

# Syllabus Statistics for the Health Professions

## Course Information:

Course title: Introductory Statistics for the Health Professions

Course number: MATH 1005

Course description: Statistics for the Health Professions is designed for students entering a medical profession that requires a prerequisite statistics course. The four-credit hour, one- semester course can be taken by anyone with Internet access from anywhere in the world.

This course contains the same major subject and content areas as a traditional statistics course: descriptive statistics, probability, inferential statistics, and linear regression. It differs from most traditional statistics courses because one emphasis is relevance to the medical professions. A substantial number of human health examples are included to demonstrate the relevance of statistics to health and disease.

Many of the students taking this course will have an undergraduate degree and will be in the process of a career change. Many will be aspiring to become a DPT, Pharmacist, Optometrist, CRNA, PA, Genetic Counselor, or some other health professional.

Every day the professor will have either an email or phone office hour. Communication with the professor is strongly encouraged.

Prerequisite(s): None

For general course information, such as registration, questions regarding financial aid, etc. please contact the OWL Enrollment Consultant at 1-855-325-0894 or [owladmissions@une.edu](mailto:owladmissions@une.edu) Most of your questions may be answered in our FAQs at <http://www.une.edu/com/online>

## Instructor Information:

Name: Lori J. Koban, PhD

Email: [lori.koban@maine.edu](mailto:lori.koban@maine.edu)

Phone: Feel free to call me at 207-860-8843.

Office Hours: If you have a question that does not lend itself to written communication, please email me and request that we set up a phone call.

Technical Assistance:

If you have a problem with Blackboard or your software, please make sure you email [comdistancetechhelp@une.edu](mailto:comdistancetechhelp@une.edu) or call us at (207) 602-2689

## **Course Goals and Objectives:**

To give the student interested in the health professions an introduction to Statistics. This course contains the same major subject and content areas as a traditional Statistics course: descriptive statistics, probability, inferential statistics, and linear regression. It differs from most traditional statistics courses because one emphasis is relevance to the medical professions. A substantial number of human health examples are included to demonstrate the relevance of statistics to health and disease. The major subjects are descriptive statistics, probability, inferential statistic, and linear regression. Specifically, we will cover chapters with the following titles:

- Statistics and How they are Used,
- Populations and Samples,
- Organizing and Displaying Data,
- Summarizing Data (measures of center and variation),
- Probability,
- The Normal Distribution,
- Sampling Distribution of Means and Estimation,
- One-Sample Significance Testing, Point Estimates, and Confidence Intervals,
- Two-Sample Significance Testing, Point Estimates, and Confidence Intervals,
- ANOVA tests
- Inferences Regarding Proportions,
- The Chi-Square Test, and
- Correlation and Linear Regression.

Students will use the statistical software SPSS. All course topics above will first be learned and implemented without SPSS, and then will be applied to large data sets with the use of SPSS.

## **Course Materials:**

- Textbook: Basic Statistics for the Health Sciences, 5th edition, Jan Kuzma and Steve Bohnenblust, McGraw-Hill, 2004. Textbooks need to be purchased separately and are not part of your registration fee. Course materials are available through our bookstore at <http://www.newengland.bkstr.com>.

- **SPSS Software:** You will need to purchase the SPSS Statistics software. The cost of SPSS (about \$40) is **not included** in the cost of this course. Do not purchase this software until you are instructed to do so. You only have a 6 month rental, so I want you to wait to purchase it until you are ready to use it in the course.
- **Scientific Calculator:** You will need a scientific calculator for this course. Any calculator that has an exponent and square root key suffices. If you need to purchase a calculator, I recommend the TI- 30XIIS. It is solar. Also, it has a two-line display window, which makes it easier to keep track of complicated expressions. It costs between \$20 and \$30.

### Course Format:

For each chapter you will:

- watch the lectures and complete the lecture outlines,
- complete homework problems and check your answers, and
- complete the online quiz.

Regular contact with your professor is strongly encouraged!

This course is designed to take 16 weeks to complete. A detailed “16 Week Timeline” is on Blackboard so that you can stay on track.

### Grading:

Homework	0 explicit points
Chapter Quizzes (20 points each)	260 points
Exam 1	100 points
Exam 2	100 points
Final Exam (must be proctored)	400 points
SPSS Exam (not proctored)	180 points
<b>TOTAL</b>	<b>1040 points</b>

Grades will be assigned as follows:

- At least an A- (90% or more)
- At least a B- (80% - 89%)
- At least a C- (70% - 79%)
- At least a D- (60% - 69%)

The instructor reserves the right to change this policy if it benefits the student.

