

**MIDSTATE COLLEGE**  
**411 W NORTHMOOR RD**  
**PEORIA, IL 61614**  
**(309) 692-4092 or (800) 251-4299**  
**Summer 2019**  
**Tuesday: 6:00 p.m. – 9:30 p.m.**

**Course Number & Name:** BUS310-Quantitative Analysis (Advanced Statistics)

**Credit Hours:** 4 Quarter Hours

**Method of Delivery:** Flex Learning

**Classroom:** 500

**Course Description:**

This course provides an advanced application of survey and sampling design, multiple regression, analysis of variance, and research models with emphasis placed on writing research reports.

**Textbook:** Statistical Techniques in Business & Economics, 16<sup>th</sup> Ed.

ISBN: 9780078020520

**Authors:** Lind, Marchal, & Wathen

**Publisher:** McGraw-Hill

**Mathematic Software:** You can use GeoGebra to enhance the learning of mathematical concepts. This program is installed on all the computers in the library. You will find it on your desktop. To install it at home go the following link: <http://www.geogebra.org/download>. I'll also show how to go use Excel for various techniques, but you are \*not\* required to purchase it.

**Prerequisite(s):** BUS232 Business Statistics

**Topics:** Introduction to statistics, data collection, graphing, box plots, population and sample mean, population and sample variance, standard deviation, probability, binomial distribution, Poisson distribution, normal distribution, the central limit theorem, confidence intervals for a population mean and a population proportion, hypothesis testing (population means and population proportions), ANOVA (analysis of variance), nonparametric statistics.

**Learning Objectives:**

Upon completion of this course, the student will be able to:

1. Relate how statistics in business are used in controlling the operating of a business and in the decision making process.
2. Use statistics as a decision aid.
3. Analyze and evaluate data from a variety of sources.
4. Apply regression models in business.
5. Test hypotheses about population proportions.
6. Test hypotheses about population means.
7. Perform parametric and nonparametric tests.

**Midstate Grading Scale:**

90 – 100%	A
80 – 89%	B
70 – 79%	C
60 – 69%	D
0 – 59%	F

**Instructor:**

Name: Taki Nagase

E-mail: [tnagase@midstate.edu](mailto:tnagase@midstate.edu)

Phone: 309-692-4092 ext. 1380

Office Hours: Thursday, 5:00 p.m. – 6:00 p.m. Room: 500

**Grading Specifications:**

Participation/Forum	20%
Homework	30%
Weekly Quizzes	20%
Mid-term exam	15%
Final exam	15%

**Points for Assignments and Exams:**

	Homework	Attendance	Quiz	Exams
Week 1	10	10	10	
Week 2	10	10	10	
Week 3	10	10	10	
Week 4	10	10	10	
Week 5	10	10	10	
Week 6				100
Week 7	10	10	10	
Week 8	10	10	10	
Week 9	10	10	10	
Week 10	10	10	10	
Week 11	10	10	10	
Week 12				100

**Academic Integrity:**

Academic integrity is a basic principle of the College's function. Midstate College students are expected to maintain a high level of academic honesty. Contrary actions may result in penalties such as failure of the assignment(s), a lesser grade on assignment(s), failure of the course and/or suspension from the College. The course instructor will review all submitted documents and supporting evidence in connection to the infraction. The course instructor will also review the student's personal file for other

notifications of academic dishonesty before determining the level of action to be applied. The course instructor will complete the Academic Dishonesty Report form to document and describe the incident and actions taken, then kept on file. The student may appeal the decision to administration, whose decision will be final.

The following (**plagiarism, cheating, deception, sabotage, computer misuse and copyright infringement**) are included in the actions Midstate College considers behavior contrary to the academic integrity policy; however, the policy is not limited to these examples. Further discussion of consequences regarding academic dishonesty are addressed in the Student Handbook.

### **Plagiarism:**

Plagiarism is using another person's words, either by paraphrase or direct quotation, without giving credit to the author(s). Plagiarism can also consist of cutting and pasting material from electronic sources by submitting all or a portion of work for assignment credit. This includes papers, computer programs, music, sculptures, paintings, photographs, etc. authored by another person without explicitly citing the original source(s). These actions violate the trust and honesty expected in academic work. Plagiarism is strictly against the academic policy of Midstate College. Its seriousness requires a measured, forceful response which includes consequences for inappropriate and/or no citation.

In courses containing writing assignments, the College promotes the use of Turnitin which compares the student's writing against previously submitted papers, journals, periodicals, books, and web pages. Students and instructors can use this service to reduce the incidence of plagiarism. This electronic resource has been found to conform to legal requirements for fair use and student confidentiality. It is able to provide a report to the student indicating the parts of the assignment that match.

### **Student Success and Tutoring:**

Contact Student Success: Room 110; (309) 692-4092, ext. 1100; [studentsuccess@midstate.edu](mailto:studentsuccess@midstate.edu);

The Office of Student Success offers help in the following areas:

- Tutoring: Tutoring is encouraged for students who are doing their best to complete assignments yet still are experiencing difficulty in this course. Tutoring may be provided by the instructor outside of scheduled class times or through the office of Student Success.
- Writing assignment assistance: This may include learning how to conduct research; using proofreading tools such as Turnitin; outlining a topic; and applying MLA/APA standards.
- Math, accounting, and computer skills (including file management).
- Test-taking techniques.
- Note-taking skills development.
- Study skills development.
- Time management.

