



# **STAT 200 6370 INTRODUCTION TO STATISTICS (2178) STAT-200**

Fall 2017 Section 6370 3 Credits 08/21/2017 to 10/15/2017

---

## **FACULTY CONTACT**

---

James Howard [JamesP.Howard@faculty.umuc.edu](mailto:JamesP.Howard@faculty.umuc.edu)

## **COURSE DESCRIPTION**

---

Prerequisite: MATH 012 or an appropriate score on a placement test. An introduction to statistics. The objective is to assess the validity of statistical conclusions; organize, summarize, interpret, and present data using graphical and tabular representations; and apply principles of inferential statistics. Focus is on selecting and applying appropriate statistical tests and determining reasonable inferences and predictions from a set of data. Topics include methods of sampling; percentiles; concepts of probability; probability distributions; normal, t-, and chi-square distributions; confidence intervals; hypothesis testing of one and two means; proportions; binomial experiments; sample size calculations; correlation; regression; and analysis of variance (ANOVA). Students may receive credit for only one of the following courses: BEHS 202, BEHS 302, BMGT 230, ECON 321, GNST 201, MATH 111, MGMT 316, PSYC 200, SOCY 201, STAT 100, STAT 200, STAT 225, or STAT 230.

## **COURSE INTRODUCTION**

---

In this course, you will develop a basic understanding of descriptive and inferential statistics. STAT 200 provides the quantitative tools for decision-making and develops the ability to interpret statistical results in professional literature as well as the media.

This course is intended to accommodate every student who needs an introductory statistics course, regardless of the subject in which one plans to major.

Following is a general outline of specific topics you will encounter in this course:

- ◦ Introduction to Statistical Thinking, Types of Data, and Collection of Sample Data
- ◦ Methods of Summarizing and Graphing Data
- ◦ Measures of Center and Variation
- ◦ Probability, Basic Counting Methods, and Conditional Probability
- ◦ Discrete Random Variables, the Binomial Distribution
- ◦ The Normal Distribution
- ◦ Confidence Interval Estimation

- ◦ Hypothesis Testing, including z-, t-, and  $\chi^2$  Tests
- ◦ Correlation and Regression
- ◦ Goodness of Fit
- ◦ One-Way Analysis of Variance (ANOVA)

**Note:** This course is identified as a prerequisite for another course at UMUC. Successful completion of this course is required to advance to the next course in a sequence. A grade of Withdrawal (W), Failure for non-attendance (FN), Failure (F) or Incomplete (I) will not meet a prerequisite requirement. You may be barred from enrolling in or may be removed from courses for which you do not have the necessary prerequisites. Keep track of your progress in this course. If you are uncertain about your standing, consult with your instructor. You should also work with an academic advisor to be sure you are aware of your options and are meeting all necessary program requirements when planning your schedule.

## COURSE OUTCOMES

---

After completing this course, you should be able to:

- distinguish among sampling methods for the collection of data in order to assess the validity of statistical conclusions
- organize, summarize, interpret, and present data using graphical and tabular representations
- apply basic concepts of probability in order to assess the likelihood of an event
- select and apply the statistical test or tests that are most appropriate to analyze a data set
- determine reasonable inferences and predictions from a set of data to make appropriate decisions

## COURSE MATERIALS

---

Click to access your course materials information (<http://webapps.umuc.edu/UgcmBook/BPage.cfm?C=STAT%20200&S=6370&Sem=2178>)

## CLASS GUIDELINES

---

### Faculty Information

To locate information within your LEO classroom, log in and review your faculty member's information, which is found in the Start Here section of your classroom after clicking on the **Content** link.

### Contacting your Faculty Member

You can use the Pager feature within the classroom to send a message to your faculty member. Click the Classroom Walkthrough Videos link below, and then click **The Pager** link, to view a how-to video on how to use the Pager function within the classroom:

Classroom Walkthrough Videos Link (<http://www.umuc.edu/students/leo/videos.cfm>)

Within the **Content** section of your classroom, view the **Start Here** section or **Additional Course Information** section within the **Syllabus** to learn more about contacting your faculty member.

