Course Description

Introduces students to basic statistical principles and calculations as applied in the healthcare environment. Focuses on procedures for collecting and reporting vital statistics and basic quality control population statistics. In addition, students learn the fundamentals of displaying statistical information using a variety of graphs and charts.

Course Textbook


Course Learning Outcomes

Upon completion of this course, students should be able to:

1. Explain how statistics are used in healthcare.
2. Differentiate between descriptive and inferential statistics.
3. Formulate statistics that meet medical and administrative reporting needs and requirements of government regulatory and voluntary agencies.
4. Prepare statistical reports to support healthcare information and department operations and services.
6. Utilize appropriate methods of data display.

Credits

Upon completion of this course, the students will earn three (3) hours of college credit.

Course Structure

1. **Unit Learning Outcomes:** Each unit contains Learning Outcomes that specify the measurable skills and knowledge students should gain upon completion of the unit.
2. **Unit Lesson:** Each unit contains a Unit Lesson, which discusses unit material.
3. **Reading Assignments:** Each unit contains Reading Assignments from one or more chapters from the textbook. Suggested Readings are listed in Units I, II, III, and VI. The readings themselves are not provided in the course, but students are encouraged to read the resources listed if the opportunity arises as they have valuable information that expands upon the lesson material.
4. **Discussion Boards:** Discussion Boards are part of all CSU term courses. More information and specifications can be found in the Student Resources link listed in the Course Menu bar.
5. **Unit Assessments:** This course contains seven Unit Assessments, one to be completed at the end of Units I-VII. Assessments are composed of written response questions.
6. **Unit Assignments:** Students are required to submit for grading Unit Assignments in Units I-VIII. Specific information and instructions regarding these assignments are provided below. Grading rubrics are included with the Unit I-VIII Assignments. Specific information about accessing these rubrics is provided below.
7. **Final Exam (Proctored):** Students are to complete a Final Exam in Unit VIII. All Final Exams are proctored—see below for additional information. You are permitted four (4) hours to complete this exam in the presence of your approved proctor. This is an open book exam. Only course textbooks and a calculator, if necessary, are allowed when taking proctored exams. The Final Exam is composed of multiple-choice and written response questions.
8. **Ask the Professor:** This communication forum provides you with an opportunity to ask your professor general or course content related questions.

9. **Student Break Room:** This communication forum allows for casual conversation with your classmates.

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**CSU Online Library**

The CSU Online Library is available to support your courses and programs. The online library includes databases, journals, e-books, and research guides. These resources are always accessible and can be reached through the library webpage. To access the library, log into the myCSU Student Portal, and click on “CSU Online Library.” You can also access the CSU Online Library from the “My Library” button on the course menu for each course in Blackboard.

The CSU Online Library offers several reference services. E-mail (library@columbiasouthern.edu) and telephone (1.877.268.8046) assistance is available Monday – Thursday from 8 am to 5 pm and Friday from 8 am to 3 pm. The library’s chat reference service, **Ask a Librarian**, is available 24/7; look for the chat box on the online library page.

Librarians can help you develop your research plan or assist you in finding relevant, appropriate, and timely information. Reference requests can include customized keyword search strategies, links to articles, database help, and other services.

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**Unit Assignments**

**Unit I Article Review**

For this assignment, choose a peer-reviewed article to review. Use the databases within the CSU Online Library, or use another source that contains peer-reviewed articles. Choose the article from one of the following topics:

- statistics in health care
- data collection related to health care
- ambulatory care
- residential care

The purpose of this assignment is for you to practice reviewing articles that contribute to the industry. The authors of these articles are researchers and professionals who have shared or experimented with ideas that demonstrate potential to improve the industry. As a professional in the industry, it is in your best interest to review the literature and trends. This provides you with the opportunity to read about what was successful and how it was accomplished. Plus, it allows you to analyze what was unsuccessful, how you can improve it, or at least how you can avoid repeating the mistakes of others. Use these skills to contribute to research papers and other scholarly writings. If you have not already, hopefully, you will contribute to the industry by publishing an article and sharing with your community of peers.

As you read the article you choose for this assignment, consider the following questions: How could the topic of this article apply to your personal or professional life? How could it apply to an organization you have observed?

The article you choose must meet the following requirements:

- be peer reviewed.
- relate to the concepts within this course, and
- be at least ten pages in length.

