



## Statistical Techniques

BQM 450 [all sections]

Southwestern College Professional Studies

## COURSE SYLLABUS

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### I. Course Catalog Description

The course is a survey of descriptive and inferential statistics, probability theory, sampling theory, hypothesis testing, and study of variability, regression and correlation. Emphasis will be placed on statistical applications and how to apply statistics in reducing large amounts of data into a meaningful form for effective decision making.

### II. Required and Supplementary Instructional Materials

Lind, D., Marchal, W., & Wathen, S. (2012). *Statistical techniques in business and economics* (15th ed.). New York, NY: McGraw-Hill.

### III. Course Delivery

There are two forms of course delivery Ground and Online:

Ground courses, or those that meet face-to-face on a weekly basis, also have an online component, which means some of the course content is delivered online. Southwestern College utilizes the Blackboard (Bb) learning management system.

Online courses typically contain a blend of synchronous (real-time) and asynchronous (not real-time) material. Depending on the course, you may be required at times to interact “live,” which might mean attending a scheduled Collaborate session. You may also be required to view or listen to a lecture or other video on a specific date and time. Of course, if there are circumstances that prohibit you from logging in to a scheduled synchronous activity, an alternate assignment will be provided. Please refer to the [Course at a Glance](#) section which will note any synchronous activities.

### IV. Learning Outcomes

Learning outcomes describe the knowledge, skills, values, and attitudes that learners gain as the result of a particular learning experience. Southwestern College Professional Studies has learning outcomes specific to each course and each [undergraduate](#) and [graduate](#) program of study, as well as [institution-wide outcomes](#) related to the mission and vision of the college. Outcomes can help learners and instructors focus on the big picture of the learning experience and can help inform potential employers about a graduate’s knowledge and skills.

Upon successfully completing this course, the learner will be able to:

- Explain topics, such as frequency distribution, elementary probability theory, estimation, hypothesis testing, and regression analysis
- Evaluate and select the appropriate statistical techniques to solve practical problems in business and economics
- Use statistical software such as MS Excel to solve business and economic problems
- Read and interpret computer-generated statistical outputs

At the end of the course, learners may vary in their ability to achieve these outcomes. You are more likely to achieve these outcomes only if you attend class and/or online activities as required by the syllabus, complete the requirements for all assignments to the best of your ability, participate actively in class activities and group work as directed, and study diligently for exams.

### V. Expectations

Learners can expect the instructor to:

- Respond to e-mail and phone contact attempts promptly (if you do not receive a response after 48 hours please follow-up as a technology glitch may have occurred)
- Substantially participate in weekly discussions/lecture
- Employ impartial and consistent grading practices
- Provide assignment grades and feedback in one week or less

Instructors can expect the learner to:

- Review the syllabus in its entirety requesting clarification prior to beginning week 1 coursework
- Obtain access to the required course materials prior to the class start date or notify the instructor of any delay no later than Tuesday of week 1 of the course
- Submit course assignment questions with enough notice to receive and incorporate feedback prior to the assignment due date (see [course late policy](#))
- Possess basic skills in Microsoft Office, and have the ability to access Blackboard
- Include the [course ID](#) (Ex: CORE101) on all e-mail correspondence
- Check Blackboard course announcements often during the course
- Communicate with instructors and classmates in a professional and respectful manner
- Substantially participate in weekly discussion/lecture (it is strongly suggested that Bb posts be prepared in a word processing software application then checked for grammar errors prior to submission)
- Submit assignments via the appropriate avenue (e.g. discussion board, Bb assignment link, etc.)
- Adhere to the Southwestern College [Student Code of Conduct](#) and [Standards of Academic Integrity](#)
- Create and submit original work

**VI. Grading Scale and Criteria**

<u>Grade</u>	<u>Quality Points</u>	<u>Course Scale</u>
A+	4.00	100%
A	4.00	94.0-99.9%
A-	3.67	90.0-93.9%
B+	3.33	87.0-89.9%
B	3.00	84.0-86.9%
B-	2.67	80.0-83.9%
C+	2.33	77.0-79.9%
C	2.00	74.0-76.9%
C-	1.67	70.0-73.9%
D+	1.33	67.0-69.9%
D	1.00	64.0-66.9%
D-	0.67	60.0-63.9%
F	0.00	< 60.0%

<u>Grade:</u>	<u>Criteria and Guidelines:</u>
A+	The grade of A+ is reserved for a perfect score (100%) of all work in a course.
A	Superior work: Superior performance that far exceeds the minimum expectations and demonstrates an excellent understanding of the concepts addressed in the course.
B	Above average work: Good performance that exceeds the minimum expectations and demonstrates a higher than average understanding of the concepts addressed in the course.
C	Average Work: Adequate performance that meets the minimal expectations and demonstrates a basic understanding of the concepts addressed in the course.
D	Minimally acceptable work for receiving credit: Below average performance that does not meet the minimum expectations and/or does not demonstrate a basic understanding of the concepts addressed in the course.
F	Failure: Unacceptable performance (in a professional context, this means “you’re fired.”)
WF	Withdraw/Fail: A final grade of WF will be recorded for learners who either never access/attend or submit any assignments for courses.
WD, AW, I, S, W, WM	Please refer to the <a href="#">Grading System</a> section of the appropriate catalog.

## VII. College Policies

Students are expected to read and abide by the college policies as listed in the appropriate catalog:

- [Undergraduate Catalog](#): For learners who do not possess a bachelor’s degree, are pursuing an additional bachelor’s degree or for graduate learners who are enrolled in 100-400 level courses.
- [Graduate Catalog](#): For learners who have earned a bachelor’s degree and are pursuing a master’s degree or graduate level certificate or learners who are enrolled in 500+ level courses.