## GRADING INFORMATION

---

Meeting course deadlines is crucial for success in computer-mediated courses. You may read at your own pace, but online participation, homework problems, quizzes, and final exam must adhere to the timetable given in the Course Schedule. Otherwise the grade will be 0. The academic schedule in this Syllabus is referenced to Eastern Time Zone (local time at Adelphi, MD). No late online participation, assignments, or makeup for the quizzes and final exam will be accepted.

You are expected to submit *your own work* for all assignments, quizzes and final exam. Submitted assignments, quizzes, and final exam that are highly similar in content and presentation will be considered suspect and will be questioned. No credit will be given for plagiarism. Please refer to UMUC Policy on Academic Dishonesty and Plagiarism (Policy 150.25 - Academic Dishonesty and Plagiarism - UMUC (<http://www.umuc.edu/policies/academicpolicies/aa15025.cfm>)). Please visit UMUC's Virtual Academic Integrity Laboratory (VAIL - Home - UMUC (<http://www.umuc.edu/cip/vail/>)) for further information.

### ***Guideline for Receiving Tutoring Service***

We fully appreciate that many of our students may seek tutoring services to supplement our instructional program. However, it should be understood that tutors may not be used to complete any portion of assignments, projects, quizzes, exams and final exam on behalf of our students. Students are expected to submit their own work. Students who are suspected of submitting the work of their tutors will be reported to the Dean's Office for potential investigation in accordance to UMUC's academic policy on Academic Dishonesty and Plagiarism (Policy 150.25 - Academic Dishonesty and Plagiarism - UMUC (<http://www.umuc.edu/policies/academicpolicies/aa15025.cfm>)).

If you are to receive tutoring services, please inform your tutor of this expectation and be sure to clarify your tutor's role and responsibility to your academic endeavors at UMUC.

You are encouraged to harness commonly available technologies (one of six cross-curricular initiatives: Competence in Information Technology) to perform your work. For example, you should be able to write out mathematical equations in MS WORD files using Microsoft Equation 3.0 (which comes with MS WORD) or equivalent or more advanced equation-writer such as MathType (<http://www.dessci.com/en/products/mathtype/>). You should also be able to plot line graphs and related statistical diagrams using common graphic packages such as EXCEL, MATLAB (<http://www.mathworks.com/>), or free web resources.

### **Grading Criteria**

The course grade will be determined as follows:

Online Participation	40 points	8% of final course grade
Homework Problems	160 points	32% of final course grade
Three Quizzes	200 points	40% of final course grade

Final Exam	100 points	20% of final course grade
<b>TOTAL</b>	<b>500 points</b>	<b>100% of final course grade</b>

## Grading Details

The work you are required to do in this course consists of:

- reading assignments
- online participations
- homework problems
- 3 quizzes
- final examination

Each of these is described below:

### ***Weekly Reading Assignments***

Even though there is no numerical score associated with the weekly reading assignments, it should be understood that how well you do in the course depends heavily on how conscientious you are with the reading assignments. Each week there will be reading assigned from Lane *et al.* and Illowsky *et al.* You should also read the Modules (Course Resources) presented in the Course Content area of LEO. The details of which chapter(s) assigned for which week can be found in the Course Schedule in this syllabus.

When doing the reading for this course you need to really *SLOW DOWN* !



Reading statistics is not like reading anything else! You need to look very carefully at the numbers and *formulæ* and spend some time making sure you understand them and that they make sense. Reading statistics (or any mathematical text) can take three to four times longer, per page, than reading a non-mathematical text.



### ***Online Participation in Weekly Academic Conference***

Active engagement is an important ingredient in student success in online classes. In particular, online students learn best in small group settings based on findings from institutional research. The weekly online participation is, therefore, structured in study group setting. You will be randomly rostered into a study group of five to six members at the beginning of the semester.

Every week, students are given a set of questions, conceptual questions that may serve as study guides to the weekly materials to be covered. They will be posted in each week's conference area. They include various kinds of activities and questions about the material we are addressing. Some will involve searching the Web for additional information on a topic or presenting an example of the material.

