Maxine Goodman Levin College of Urban Affairs  
Cleveland State University  
Fundamentals of Applied Reasoning  
UST 504

Syllabus

Spring Semester 2016  
Thursday 6:00 pm – 9:50 pm  
Room: UR 27

Instructor: Dwayne Keeney  
Phone: 216-526-6660  
Email: D.Keeney@csuohio.edu  
Office Hours: By appointment *

Course Description:
This course is a four credit course designed to introduce the student to the basic principles, techniques and the logic of data analysis. It also will familiarize the student with statistical reasoning. This course focuses on core statistical concepts and techniques that are used in many fields.

Course Objective:
This course focuses on knowledge and skill development in the statistical area. The course is designed to meet the following learning objectives:

Knowledge
- Understand mathematical models, graphs, tables and schematics and how to interpret and draw inferences from them.
- Recognize and interpret mathematical information when presented symbolically, visually, numerically or verbally.
- Understanding of alternatives that can be used in mathematical or statistical analysis and how to achieve optimal results.
- Recognize the limits of mathematical and statistical models and be able to explain how those limits affect everyday decision making.
- Understanding of how mathematical and statistical information can assist in analysis, synthesis and evaluation of complex problems.

Skills
- Use of arithmetic, algebraic, geometric, and statistical models to solve problems.
- Understanding of how to calculate formulae.
- Use of technology to solve mathematical and statistical problems as well as to prepare graphs and charts.
- Development of the means used to estimate and check answers to mathematical problems.
- Representation of mathematical information in a symbolic, visual, or verbal manner that has clarity of result.

*As a part time instructor, I do not have an office on campus, nor do I keep regular office hours in this building. I am however available as needed. Please call or email me with questions throughout the week. I try to arrive before the start of class each week and usually am available afterwards. I am always willing to make an appointment to discuss issues requiring more in depth discussion.
Required Text:

Course Design:
The course will use a series of exercise problems, group activities, learning assessments, and computer labwork to help you build skills in analytical reasoning. Weekly quizzes and two exams during the semester will test your understanding of the concepts and techniques covered in class.

You should prepare for each class by reading the chapter assignments in advance and identifying those elements that may require additional clarification. We will make extensive use of computers in the classroom, working primarily with Excel, SPSS and Word.

Both essential and supplemental course materials will be made available via the course Blackboard site. Students are required to utilize these resources.

Never feel that you are the only one with a question. It’s rarely, if ever the case.

Expectations:
1) Time Required - This course will require a significant time commitment on your part. If the general understanding is that Master’s level college courses will require 2 to 3 hours of time for each credit hour of instruction, then you should anticipate spending 12 hours each week in preparation for class, homework completion and studying for exams. Some weeks will require more, some less.

2) Academic Misconduct – Academic misconduct (plagiarism, cheating or in any other form) will result in a final course grade of “F”. Obviously the group activities require collaboration. We will employ a similar approach to many exercise problems. I encourage you to study together, and you can work through learning assessments in groups if you find doing so helpful. But each student must turn in his or her own original assessment for grading. Computer labwork is to be completed individually. No collaboration, sharing of resources or notes is acceptable during the taking of any exam component or quiz. Questions as to what is acceptable, please ask.

3) Exam Scheduling – Exams dates are clearly noted in the syllabus. Make-up exams are given only in emergency cases, with proof required.

Special Needs:
If you require special accommodations in this course, either for homework assignments, taking exams, or to in any way be able to completely actively take part in class, please let me know as soon as possible. Educational access is the provision of classroom accommodations, auxiliary aids and services to ensure equal educational opportunities for all students regardless of their disability. Any student who feels he or she may need an accommodation based on the impact of a disability should contact the Office of Disability Services at (216)687-2015. The Office is located in MC 147. Accommodations need to be requested in advance and will not be granted retroactively. Further information regarding the office can be accessed on the web at http://www.csuohio.edu/offices/disability/
Grading:

<table>
<thead>
<tr>
<th>Course Element</th>
<th>Date</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exercise problems *</td>
<td>As scheduled</td>
<td>5%</td>
</tr>
<tr>
<td>In-class group activities *</td>
<td>As scheduled</td>
<td>5%</td>
</tr>
<tr>
<td>Learning assessments *</td>
<td>As scheduled</td>
<td>10%</td>
</tr>
<tr>
<td>Quizzes *</td>
<td>As scheduled</td>
<td>15%</td>
</tr>
<tr>
<td>Labwork I</td>
<td>Mar. 09</td>
<td>10%</td>
</tr>
<tr>
<td>Labwork II</td>
<td>May 04</td>
<td>15%</td>
</tr>
<tr>
<td>Exam I – Midterm</td>
<td>Mar. 23</td>
<td>20%</td>
</tr>
<tr>
<td>Exam II – Final</td>
<td>May 11</td>
<td>20%</td>
</tr>
</tbody>
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- Minimum Grading scale:  
  94-100 A  
  90-93 A-  
  83-86 B  
  80-82 B-  
  70-79 C

- **All assignments** have strict due dates associated with them. Late submissions **will not** be accepted. If you must miss a class, make arrangements to submit your assignments before the scheduled due date.

- Attendance is required to participate in & earn credit for in-class activities.

- All exams will test accumulated knowledge as well as new problems. The nature of the material requires using early concepts throughout the semester. In preparation for exams, review all material. Do not fall behind in the readings or exercises.

- Attendance and participation at each class are expected. Lectures will provide the basis for exam material and showcase skills needed for the completion of assignments. If you miss a class, it is **your** responsibility to obtain notes and necessary course materials from someone in class in order to complete the assignments on time.

- During most semesters, the College sponsors a tutor to help students enrolled in all sections of 504. Contact information and information regarding scheduled sessions will be provided via Blackboard.

Course Policies:

- Please turn off ringers to phones before class begins.
- Elements of the syllabus are subject to change if circumstances warrant.
- All submitted work is to be written according to academic standards with appropriate citations. The student should contact the instructor before submitting work if unsure about how to paraphrase material or how to cite correctly, The Writing Center at Cleveland State is available to assist the student with writing issues. Information on the writing center is found at [http://www.csuohio.edu/writingcenter/index.html](http://www.csuohio.edu/writingcenter/index.html).
- Questions regarding the university calendar (holidays and finals week schedule) can be resolved by using the following link to the registrar’s office. [http://www.csuohio.edu/enrollmentservices/registrar/calendar](http://www.csuohio.edu/enrollmentservices/registrar/calendar)
  Last day to Drop – January 27, 2017
  Last day to Withdraw – March 31, 2017

* The lowest score of each of these categories (exercise problems, in-class group activities, learning assessments and quizzes) we be dropped from the final grade calculation.
Course Schedule: Class meeting date followed by material to be covered

Jan. 19      Online introduction and prep for
Jan. 26      Chapters 1-2
Feb. 02      Chapter 3
Feb. 09      Chapter 4
Feb. 16      Chapter 5
Feb. 23      Chapter 6
Mar. 02      Chapter 7
Mar. 09      Labwork
Mar. 16      No class scheduled – Spring Recess
Mar. 23      Exam I – Midterm
Mar. 30      Chapter 8
Apr. 06      Chapter 9
Apr. 13      Chapter 11
Apr. 20      Chapter 12
Apr. 27      Chapter 14
May 04       Labwork
May 11       Exam II – Final

Notes: This schedule may change as needed. Notice of changes will be given as far in advance as possible.

This is what we are covering each night.
READ TEXT CHAPTERS IN ADVANCE