The writing you submit must meet the following requirements:

- Be at least two pages in length,
- identify the main topic/question,
- identify the author’s intended audience, and
- summarize the article, analyze the article, evaluate how the article is related to your topic, and explain what you learn from this article.

Format your Article Review using APA style. Use your own words, and include citations and references as needed to avoid plagiarism.
Information about accessing the Blackboard Grading Rubric for this assignment is provided below.

Unit II Homework

Please complete the Chapter 3 Test on pages 59-61, and Chapter 4 Test, questions 7-16, on pages 79-82. Calculations must be shown in order to receive credit for this assignment.

Information about accessing the Blackboard Grading Rubric for this assignment is provided below.

Unit III Homework

Please complete the Chapter 5 Test on pages 95-100, and Chapter 6 Test, questions 8-12, on pages 113-115. Calculations must be shown in order to receive credit for this assignment.

Information about accessing the Blackboard Grading Rubric for this assignment is provided below.

Unit IV Homework

Please complete the Chapter 7 Test, questions 5-13, on pages 129-131. Calculations must be shown in order to receive credit for this assignment.

Information about accessing the Blackboard Grading Rubric for this assignment is provided below.

Unit V PowerPoint Presentation

Create a PowerPoint Presentation, 7 to 10 slides, based on the knowledge you have learned within this unit. Please make sure to include information about obstetrical-related rates and autopsy rates. How might the knowledge of these areas contribute to your future? How are they being used in healthcare today? Do you feel that this unit increased your overall expectations of statistics in health care? Please make sure to include detail and reasoning in your responses.

You may use various sources, including your textbook or other scholarly material. Since you will not be presenting this PowerPoint to your instructor in person, add written explanation for the contents of your slides when necessary. You may use the PowerPoint slide notes function to provide brief explanations.

Visual emphasis such as bold, italicized, or underlined text, should be used sparingly in order to maximize the prominence of key points. Each slide should address a single concept, and slides should follow a logical progression, each building on the other.

Information about accessing the Blackboard Grading Rubric for this assignment is provided below.

Unit VI Homework

Complete the Chapter 10 Test, questions 2-11, on pages 189-193, and Chapter 11 Test on pages 211-212. Calculations must be shown in order to receive credit for this assignment.

Information about accessing the Blackboard Grading Rubric for this assignment is provided below.

Unit VII PowerPoint Presentation

Create a PowerPoint Presentation, 7 to 10 slides, based on the knowledge you have learned within this unit. Please make sure to include information on frequency distributions and measures of central tendency and variation. How might the knowledge of these areas contribute to your future? How are they being used in healthcare today? Do you feel that this unit increased your overall expectations of statistics in health care? Please make sure to include detail and reasoning in your responses.

You may use various sources, including your textbook or other scholarly material. Since you will not be presenting this PowerPoint to your instructor in person, you may sometimes need to add written explanation for the contents of your slides. If this becomes necessary, you may use the PowerPoint slide notes function to provide brief explanations.

Visual emphasis such as bold, italicized, or underlined text, should be used sparingly in order to maximize the prominence of key points. Each slide should address a single concept, and slides should follow a logical progression, each building on the other.
Information about accessing the Blackboard Grading Rubric for this assignment is provided below.

Unit VIII Homework

Please complete the Chapter 14 Test on pages 287-290. Calculations must be shown in order to receive credit for this assignment.

Information about accessing the Blackboard Grading Rubric for this assignment is provided below.

APA Guidelines

The application of the APA writing style shall be practical, functional, and appropriate to each academic level, with the primary purpose being the documentation (citation) of sources. CSU requires that students use APA style for certain papers and projects. Students should always carefully read and follow assignment directions and review the associated grading rubric when available. Students can find CSU’s Citation Guide by clicking here. This document includes examples and sample papers and provides information on how to contact the CSU Success Center.

Grading Rubrics

This course utilizes analytic grading rubrics as tools for your professor in assigning grades for all learning activities. Each rubric serves as a guide that communicates the expectations of the learning activity and describes the criteria for each level of achievement. In addition, a rubric is a reference tool that lists evaluation criteria and can help you organize your efforts to meet the requirements of that learning activity. It is imperative for you to familiarize yourself with these rubrics because these are the primary tools your professor uses for assessing learning activities.