You will be working with your study group members on the weekly discussion questions and activities for five days of an academic week in your study group. You are encouraged to participate in each week's academic conference by carrying out discussions on these questions and activities with your study group members. What I would like to see is that you communicate with each other and helping each other out with this material. I am sure some of you feel very confident coming into a Statistics class while others are feeling great FUD (that stands for "fear, uncertainty and doubt"). Please help each other out with encouragement and substantive support whenever possible. I will work with you in your study group each week. With your help, we can make the weekly conferences forum for free exchange of ideas and sharing. We can create a supportive environment that is conducive to learning from each other. After all, these questions can be valuable study guides for the materials covered during the week. A representative chosen by your study group will post a summary report in the main Conference area under the appropriate conference of the week.

Grading and points for each weekly academic conference are not automatic. I am looking for answers, solutions, comments, questions, explanations, and challenges to your classmate's ideas. You have to demonstrate good writing, critical thinking, objective discussion, and accurate interpretation of course material as well as some insight into the issues. The online participation constitutes 8% of the final course grade.

## ***Participation -- World Wide Web Protocols***

By registering for a Web-based course, you have made a commitment to participate in your course conferences as well as other online activities. To contact your instructor, use the conferencing software or email links provided, which allow you to communicate with the instructor and your classmates in a virtual classroom 24 hours a day, 7 days a week. Please plan to participate regularly. You will note in the grading policy that your online participation counts towards your final grade.

You are expected to adhere to the general rules of online etiquette.

## ***Weekly Homework Problems***

In the Activities area of each weekly module in the Table of Content, you are given a list of exercises each week from the textbook. You are assigned 75 problems throughout the semester, and the assignment for each week is worth 20 points. Eight weeks of these homework exercises constitute 32% of the final course grade.

Homework is a very important part of this course because the best way to learn statistics is to do statistics. You are encouraged to seek help from the instructor or fellow students when you need it.

Solving a mathematical or scientific problem is an exercise in logical and critical thinking. The process in coming up with the correct solution is much more important than the correct answer itself. Therefore, it is important to show that you understand the problems by showing your work, including calculations and methodologies. You will not receive full credit if you cannot convince your instructor that you actually know how to solve the problems. Your work should be posted in your Assignments Folder for the week they are assigned. To keep up with the pace of this course, you should submit homework assignments to the Assignments Folder on or before the due date. There is a lock date in the Assignments Folder. The Assignments Folder will be locked after the due date. My suggested approaches to these homework problems will be posted after the due date. Homework assignments submitted after the solutions are posted will not be accepted.

In order to underscore the importance of weekly homework assignment as a critical element in the learning process, we are applying the methodology of reflective learning with the weekly homework assignment. None of us would like to make mistakes, but we have the opportunity to learn from our mistakes. We would not reap the maximum benefit from the weekly homework assignment if we do not go back and reflect on what might have gone wrong with the submitted solutions after the work is graded. Therefore, you are given an opportunity to improve your overall score in each weekly assignment. Revision to each weekly homework assignment will be

accepted provided that 1) you have made a good-faith effort on the resubmitted problems with adequate analysis and commentary on how or why the submitted solutions are wrong or inadequate, and 2) the revision is submitted to the corresponding Assignment Folder for revision no later than 1 week after the due date. The Assignment Folder for revised work will be locked one week after the due date. However, the additional points will at most be one half of the balance of maximum possible score for the week's assignment. For example, if the maximum points for Week 4 Homework Assignment is 20 points, and you scored 7 points in your initial attempt. The upgraded score will be at most be 13.5 points  $\{7 + (20-7)/2\}$ .

Weekly homework assignment as well as revision may be submitted in plain ASCII, TFE format, or even as attached file such as a Microsoft Word file and PDF. By the way, an attached file might be necessary if graphic files, figures, and/or diagrams are included.