**Homework:** Though homework is not graded, it is the most important part of the course. You should work all homework problems, check your answers, and contact the instructor with questions.

**Chapter Quizzes:** After completing the homework for each chapter you will take an online quiz. After you take each quiz, you will see the correct solutions. You may retake each quiz as often as you like (the questions will change). For each quiz, your grade will be the average of all attempts. There is no time limit on

quizzes and they are open book.

Exams: There will be two chapter exams. Exam 1 will cover Chapters 1-6, and Exam 2 will cover Chapters 7-9 and 11-13. You may take each exam as often as you like, but your grade is based on your first attempt. There is a two-hour time limit on exams and they are open book. Access to the Internet or communication devices is not allowed during the exam.

Final Exam: This exam is proctored. It is open book and open notes. It covers all material in the course, except the SPSS content. To prepare for it, study homework problems, chapter quizzes, and the two exams. There is a 4 hour time limit and it is open book. Access to the Internet or communication devices is not allowed during the exam.

SPSS Exam: This exam is not proctored. It is open book and open notes. It covers the SPSS content of the course.

### **Procedures for Arranging Required Proctoring of the Final Exam:**

All quizzes, chapter exams, and the final will be open book and open notes. Quizzes and chapter exams will be taken on-line. The final exam will also be taken on-line, and will be a proctored exam.

### **Online Final Exam:**

The University of New England has contracted with ProctorU.com to provide students in MATH 1005 the most convenient, at home, on-line exam proctoring system. This system provides a simple, no cost to the student, secure, on-line proctor for the final exam. Please see system requirements to ensure you have the necessary computer setup to use ProctorU. Upon enrollment into MATH-1005 students will register with ProctorU and establish a login name and password. This will give you access to all of ProctorU's services. When ready, students will schedule their exams with ProctorU **one week** prior to taking that exam. Upon the exam day and hour, students will log in to ProctorU and click on "exams". Following the procedures outlined at ProctorU's web site, the student will log in to Blackboard, open the appropriate exam and the proctor will then allow student access to that exam.

### **Tech Requirements:**

- PC: Windows XP, Windows Vista or Windows 7 with 256 MB of RAM or higher
- Mac: Mac OS10 or higher
- A web cam with 640x480 video pixel resolution
- Headphones or working speakers connected to the computer
- A microphone connected to the computer (we recommend having a web cam that has a built in microphone)
- A high speed internet connection (minimum 768 Kbps/128 Kbps). We

recommend connecting your computer directly to your router with an Ethernet cable for any proctored exams.

- A web browser with Adobe Flash Player installed. (Google Chrome recommended for ProctorU website)
- Authority to allow remote access to your computer and screen by one of our proctors

You will need to register with Proctor U to take the exam at least 1 week prior to when you would like to schedule the exam. For further instructions on taking online exams visit, [Online Learning's Proctor U site](#).

## **Withdrawal from the Course and Refunds:**

To withdraw from a course, please e-mail [UNERegistrar@une.edu](mailto:UNERegistrar@une.edu) with your intentions to withdraw and include the course subject and number (Example: ANAT 1005). This action will result in a W grade for the course.

### Refund Policy:

- 100% refund prior to the official start of the course.
- 40% refund within the first week of the official course start date.
- No refund after the first week of the official course start date.

For further information concerning refunds, please see <http://www.une.edu/businessoffice/refunds.cfm>.

## **Course Length and Extensions:**

1. Courses in CDE program are equivalent to one semester courses designed to be completed in 16 weeks
2. Enrollment in the course begins the day that payment is processed.
3. Students for whom a grade has not been posted by 16 weeks will be flagged by the administrative staff. An email will be sent to the student seeking your intentions for completing this course.

## **Transcripts:**

Due to the Family Privacy Act, official transcripts may only be requested by the student. This may be done online by going to the University of New England Registrar website and following the directions on the page. The URL is: <http://www.une.edu/registrar/transcript.cfm>. Fill in and sign the request and either mail or fax it to the University Campus address on the form.

## **Learning Disabilities:**

Any student with a documented learning disability needing academic adjustments or accommodations is requested to notify the professor prior to or during the first

week of being in the course. All discussions will remain confidential. All students with a documented learning disability will need to provide all necessary documentation before special accommodations will be granted. Accommodations will be granted for the midterm and final exams only, as the quizzes are not timed.