Rubric categories include: (1) Discussion Board, (2) Assessment (Written Response), and (3) Assignment. However, it is possible that not all of the listed rubric types will be used in a single course (e.g., some courses may not have Assessments).

The Discussion Board rubric can be found within Unit I’s Discussion Board submission instructions.

The Assessment (Written Response) rubric can be found embedded in a link within the directions for each Unit Assessment. However, these rubrics will only be used when written-response questions appear within the Assessment.

Each Assignment type (e.g., article critique, case study, research paper) will have its own rubric. The Assignment rubrics are built into Blackboard, allowing students to review them prior to beginning the Assignment and again once the Assignment has been scored. This rubric can be accessed via the Assignment link located within the unit where it is to be submitted. Students may also access the rubric through the course menu by selecting “Tools” and then “My Grades.”

Again, it is vitally important for you to become familiar with these rubrics because their application to your Discussion Boards, Assessments, and Assignments is the method by which your instructor assigns all grades.

Final Examination Guidelines

Final Exams are to be administered to students by an approved Proctor. CSU approves two, flexible proctoring options: a standard Proctor, who is chosen by the student and approved by the university, or Remote Proctor Now (RP Now), an on-demand, third-party testing service that proctors examinations for a small fee.

Students choosing RP Now must have an operational webcam/video with audio, a high-speed Internet connection, and the appropriate system rights required to download and install software.

To review the complete Examination Proctor Policy, including a list of acceptable Proctors, Proctor responsibilities, Proctor approval procedures, and the Proctor Agreement Form, go to the myCSU Student Portal from the link below.

http://mycsu.columbiasouthern.edu

You are permitted four (4) hours to complete this exam in the presence of your approved Proctor. This is an open book exam. Only course textbooks, writing utensils, and a calculator, if necessary, are allowed when taking proctored exams.
Other materials are not permitted unless specified in the examination instructions and only the sources identified in the instructions may be used as source material.

**Communication Forums**

These are non-graded discussion forums that allow you to communicate with your professor and other students. Participation in these discussion forums is encouraged, but not required. You can access these forums with the buttons in the Course Menu. Instructions for subscribing/unsubscribing to these forums are provided below.

[Click here for instructions on how to subscribe/unsubscribe and post to the Communication Forums.](#)

**Ask the Professor**

This communication forum provides you with an opportunity to ask your professor general or course content questions. Questions may focus on Blackboard locations of online course components, textbook or course content elaboration, additional guidance on assessment requirements, or general advice from other students.

Questions that are specific in nature, such as inquiries regarding assessment/assignment grades or personal accommodation requests, are NOT to be posted on this forum. If you have questions, comments, or concerns of a non-public nature, please feel free to email your professor. Responses to your post will be addressed or emailed by the professor within 48 hours.

Before posting, please ensure that you have read all relevant course documentation, including the syllabus, assessment/assignment instructions, faculty feedback, and other important information.

**Student Break Room**

This communication forum allows for casual conversation with your classmates. Communication on this forum should always maintain a standard of appropriateness and respect for your fellow classmates. This forum should NOT be used to share assessment answers.

**Grading**

- Discussion Boards (8 @ 1%) = 8%
- Unit Assessments (7 @ 5%) = 35%
- Homework (5 @ 5%) = 25%
- PowerPoint Presentations (2 @ 5%) = 10%
- Unit I Article Review = 5%
- Final Exam = 17%
- Total = 100%

**Course Schedule/Checklist (PLEASE PRINT)**

The following pages contain a printable Course Schedule to assist you through this course. By following this schedule, you will be assured that you will complete the course within the time allotted.
By following this schedule, you will be assured that you will complete the course within the time allotted. Please keep this schedule for reference as you progress through your course.

### Unit I  Statistical Terminology and Patient Data Collection

<table>
<thead>
<tr>
<th>Review</th>
<th>Unit Study Guide</th>
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</table>
| Read         | - **Chapter 1:** Statistical Terminology and Health Care Data  
               - **Chapter 2:** Health Care Overview and Patient Data Collection  
               - **Suggested Reading:** See Study Guide |
| Discuss      | - **Discussion Board Response:** Submit your response to the Discussion Board question by Saturday, 11:59 p.m. (Central Time)  
               - **Discussion Board Comment:** Comment on another student’s Discussion Board response by Tuesday, 11:59 p.m. (Central Time) |
| Submit       | - **Assessment** by Tuesday, 11:59 p.m. (Central Time)  
               - **Article Review** by Tuesday, 11:59 p.m. (Central Time) |