## **Quizzes**

Quizzes are important milestones as they provide valuable feedback for instructors and students. Quizzes will be given as indicated in the course schedule. You will be given one week to work on each quiz, and the due dates of the quizzes can be found in the Course Schedule. Each quiz will be posted in the Activities under the weekly module at the beginning of the designated academic week, and it will be due at the end of that academic week.

Quizzes may be submitted in plain ASCII, TFE format, or even as attached file such as a Microsoft Word file and PDF. An attached file might be necessary if graphic files, figures, and/or diagrams are included.

***Quizzes must be individually completed and represent your own personal work. Neither collaboration nor consultation with others is allowed.***

To keep up with the pace of this course, you should submit quizzes to the Assignments Folder on or before the due date. There is a lock date on the quizzes in the Assignments Folder. After the due date, solutions will be posted. Quizzes submitted after the solutions are posted will not be accepted. Since quizzes are assessment tools, there will be no revisions accepted. The three quizzes together constitute 40% (8%, 16% and 16%) of the final course grade.

## **Final Exam**

The final exam will become available at 00:01 a.m. ET on the Friday of Academic Week 8. It is an open book exam. The chapters to be covered on the Final Exam are those covered in the Course Schedule. You are required to show your work and calculations, where appropriate, in order to receive full credit. The final exam will be posted in the Activities area of Week 8 module at 00:01 a.m. ET on the Friday of Academic Week 8, and it is due at 11:59 p.m. ET on the last day of Academic Week 8 (Sunday). The Assignment Folder for the Final Exam will be locked right after midnight on Sunday. You have a window of 72 hours to complete and submit the exam.

***The final exam must be individually completed and represent your own personal work. Neither collaboration nor consultation with others is allowed.***

The solutions for the final exam will not be posted.

The final exam will be given during the final exam week, and you are expected to take the exam as scheduled. In the event of illness or extraordinary circumstances, you must contact your faculty member and provide documentation to request an exception and approval to take a makeup exam. If the request is not approved, the exam grade will be recorded as a zero. The final exam constitutes 20% of the final course grade.



## Grading Rubrics

There are two rubrics used in this class. The first, used for homework, quizzes, and the final exam is a simple six-point scale. On that six-point scale, there are three categories of points, each worth two points:

	<b>Excellent 2 points</b>	<b>Satisfactory 1 point</b>	<b>Unsatisfactory 0 points</b>
<b>Understanding the Problem</b>	Complete understanding of the problem	Part of the problem misunderstood or misinterpreted	Complete misunderstanding of the problem
<b>Planning a Solution</b>	Plan could have led to a correct solution if implemented properly	Partially correct plan based on part of the problem being interpreted correctly	No attempt, or totally inappropriate plan
<b>Getting an Answer</b>	Correct answer and correct label for the answer	Copying error; computational error; partial answer for a problem with multiple answers	No answer, or wrong answer based on an inappropriate plan

Because of this structure, getting a correct answer is only worth about one-third of the grade. In order to get full credit, you must explain how you solved it, i.e., you must show your work. Sometimes that is a quick explanation of your reasoning. Sometimes it is a complex calculation. Whatever it is, you must show that you understood the problem and how it was solved.

Every problem will be graded on this six-point scale. However, some problems may be weighted differently in the final grading.

The second rubric is used for the group discussion. It is a simple one-dimensional scale worth up to three points:

### **Points Explanation**

0 No work done to advance the discussion.

- 1 Student contributions to discussions were minimal and did not advance the discussion. These may be as simple as "I agree" or otherwise not furthering the discussion. Little evidence of understanding the question or how it related to the course material.
- 2 Timely discussion contributions. Postings do not always reflect questions posed, topics described, or requests for clarification/correction. Demonstrates courtesy and respect to others.
- 3 Timely discussion contributions. Comments are meaningful. In-depth thought and contributions which add to the overall learning of the other individuals in the course. Demonstrates courtesy and respect to others.