To request accommodations at the University of New England, please contact:

Jaime L. Flaig, M.Ed  
 Coordinator of Disability Services  
 Phone: (207) 221-4418  
 Fax: (207) 523-1919  
 Email: [jflaig@une.edu](mailto:jflaig@une.edu)

### Suggested 16-Week Timeline

<b>Week</b>	<b>Goals</b>
<b>Getting Started</b>	<ul style="list-style-type: none"> <li>➤ Read Syllabus</li> <li>➤ Contact professor to discuss syllabus</li> <li>➤ Read and complete the "Academic Integrity Agreement" on Blackboard. (If you do not complete this, you will not be allowed to take any course quizzes or exams.)</li> </ul>
<b>1</b>	<p><b>Chapters 1-3</b></p> <ul style="list-style-type: none"> <li>➤ Read Textbook, Watch Lectures, and Complete Lecture Notes               <ul style="list-style-type: none"> <li>- Chapters 1 - 2 (13 minutes)</li> <li>- Section 3.1 (16 minutes)</li> <li>- Sections 3.2 - 3.3 (14 minutes)</li> <li>- Section 3.4 (42 minutes)</li> </ul> </li> <li>➤ Complete Homework</li> <li>➤ Take (and retake) Quiz</li> </ul>
<b>2</b>	<p><b>Chapter 4</b></p> <ul style="list-style-type: none"> <li>➤ Read Textbook, Watch Lectures, and Complete Lecture Notes               <ul style="list-style-type: none"> <li>- Section 4.1 (30 minutes)</li> <li>- Section 4.2 (30 minutes)</li> <li>- Section 4.3 (9 minutes)</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>- Section 4.4 (1 minute)</li> <li>- Section 4.5 (1 minute)</li> <li>➤ Complete Homework</li> <li>➤ Take (and retake) Quiz</li> </ul>
<b>3</b>	<p><b>Chapter 5</b></p> <ul style="list-style-type: none"> <li>➤ Read Textbook, Watch Lectures, and Complete Lecture Notes <ul style="list-style-type: none"> <li>- Section 5.1 (21 minutes)</li> <li>- Sections 5.2 - 5.3 (40 minutes)</li> <li>- Section 5.4 (17 minutes)</li> <li>- Section 5.5 (14 minutes)</li> <li>- Section 5.6 (6 minutes)</li> <li>- Section 5.7 (24 minutes)</li> </ul> </li> <li>➤ Complete Homework</li> <li>➤ Take (and retake) Quiz</li> </ul>
<b>4</b>	<p><b>Chapter 6</b></p> <ul style="list-style-type: none"> <li>➤ Read Textbook, Watch Lectures, and Complete Lecture Notes <ul style="list-style-type: none"> <li>- Section 6.1 (13 minutes)</li> <li>- Section 6.2 (23 minutes)</li> <li>- Section 6.3a (15 minutes)</li> <li>- Section 6.3b (31 minutes)</li> <li>- Section 6.3c (14 minutes)</li> </ul> </li> <li>➤ Complete Homework</li> <li>➤ Take (and retake) Quiz</li> </ul>
<b>End of 4</b>	<ul style="list-style-type: none"> <li>➤ Review Chapters 1-6</li> <li>➤ Take Exam 1</li> </ul>
<b>5</b>	<p><b>Chapter 7 - Part 1</b></p> <ul style="list-style-type: none"> <li>➤ Read Textbook, Watch Lectures, and Complete Lecture Notes <ul style="list-style-type: none"> <li>- Section 7.1 (15 minutes)</li> <li>- Section 7.2 (28 minutes)</li> <li>- Sections 7.3 and 7.5 (22 minutes)</li> </ul> </li> <li>➤ Complete Homework</li> <li>➤ Take (and retake) Quiz</li> </ul>
<b>6</b>	<p><b>Chapter 7 - Part 2</b></p> <ul style="list-style-type: none"> <li>➤ Read Textbook, Watch Lectures, and Complete Lecture Notes <ul style="list-style-type: none"> <li>- Sections 7.4 and 7.6 (33 minutes)</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>- Section 7.7 (26 minutes)</li> <li>- Section 7.8 (1 minute)</li> <li>➤ Complete Homework</li> <li>➤ Take (and retake) Quiz</li> </ul>
<b>7</b>	<p><b>Chapter 8</b></p> <ul style="list-style-type: none"> <li>➤ Read Textbook, Watch Lectures, and Complete Lecture Notes <ul style="list-style-type: none"> <li>- Sections 8.4 to 8.7 - Part 1 (38 minutes)</li> <li>- Sections 8.4 to 8.7 - Part 2 (25 minutes)</li> <li>- Sections 8.1 to 8.3 (1 minute)</li> <li>- Sections 8.11 to 8.14 (17 minutes)</li> <li>- Sections 8.15 to 8.16 (9 minutes)</li> <li>- Sections 8.8 to 8.10 (17 minutes)</li> </ul> </li> <li>➤ Complete Homework</li> <li>➤ Take (and retake) Quiz</li> </ul>
<b>8</b>	<p><b>Chapter 9</b></p> <ul style="list-style-type: none"> <li>➤ Read Textbook, Watch Lectures, and Complete Lecture Notes <ul style="list-style-type: none"> <li>- Sections 9.1 - 9.3 (7 minutes)</li> <li>- Section 9.4 (40 minutes)</li> <li>- Section 9.5 (29 minutes)</li> <li>- Section 9.6 (7 minutes)</li> <li>- Section 9.7 (1 minute)</li> <li>- Section 9.8 (12 minutes)</li> </ul> </li> <li>➤ Complete Homework</li> <li>➤ Take (and retake) Quiz</li> </ul>
<b>9</b>	<p><b>Chapter 11</b></p> <ul style="list-style-type: none"> <li>➤ Read Textbook, Watch Lectures, and Complete Lecture Notes <ul style="list-style-type: none"> <li>- Section 11.1 (15 minutes)</li> <li>- Sections 11.2 - 11.3 (19 minutes)</li> <li>- Section 11.4 (21 minutes)</li> <li>- Section 11.5 (17 minutes)</li> <li>- Section 11.6 (23 minutes)</li> </ul> </li> <li>➤ Complete Homework</li> <li>➤ Take (and retake) Quiz</li> </ul>
<b>10</b>	<p><b>Chapter 12</b></p> <ul style="list-style-type: none"> <li>➤ Read Textbook, Watch Lectures, and Complete Lecture Notes <ul style="list-style-type: none"> <li>- Sections 12.1 - 12.3 (15 minutes)</li> <li>- Section 12.4 (22 minutes)</li> <li>- Section 12.5 (18 minutes)</li> </ul> </li> </ul>



