project 3 due |
| | 4 | W | Exam 3 | Exam 3 |
| | 6 | F | No Class (Easter Recess) | |
| | 9 | M | No Class (Easter Recess) | |
| | 11 | W | Simple Linear Regression | |
| | 13 | F | Computer/Discussion/Application | |
| | 16 | M | Simple Linear Regression | |
| | 18 | W | Multiple Linear Regression | |
| | 20 | F | Computer/Discussion/Application | |
| | 23 | M | Multiple Linear Regression | |
| | 25 | W | Project 4, Review | Project 4 due |
| | 27 | F | Exam 4 | Exam 4 |
| FINAL EXAM | TBA | | Final Research Project | Final Research Project due |