## **Additional Grading Information**

### **Grade of W**

In accordance with UMUC Policy 170.71 - Grade of Incomplete and Withdrawal - UMUC (<http://www.umuc.edu/policies/academicpolicies/aa17071.cfm>), students may withdraw and receive a grade of *W* by following the procedures detailed at Withdrawals - UMUC (<http://www.umuc.edu/students/support/advreg/registration/withdraw.cfm>). The grade of *W* appears on the permanent record unless the withdrawal is completed before a course begins. For purposes of academic retention, the grade of *W* is counted as attempted hours. It is not used in determining grade-point averages.

### **Grade of G**

In accordance with UMUC Policy 170.71 - Grade of Incomplete and Withdrawal - UMUC (<http://www.umuc.edu/policies/academicpolicies/aa17071.cfm>), when an allegation of academic dishonesty and/or plagiarism is reported by the faculty under UMUC Policy 150.25 - Academic Dishonesty and Plagiarism - UMUC (<http://www.umuc.edu/policies/academicpolicies/aa15025.cfm>), a grade of *G*, grade pending, is administratively entered and will remain on a student's record until the process of Policy 150.25 - Academic Dishonesty and Plagiarism - UMUC (<http://www.umuc.edu/policies/academicpolicies/aa15025.cfm>) is completed and the final grade for the course is assigned.

### **Grade of FN**

In accordance with UMUC Policy 205.06 - Calculation Of Grade-Point Average (GPA) for Inclusion on Transcripts and Transcript Requests - UMUC (<http://www.umuc.edu/policies/academicpolicies/aa20506.cfm>), a grade of *FN* will be given for a failure in the course because the student has ceased to attend and participate in the first 60% of the semester in course assignments and activities. It is assigned when the student ceases to attend class but has not officially withdrawn. The *FN* grade is treated as an *F* in calculating the grade-point average.

### **Grade of I**

In accordance with UMUC Policy 170.71 - Grade of Incomplete and Withdrawal - UMUC (<http://www.umuc.edu/policies/academicpolicies/aa17071.cfm>), a grade of Incomplete (*I*) will be awarded only if you have completed at least 60% of the course material with a passing grade, can present a compelling reason for an extension, and have made the request for an incomplete prior to the end of the semester.



The grade of *I* (Incomplete) is an exceptional mark given only to students whose work in a course has been satisfactory but who for reasons beyond their control have been unable to complete all the requirements of a course. The following criteria must be met:

- You must have completed the major portion of the work in the course.
- The work you have already completed must be of satisfactory quality.
- You must have requested the grade of *I* before the end of the course.

The guidelines for awarding the grade of *I* are as follows:

- The student must ask the instructor for a grade of *I*. (Teachers cannot award a grade of *I* on their own initiative.)
- The instructor decides whether to grant the request.
- The instructor sets a date, no more than four (4) months after submitting the original grade, for completion of the remaining requirements of the course.
- The instructor and the student together agree on the remaining requirements of the course and the deadline for submitting the work.
- The instructor and the student should fill out an Incomplete Contract: Incomplete Agreement Form- Faculty - UMUC ([http://www.umuc.edu/faculty/facsupport/facservices/incomplete\\_agreement\\_form.cfm](http://www.umuc.edu/faculty/facsupport/facservices/incomplete_agreement_form.cfm)), a copy of which should be sent to the Math/Stat Department for record.
- The student is responsible for completing the work.
- After the work is completed, the instructor submits a grade change form to replace the grade of *I* on the student's record with a letter grade.
- The grade of *I* cannot be removed by means of credit by examination.
- The grade of *I* cannot be replaced by a grade of *W* (defined above).
- If the student does not meet the deadline, the grade of *I* will be converted automatically to a final grade of *F*.

Students who elect to repeat an incomplete course must register again for the course, pay all applicable fees, and retake the course. For purposes of academic retention, your grade is counted as an *F*. The grade of *I* is not used in determining grade-point averages.

## Changes in Grade

In accordance with UMUC policy on Procedure for Late Grade Changes - Exams & Testing - Faculty - UMUC (<http://www.umuc.edu/faculty/facsupport/facultyexams/gradechange.cfm>), teachers may change a grade previously assigned only by submitting a Grade Adjustment Report, along with a letter giving the reasons for the change. Any change must be made no later than four (4) months after the original grade was awarded.