[Non-Discrimination Policy](#)

[Student Code of Conduct](#)

[Academic Integrity Policy](#)

[Policies for Dealing with Violations of Academic Integrity](#)

[Incomplete Policy](#)

[Withdraw Policy](#)

## VIII. Course Policies

Students are expected to read and abide by the course policies listed in the instructor-specific syllabus located in the Blackboard course.

## IX. [Technology Requirements](#)

### X. Citation

Check the Academic Resources link in the course menu of your Blackboard course to find the specific requirements and resources for formatting manuscripts and documenting various kinds of sources when submitting written work.

### XI. SafeAssign®

This instructor may use SafeAssign®, which is a system that allows for checking the originality of writing and proper citing. Your assignments may be run through this software.

## XII. Course Requirements:

Requirements	Number of Assignments	Points Possible	Percent of Grade
Discussions	6	150	15
Chapter Exercises	21	315	31.5
Midterm Exam	1	150	15
Final Exam	1	150	15
Research Project	1	235	23.5
<b>Total Points</b>		<b>1,000</b>	<b>100</b>

### XIII. Course at a Glance:

Unit	Reading & Preparation Activities	Graded Work Due
1	<ul style="list-style-type: none"> <li>• Introductions discussion forum</li> <li>• Course Software document</li> <li>• <i>Lind, Marchal &amp; Wathen</i>, Chapters 1-3</li> <li>• Chapter 1-3 PowerPoints</li> <li>• Making Histograms, Frequency Polygons and Ogives using MS Excel document</li> <li>• Inferential &amp; Descriptive video</li> <li>• Statistics: Standard Deviation video</li> </ul>	<ul style="list-style-type: none"> <li>• Unit 1 Discussion</li> <li>• Unit 1 Chapter Exercises</li> </ul>
2	<ul style="list-style-type: none"> <li>• <i>Lind, Marchal &amp; Wathen</i>, Chapters 4-5</li> <li>• Chapter 4-5 PowerPoints</li> <li>• Research Project Assignment</li> <li>• Stem and Leaf Plot video</li> <li>• Box-and-Whisker Plots video</li> <li>• Probability explained video</li> </ul>	<ul style="list-style-type: none"> <li>• Unit 2 Discussion</li> <li>• Unit 2 Chapter Exercises</li> <li>• Unit 2 Research Project Topic</li> </ul>
3	<ul style="list-style-type: none"> <li>• <i>Lind, Marchal &amp; Wathen</i>, Chapters 6-7</li> <li>• Chapter 6-7 PowerPoints</li> <li>• Review <i>Lind, Marchal &amp; Wathen</i>, Chapters 1-5</li> <li>• Confidence Intervals using Large &amp; Small Samples document</li> <li>• Confidence Intervals using MiniTab document</li> <li>• Binomial distributions video</li> </ul>	<ul style="list-style-type: none"> <li>• Unit 3 Discussion</li> <li>• Unit 3 Chapter Exercises</li> <li>• Midterm Exam</li> </ul>
4	<ul style="list-style-type: none"> <li>• <i>Lind, Marchal &amp; Wathen</i>, Chapters 8-9</li> <li>• Chapter 8-9 PowerPoints</li> <li>• Central Limit Theorem video</li> </ul>	<ul style="list-style-type: none"> <li>• Unit 4 Discussion</li> <li>• Unit 4 Chapter Exercises</li> </ul>
5	<ul style="list-style-type: none"> <li>• <i>Lind, Marchal &amp; Wathen</i>, Chapters 10-11</li> <li>• Chapter 10-11 PowerPoints</li> <li>• Hypothesis Testing Examples document</li> <li>• One tailed and two tailed tests video</li> </ul>	<ul style="list-style-type: none"> <li>• Unit 5 Discussion</li> <li>• Unit 5 Chapter Exercises</li> </ul>
6	<ul style="list-style-type: none"> <li>• <i>Lind, Marchal &amp; Wathen</i>, Chapters 12-13</li> <li>• Chapter 12-13 PowerPoint</li> <li>• Regression Examples A document</li> <li>• Review <i>Lind, Marchal &amp; Wathen</i>, Ch. 7-11</li> <li>• ANOVA Hypothesis test with F statistic video</li> </ul>	<ul style="list-style-type: none"> <li>• Unit 6 Discussion</li> <li>• Unit 6 Research Project</li> <li>• Final Exam</li> </ul>

### XIV. College Resources

[Advising](#)

[Self-Service](#)

[Withdraw Form](#)

[Blackboard Learn](#)

[SCPS Bookstore](#)

[Deets Library](#)

[Online Writing Center](#): View this brief [video tutorial](#) that explains how to enroll in Blackboard

IT Support: [Marilyn.clements@sckans.edu](mailto:Marilyn.clements@sckans.edu) or 888-684-5335 x.121

**XV. ADA Compliance Statement**

Southwestern College Professional Studies is committed to making reasonable accommodations for qualified students with documented disabilities. If you have a disability that may impact your learning and for which you may need accommodations, please notify the Director of Learner Support and Academic Success, at 888.684.5335.

**XVI. Senior Capstone and Graduate Projects:**

The majority of the programs offered by Southwestern College Professional Studies conclude with a Senior Capstone or Graduate Project. During the Capstone or Project course students will be required to retrieve papers, assignments and projects that they created during their entire program of study. For this reason it is imperative that students design a method of storing program course work for use during their final class at Southwestern College Professional Studies.