HCM 365 Statistics for Healthcare Professionals
Spring Semester 2016

Instructor: Marcea Walter, MHSA, Assistant Professor
Office: CASA 132
Phone: 453-8883
E-mail: mwalter@siu.edu
Office Hours: Monday: 10:00am – 11am and 12:15pm – 1:15pm, Wednesday: 10:00am – 11:00am, and Thursday: 11:00am – 12:30pm and 2:00pm – 3:30pm.

Course Information:
Tuesday and Thursday, 12:35pm-1:50pm, ASA 0014

Course Description:
Course for students beginning a major in the healthcare profession. Students examine and apply data to their professions with an emphasis placed on the understanding of the basic principles, techniques, and applications involved with analysis, synthesis, and utilization of data.

Prerequisite:
UCC Mathematics.

Required Textbook:

Other Course Requirements:
- A computer which can effectively run Desire to Learn (D2L)
- Proficiency with the D2L system pertaining to quiz/assignment/testing.
- Basic calculator

Course Objectives:
Upon successful completion of this course, students will be able to:
- Understand the importance of statistics in the field of health administration.
- Know how to summarize and present data, especially in reference to the use of computer software.
- Utilize the fundamental techniques for assessing the probabilities of events.
- Describe the distribution of random variables.
- Understand and utilize the quantitative skills needed to perform analyses of variance.
- Draw inferences about means and proportions.
- Calculate correlations between variables.

Course Outline:

<table>
<thead>
<tr>
<th>Topics</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. What is Statistics?</td>
<td>5%</td>
</tr>
<tr>
<td>II. Descriptive Statistics</td>
<td>15%</td>
</tr>
<tr>
<td>a. Measures of central tendency</td>
<td></td>
</tr>
</tbody>
</table>
b. Measures of dispersion

c. Distribution

III. Probability 15%

a. Simple event
b. Compound event
c. Rules of multiplication

IV. Probability Distribution 20%

a. Discrete random variable
b. Continuous random variable

V. Inference about the mean 10%

VI. Inference about the proportion 10%

VII. Analysis of variance 15%

a. One-way ANOVA
b. Two-way ANOVA

VIII. Correlation 10%

Course Evaluation:

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Test</td>
<td>10</td>
</tr>
<tr>
<td>Post-Test</td>
<td>20</td>
</tr>
<tr>
<td>Article Reviews (8 @ 10 points)</td>
<td>80</td>
</tr>
<tr>
<td>Homework Assignments (3 @ 20 points)</td>
<td>60</td>
</tr>
<tr>
<td>Worksheets (6 in-class @ 10 points)</td>
<td>60</td>
</tr>
<tr>
<td>Exam 1</td>
<td>100</td>
</tr>
<tr>
<td>Exam 2</td>
<td>100</td>
</tr>
<tr>
<td>Final Exam (Cumulative)</td>
<td>100</td>
</tr>
</tbody>
</table>

**Total Points** 530 points

** Syllabus and course activities including any agendas, due dates and/or due times are subject to change at the discretion of the instructor at any time during the course.

Grading Scale:
90 – 100 = A
80 – 89 = B
70 – 79 = C
60 – 69 = D
59 or less = F

Pre & Post Test:
The pre-test will be given at the beginning of the semester to assess student’s current knowledge. Students will do the pre-test in class. The pre-test will not be graded, students who complete the pre-test will automatically get 10 points. Students who miss class will not be allowed to make up the pre-test.

The post-test will be given towards the end of the semester. It will either be given during class or online via D2L. **The post-test will be graded.** The post-test is worth 20 points.
Article Reviews:
Students will complete 8 article reviews worth 10 points each. Students will be provided with the article. Article reviews will be either be completed in class or given to students with a specified due date. The article reviews will help students to start recognizing and understanding statistical information.
- Students are expected to turn in college level work free from grammatical errors. Students experiencing problems with these types of issues are encouraged to contact the Center for Basic Skills on the SIUC campus. Points will be deducted for violations.
- All assignments are to be typed – no handwritten assignments will be accepted.
- All assignments should be submitted via D2L unless otherwise instructed. Please check D2L for due dates and times.
- No late assignments will be accepted. This is a management-related degree and time is an asset that cannot be wasted.
- All Homework assignments must be submitted in a Word document unless otherwise instructed. Nothing else will be accepted. If I can’t open the document, I can’t grade it. Therefore, the student will receive a zero. No second submissions allowed.