# PROJECT DESCRIPTIONS

---

There are no projects for this course.

# ACADEMIC POLICIES

---

## Academic Policies and Guidelines

### ACADEMIC INTEGRITY

As a member of the University of Maryland University College (UMUC) academic community that honors integrity and respect for others you are expected to maintain a high level of personal integrity in your academic work at all times. Your work should be original and must not be reused in other courses.

## CLASSROOM CIVILITY

Students are expected to work together cooperatively, and treat fellow students and faculty with respect, showing professionalism and courtesy in all interactions. Please review the Code of Civility for more guidance on interacting in UMUC classrooms: <https://www.umuc.edu/students/support/studentlife/conduct/code.cfm> (<https://www.umuc.edu/students/support/studentlife/conduct/code.cfm>).

## POLICIES AND PROCEDURES

UMUC is committed to ensuring that all individuals are treated equally according to Policy 040.30 Affirmative Action, Equal Opportunity, and Sexual Harassment (<https://www.umuc.edu/policies/adminpolicies/admin04030.cfm>).

Students with disabilities who need accommodations in a course are encouraged to contact the Office of Accessibility Services (OAS) at [accessibilityservices@umuc.edu](mailto:accessibilityservices@umuc.edu) (<mailto:accessibilityservices@umuc.edu>), or call 800-888-UMUC (8682) or 240-684-2287.

The following academic policies and procedures apply to this course and your studies at UMUC.

- 150.25      Academic Dishonesty and Plagiarism (<https://www.umuc.edu/policies/academicpolicies/aa15025.cfm>) – UMUC defines academic dishonesty as the failure to maintain academic integrity. All charges of academic dishonesty will be brought in accordance with this Policy.

**Note:** Your instructor may use **Turnitin.com**, an educational tool that helps identify and prevent plagiarism from Internet resources, by requiring you to submit assignments electronically. To learn more about the tool and options regarding the storage of your assignment in the Turnitin database go to: <https://www.umuc.edu/library/libresources/turnitin.cfm> (<https://www.umuc.edu/library/libresources/turnitin.cfm>).

- 151.00      Code of Student Conduct (<https://www.umuc.edu/policies/studentpolicies/stud15100.cfm>)

The following policies describe the requirements for the award of each degree:

Degree Completion Requirements for the Graduate School (<https://www.umuc.edu/policies/academicpolicies/aa17040.cfm>)

- 170.40      Degree Completion Requirements for a Bachelor's Degree (<https://www.umuc.edu/policies/academicpolicies/aa17041.cfm>)

- 170.41      Degree Completion Requirements for an Associate's Degree (<https://www.umuc.edu/policies/academicpolicies/aa17042.cfm>)

- 170.71      Policy on Grade of Incomplete (<https://www.umuc.edu/policies/academicpolicies/aa17071.cfm>) - The mark of I is exceptional and considered only for certain courses. Students who have completed 60% of their coursework with a grade of B or better for graduate courses or C or better for undergraduate courses and request an I before the end of the term. The mark of I is not available for noncredit courses.

- 170.72      Course Withdrawal Policy (<https://www.umuc.edu/policies/academicpolicies/aa17072.cfm>) - Students must follow drop and withdrawal procedures and deadlines available at <https://www.umuc.edu/> (<https://www.umuc.edu/>) under Academic Calendar.

- 130.80 Procedures for Review of Alleged Arbitrary and Capricious Grading (<https://www.umuc.edu/policies/academicpolicies/aa13080.cfm>) – appeals may be made on final course grades as described herein.
- 205.06 Calculation Of Grade-Point Average (GPA) for Inclusion on Transcripts and Transcript Requests (<https://www.umuc.edu/policies/academicpolicies/aa20506.cfm>) – Note: Undergraduate and Graduate Schools have different Grading Policies (i.e. The Graduate School does not award the grade of D). See Course Syllabus for Grading Policies.