### **Policies and Procedures:**

1. Attendance: Your attendance will be determined for each week by **whether or not you attend class or submit substantial gradable work**. Absences will result in a reduction of the final course grade.

2. Discussion Forum: Each week you will be asked to respond to a Class Forum question. The **initial response** has to be posted for full credit **by midnight on Thursday** each week. In addition to writing your own answer, each week you will compose a response to at least one answer posted by another student. Discussion Forum is open at noon on Monday, and **closed at 8:00 a.m. on the following Monday** each week.
3. Homework: Weekly homework will be assigned on the material covered that week. You are required either to submit homework in class, or submit it to the appropriate drop box (i.e. Week 1 Homework Drop Box). Homework is **due by 8:00 a.m. on Monday** each week except during the midterm and final examination week. **Late homework will be accepted with a 50% penalty. No late homework is accepted after one week of the due date.** You must **show work** to receive credit on the homework.
4. Quizzes: Quizzes will be given on a weekly basis except during the midterm and final week. Quizzes are **due by 8:00 a.m. on Monday** each week. Late quizzes will be accepted for up to one week following the due date with a 50% penalty.
5. Exams: There will be 2 exams, a midterm and final. **No late examination is accepted.** The midterm and final examination **are open at noon on Monday and be due by 8:00 a.m. on the following Monday. Do not leave it to the last moment to take an examination.**

For details on the Discussion Forum and homework, refer to the Discussion Forum and homework instructions, which are presented each week. Students are not expected to respond to the Discussion Forum nor homework on the weeks of the mid-term and final exam.

### **Participation Requirements:**

**eLearning:** In accordance with Midstate College policies, class material will be made available in our learning management system (Moodlerooms) on Monday at 12:00 p.m. of each week and will remain available until the following Monday until 8:00 AM. This allows students one week to access the lecture and related material for that week's session, complete any assignments and/or assessments, and participate in the mandatory discussion and summary boards (see my discussion/summary requirements rubric in Moodlerooms to ensure full credit in forums). Students must "submit substantial gradable work" in order to be marked as present for each week (see the Midstate eLearning policy on attendance in the student eLearning handbook). While each week extends from Monday at 12:00 PM to the following Monday at 8:00 AM, the instructor has the right to set due dates at their discretion within each week. Certain assignments, exams, and papers/projects may be due in the middle of the week at specified days and times.

### **Barbara Fields Memorial Library:**

*This course may utilize the Midstate College Library resources. Below is information for contacting and using the library as an outstanding resource to meet the requirements of this course and/or to enhance student learning.*

#### **Contact Information:**

Librarian:

Location: Room 403

Phone: (309) 692-4092 ext. 4030

Fax: (309) 692-3893

Email: [library@midstate.edu](mailto:library@midstate.edu)

#### **Library Hours:**

Monday – Thursday 8:00 a.m. – 8:00 p.m.

Friday 8:00 a.m. – 4:30 p.m.

Saturday 9:00 a.m. – 12:00 p.m.

### Library Resources:

The Barbara Fields Memorial Library, located in Room 403 of the R. Dale Bunch Student Center, contains books, periodicals, and other materials to support the educational and cultural needs of students, faculty, and staff. Computers are available for student use during library hours.

The library also subscribes to several online research resources that give immediate access to digitized versions of professionally-published content such as books, journal articles, popular magazines and the like.

### Research Guides:

Library guides are organized by subject that will give you access to all of the library resources like books, eBooks, reference materials, articles from subscription databases, business news and articles, company research, industry and economic data, tools for business & writing and citation help. Also, you'll find links to websites, videos, tutorials, and more!

Access the Business Research Guides at this location: <http://midstate.libguides.com/business> or, follow the steps below:

1. Visit [www.midstate.edu](http://www.midstate.edu)
2. Click on Library Resources at bottom of page
3. Click on "Click the Cloud!" (in light blue color in middle of page)

### Tentative weekly Schedule

Week	Chapter	Topic	Learning Objective
1		Introduction to the Class	
2	Ch. 6	Discrete Probability Distributions	1, 2
3	Ch. 7	Continuous Probability Distributions	1, 2, 3
4	Ch. 8 &9	Sampling Distribution and the Central Limit Theorem Estimation and Confidence Intervals	1, 2, 3
5	Ch. 10	One-Sample Tests of Hypothesis	1, 2, 3,5,6
6	Midterm Exam		
7	Ch. 11	Two-Sample Tests of Hypothesis	1, 2, 3,5,6

<b>8</b>	Ch. 12	Analysis of Variance	1, 2, 3,5,6
<b>9</b>	Ch. 13	Correlation and Linear Regression	1, 2, 3, 4
<b>10</b>	Ch. 14	Multiple Regression	1, 2, 3, 4
<b>11</b>	Ch. 16	Nonparametric Methods Final Review	1, 2, 3, 5, 6, 7
<b>12</b>	Final Exam		