	<ul style="list-style-type: none"> <li>- Section 12.6 (8 minutes)</li> <li>➤ Complete Homework</li> <li>➤ Take (and retake) Quiz</li> </ul>
<b>11</b>	<p><b>Chapter 13</b></p> <ul style="list-style-type: none"> <li>➤ Read Textbook, Watch Lectures, and Complete Lecture Notes <ul style="list-style-type: none"> <li>- Sections 13.1 - 13.3 (22 minutes)</li> <li>- Section 13.4 (20 minutes)</li> <li>- Section 13.5 (22 minutes)</li> <li>- Section 13.6 (3 minutes)</li> <li>- Section 13.7 (14 minutes)</li> <li>- Section 13.8 (3 minutes)</li> </ul> </li> <li>➤ Complete Homework</li> <li>➤ Take (and retake) Quiz</li> </ul>
<b>12</b>	<ul style="list-style-type: none"> <li>➤ Review Chapters 7-9 and 11-13</li> <li>➤ Take Exam 2</li> </ul>
<b>13</b>	<p><b>Final Exam (must be proctored by proctorU)</b></p> <ul style="list-style-type: none"> <li>➤ Study for Final Exam. It covers the material on Exam 1 and Exam 2. Look in the Exam folder on Blackboard for the final exam rules. Note, you may use your textbook and notes during the final exam.</li> </ul>
<b>14</b>	<p><b>Learn to use SPSS</b></p> <ul style="list-style-type: none"> <li>➤ Purchase SPSS on-line</li> <li>➤ Complete the "SPSS Tutorial"</li> <li>➤ Complete the "SPSS Quiz"</li> </ul>
<b>15</b>	<p><b>Chapter 10</b></p> <ul style="list-style-type: none"> <li>➤ Read Textbook</li> <li>➤ Read the written Chapter 10 lecture</li> <li>➤ Complete Homework</li> <li>➤ Take (and retake) Quiz</li> </ul>
<b>16</b>	<p><b>Final SPSS Exam (NOT proctored)</b></p> <ul style="list-style-type: none"> <li>➤ This exam covers the material on the SPSS tutorial and the Chapter 10 SPSS lecture.</li> </ul>
<b>End of course</b>	<ul style="list-style-type: none"> <li>➤ Please complete the course evaluation, which is located at the bottom of the Learning Module folder.</li> </ul>