## GRADING

According to UMUC's grading policy, the following marks are used:

	<b>Undergraduate</b>	<b>Graduate</b>
<b>A</b>	90-100	90-100
<b>B</b>	80-89	80-89
<b>C</b>	70-79	70-79*
<b>D</b>	60-69	N/A**
<b>F</b>	59 or below	69 or below
<b>FN</b>	Failure-Non attendance	Failure-Non attendance
<b>G</b>	Grade Pending	Grade Pending
<b>P</b>	Passing	Passing
<b>S</b>	Satisfactory	Satisfactory
<b>U</b>	Unsatisfactory	Unsatisfactory
<b>I</b>	Incomplete	Incomplete
<b>AU</b>	Audit	Audit
<b>W</b>	Withdrew	Withdrew

\* The grade of "B" represents the benchmark for The Graduate School. Students must maintain a Grade Point Average (GPA) of 3.0 or higher. Classes where final grade of C or F places a student on Academic Probation must be repeated.

\*\* The Graduate School does not award the grade of D.

## COURSE EVALUATION SURVEY

UMUC values its students' feedback. You will be asked to complete an online evaluation toward the end of the term. The primary purpose of this evaluation process is to assess the effectiveness of classroom instruction in order to provide the best learning experience possible and make continuous improvements to every class. Responses are kept confidential. Please take full advantage of this opportunity to provide your feedback.

## LIBRARY SUPPORT

Extensive library resources and services are available online, 24 hours a day, seven days a week at <https://www.umuc.edu/library/index.cfm> (<https://www.umuc.edu/library/index.cfm>) to support you in your studies. The UMUC Library provides research assistance in creating search strategies, selecting relevant databases, and evaluating and citing resources in a variety of formats via its Ask a Librarian service at <https://www.umuc.edu/library/libask/index.cfm> (<https://www.umuc.edu/library/libask/index.cfm>).

## EXTERNAL LINK DISCLAIMER

This course may contain links to external sites neither owned nor maintained by UMUC. UMUC bears no responsibility for the accuracy, legality, or content of external sites or for that of subsequent links. In addition, the terms of use, security policies, and privacy policies may differ from those of UMUC. Contact the external site for answers to questions regarding its content, terms of use, and policies.

## LEARNING MANAGEMENT SYSTEM SUPPORT

To successfully navigate the online classroom new students are encouraged to view the Classroom Walkthrough under Help in the upper right menu of the LEO classroom. Those requiring technical assistance can access Help@UMUC Support directly in LEO under the Help menu. Additional technical support is available 24 hours a day, seven days a week via self-help and live chat at <https://www.umuc.edu/help> (<https://www.umuc.edu/help>) or by phone toll-free at 888-360-UMUC (8682).

## SYLLABUS CHANGES

All items on this syllabus are subject to change at the discretion of the Instructor and the Office of Academic Affairs.

# CLASS & ASSIGNMENT SCHEDULE

SESSION	TOPICS	ASSIGNMENTS	DUE DATE
Week 1 (Aug 21 - 27)	<ul style="list-style-type: none"> <li>What is statistics?</li> <li>Types of data and levels of measurements</li> <li>Samplings</li> <li>Data organization</li> </ul>	<ul style="list-style-type: none"> <li><b>Reading:</b> Read Chapter 1 in Lane <i>et al.</i> Read Chapter 1 in Illowsky <i>et al.</i></li> <li><b>Online Participation</b></li> <li><b>Homework Assignment</b></li> </ul>	Aug 27
Week 2 (Aug 28 - Sep 3)	<ul style="list-style-type: none"> <li>Descriptive statistics</li> <li>Summarizing data</li> <li>Frequency tables</li> <li>Graphs &amp; plots</li> <li>Measures of central tendency</li> </ul>	<ul style="list-style-type: none"> <li><b>Reading:</b> Read Chapters 2 &amp; 3 in Lane <i>et al.</i> Read Chapter 2 in Illowsky <i>et al.</i></li> <li><b>Online Participation</b></li> <li><b>Homework Assignment</b></li> </ul>	Sep 3