**Notes/Goals:**

### Unit II  Mathematical Review & Census

<table>
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<th>Review</th>
<th>Unit Study Guide</th>
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| Read         | - **Chapter 3:** Mathematical Review  
               - **Chapter 4:** Census  
               - **Suggested Reading:** See Study Guide |
| Discuss      | - **Discussion Board Response:** Submit your response to the Discussion Board question by Saturday, 11:59 p.m. (Central Time)  
               - **Discussion Board Comment:** Comment on another student’s Discussion Board response by Tuesday, 11:59 p.m. (Central Time) |
| Submit       | - **Assessment** by Tuesday, 11:59 p.m. (Central Time)  
               - **Homework** by Tuesday, 11:59 p.m. (Central Time)  
               - **Proctor Approval Form** |

**Notes/Goals:**
## Unit III: Percent of Occupancy & Length of Stay/Discharge Days

**Review:**
- Unit Study Guide

**Read:**
- **Chapter 5:** Percent of Occupancy
- **Chapter 6:** Length of Stay/Discharge Days
- **Suggested Reading:** See Study Guide

**Discuss:**
- **Discussion Board Response:** Submit your response to the Discussion Board question by Saturday, 11:59 p.m. (Central Time)
- **Discussion Board Comment:** Comment on another student’s Discussion Board response by Tuesday, 11:59 p.m. (Central Time)

**Submit:**
- **Assessment** by Tuesday, 11:59 p.m. (Central Time)
- **Homework** by Tuesday, 11:59 p.m. (Central Time)

## Unit IV: Hospital Mortality Rates

**Review:**
- Unit Study Guide

**Read:**
- **Chapter 7:** Hospital Mortality Rates

**Discuss:**
- **Discussion Board Response:** Submit your response to the Discussion Board question by Saturday, 11:59 p.m. (Central Time)
- **Discussion Board Comment:** Comment on another student’s Discussion Board response by Tuesday, 11:59 p.m. (Central Time)

**Submit:**
- **Assessment** by Tuesday, 11:59 p.m. (Central Time)
- **Homework** by Tuesday, 11:59 p.m. (Central Time)

Notes/Goals:
## Unit V: Obstetrical Related Rates & Autopsy Rates

**Review:**
- Unit Study Guide

**Read:**
- Chapter 8: Obstetrical-Related Rates
- Chapter 9: Autopsy Rates

**Discuss:**
- **Discussion Board Response:** Submit your response to the Discussion Board question by Saturday, 11:59 p.m. (Central Time)
- **Discussion Board Comment:** Comment on another student’s Discussion Board response by Tuesday, 11:59 p.m. (Central Time)

**Submit:**
- **Assessment** by Tuesday, 11:59 p.m. (Central Time)
- **PowerPoint Presentation** by Tuesday, 11:59 p.m. (Central Time)

## Notes/Goals:

## Unit VI: Miscellaneous Rates & Vital Statistics Data/Rates

**Review:**
- Unit Study Guide

**Read:**
- Chapter 10: Miscellaneous Rates
- Chapter 11: Vital Statistics Data/Rates
- **Suggested Reading:** See Study Guide

**Discuss:**
- **Discussion Board Response:** Submit your response to the Discussion Board question by Saturday, 11:59 p.m. (Central Time)
- **Discussion Board Comment:** Comment on another student’s Discussion Board response by Tuesday, 11:59 p.m. (Central Time)

**Submit:**
- **Assessment** by Tuesday, 11:59 p.m. (Central Time)
- **Homework** by Tuesday, 11:59 p.m. (Central Time)

## Notes/Goals:
## Course Schedule

### Unit VII
**Frequency Distribution & Measures of Central Tendency and Variation**

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<th>Review:</th>
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<td>Read:</td>
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<td>- <strong>Chapter 12:</strong> Frequency Distribution</td>
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<td>- <strong>Chapter 13:</strong> Measures of Central Tendency and Variation</td>
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<td>- <strong>Request to take Final Exam</strong></td>
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### Notes/Goals:

### Unit VIII
**Data Presentation**

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<td>Read:</td>
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<tr>
<td>- <strong>Chapter 14:</strong> Data Presentation</td>
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