<p>Week 3 (Sep 4 - 10)</p>	<ul style="list-style-type: none"> <li>Discrete random variables</li> <li>Continuous random variables</li> <li>Probability</li> </ul>	<ul style="list-style-type: none"> <li><b>Reading:</b> Read Chapter 5 in Lane <i>et al.</i> Read Chapters 3 &amp; 4 in Illowsky <i>et al.</i></li> <li><b>Online Participation</b></li> <li><b>Homework Assignment</b></li> <li><b>Quiz 1</b> (covers Week 1 through Week 2 materials)</li> </ul>	<p>Sep 10</p>
<p>Week 4 (Sep 11 - 17)</p>	<ul style="list-style-type: none"> <li>Normal distribution</li> <li>Central limit theorem</li> </ul>	<ul style="list-style-type: none"> <li><b>Reading:</b> Read Chapter 7 in Lane <i>et al.</i> Read Chapters 6 &amp; 7 in Illowsky <i>et al.</i></li> <li><b>Online Participation</b></li> <li><b>Homework Assignment</b></li> </ul>	<p>Sep 17</p>
<p>Week 5 (Sep 18 - 24)</p>	<ul style="list-style-type: none"> <li>Confidence intervals</li> <li><math>t</math> distribution</li> <li>Estimation</li> </ul>	<ul style="list-style-type: none"> <li><b>Reading:</b> Read Chapter 10 in Lane <i>et al.</i> Read Chapter 8 in Illowsky <i>et al.</i></li> <li><b>Online Participation</b></li> <li><b>Homework Assignment</b></li> </ul>	<p>Sep 24</p>
<p>Week 6 (Sep 25 - Oct 1)</p>	<ul style="list-style-type: none"> <li>Hypothesis testing</li> <li>Type I &amp; Type II errors</li> <li>Power</li> </ul>	<ul style="list-style-type: none"> <li><b>Reading:</b> Read Chapters 11, 12 &amp; 13 in Lane <i>et al.</i> Read Chapters 9 &amp; 10 in Illowsky <i>et al.</i></li> <li><b>Online Participation</b></li> <li><b>Homework Assignment</b></li> <li><b>Quiz 2</b> (covers Week 3 through Week 5 materials)</li> </ul>	<p>Oct 1</p>

<p>Week 7 (Oct 2 - 8)</p>	<ul style="list-style-type: none"> <li>· Chi-square distribution</li> <li>· Linear correlation and regression</li> </ul>	<ul style="list-style-type: none"> <li>· <b>Reading:</b> Read Chapters 14 &amp; 17 in Lane <i>et al.</i> Read Chapters 11 &amp; 12 in Illowsky <i>et al.</i></li> <li>· <b>Online Participation:</b></li> <li>· <b>Homework Assignment</b></li> <li>· <b>Quiz 3</b> (covers Week 6 materials)</li> </ul>	<p>Oct 8</p>
<p>Week 8 (Oct 9 - 15)</p>	<ul style="list-style-type: none"> <li>· ANOVA</li> <li>· <i>F</i> Distribution</li> </ul>	<ul style="list-style-type: none"> <li>· <b>Reading:</b> Read Chapter 15 in Lane <i>et al.</i> Read Chapter 13 in Illowsky <i>et al.</i></li> <li>· <b>Online Participation</b></li> <li>· <b>Homework Assignment due Oct 12</b></li> <li>· <b>Final Exam</b> (comprehensive) The final exam is available at 00:01 a.m. EDT on Friday, October 13, and <b>due at 11:59 p.m. EDT on Sunday, October 15</b></li> </ul>	<p>Oct 12 &amp; Oct 15</p>

Students can access their complete list of assignments and their corresponding due dates within the **Assignments** section of the classroom by navigating to the **Assignments** section of the class from the main navigation bar. Follow the link below, and then click **Assignments**, for a video demonstration on how to utilize this feature.

Classroom Walkthrough Videos Link (<http://www.umuc.edu/students/leo/videos.cfm>)

Students also have access to a calendar tool on the course homepage within the classroom.