The article review should be 2 pages. Paper format should be double-spaced, Times New Roman Font (size 12), and APA format. The paper should be in your own words, plagiarism will result in a zero for that assignment. The article review should include the following:
- Paragraph One:
  - Introduce the topic of the article by summarizing the issue or problem discussed in the article (in your own words)
- Paragraph Two – Four:
  - Summarize the main research presented in the article
    - Proposal/Question
    - Data/Results
    - Conclusion/Applications
- Final Paragraph
  - Personal response to article
    - How it applies to the course
    - How you liked it
    - Criticisms or questions

Homework Assignments:
Students will have 3 homework assignments worth 20 points each. The homework assignments will be based off the Excel Workshops taught during class. The assignments will assess students’ knowledge of Excel and help students become more comfortable using Excel in their future careers.
- Students are expected to turn in college level work free from grammatical errors. Students experiencing problems with these types of issues are encouraged to contact the Center for Basic Skills on the SIUC campus. Points will be deducted for violations.
- All assignments are to be typed – no handwritten assignments will be accepted.
• All assignments should be submitted via D2L unless otherwise instructed. Please check D2L for due dates and times.
• No late assignments will be accepted. This is a management-related degree and time is an asset that cannot be wasted.
• All Homework assignments must be submitted in an Excel document unless otherwise instructed. Nothing else will be accepted. If I can’t open the document, I can’t grade it. Therefore, the student will receive a zero. **No second submissions allowed.**

Homework assignments are not a group project; all students are responsible for being the sole author of their work. Group work will result in a zero for that assignment. Some questions have multiple answers. **Points will only be given to those with the entire question correct. No partial points will be given.** The format requirements for the assignments are the following:

• Each question should be on a separate worksheet and labeled according to the question number, e.g. “Question 1”.
• The data from the question should be copied and pasted into the appropriate question sheet.
• All data should be labeled.
• All charts should include:
  o Chart Title
  o Axis Titles
  o Legend
• Students are required to use the formulas taught in the workshop. Answers that do not use the formulas will result in a zero for that question.

**Students that do not follow the directions for the assignment will receive a zero.**

**Worksheets:**
There will be 6 worksheets given to students to complete in-class. Each worksheet is worth 10 points. The worksheets will not be graded. **Students must be present the day the worksheet is completed to receive the points.** No points will be given to students that are not present. No make-up points will be allowed.

The worksheets are designed to help students prepare for the exams. Students will complete the worksheets in class. We will go over the worksheets together as a class to ensure that all students understand the material.

**Exams:**
There will be 3 exams in this course, all worth 100 points each. **The final exam will be cumulative.** All exams will be given during class time. Exams will only be given on the scheduled exam days. **No early exams or make-up exams will be given except for those rare exceptions outlined by the University.**

The professor will provide a notecard for all students to write any information on to use on the exams. If you are not present the day that notecards are distributed, you will not be allowed to use a notecard on that exam. Students may also use calculators during the exams. Cell phones, laptops, tablets, or any other electronic device will not be allowed.
The final exam is Tuesday, May 10, 2016 from 12:30pm-2:30pm in ASA 0014.

**Attendance Policy:**
Students are responsible for attending all classes. Students will sign the attendance sheet upon entering the classroom (if you are not signed in, you are absent). **Students are expected to be punctual**, showing up late will be regarded as an absence. Late is the same as absent, so be on time. Also, signing the attendance sheet and then leaving class early will also be regarded as an absence. Students who sign the attendance sheet for others that are absent will result in a 20-point deduction from both students total points.

Students will be allowed 3 absences during the semester. Students can use these absences for whatever they wish (illnesses, emergencies, etc.). After the 3rd absence, the student will have points deducted from their total points. **20 points will be deducted for each absence after the allowed amount.** Students are responsible for keeping track of their absences. Please, **do not email me when you will be absent**, you can keep track of your absences on your own. I do not excuse any absences, which is why I allow you to miss 3 days without losing any points. Use your days wisely.

Any course work (assignments and/or exams) will not be allowed to be made up. **If a student misses a class, it is the student’s responsibility to obtain the missed notes from another student.**

**D2L Access & Proficiency:**
Each student will require access to the D2L system. Students will use the D2L system extensively in this course. However, this is NOT a class that teaches D2L to students. The student is expected to invest their own time becoming comfortable and knowledgeable of D2L. No exceptions to due dates/due times or expectations of courses deliverables will be given based upon the student’s inability to master D2L.

The instructor CANNOT aid students with technical problems such as computer compatibility etc. Students need to contact the D2L Administrator at mycourse.siu.edu or 618-453-1016 for assistance in these issues. Students should allow ample time to get the system up and running. If the computer the student intends to use for the course is not compatible with D2L, they must find a computer that will run this program effectively or drop the course given computer accessibility and usability is a requirement of the course. No exceptions to due dates/due times or expectations of courses deliverables will be given based upon technical problems unless the issues are due to an unlikely D2L system failure.

**Student Conduct Code:**
It is each student’s responsibility to know and comply with the SIUC Student Conduct Code and any policies referenced therein.

Disruptive classroom behavior can negatively affect the classroom environment as well as the educational experience for students enrolled in the course. Respect for individual differences and alternative viewpoints will be maintained at all times in this class. **All students are**
expected to come to class prepared and on time, and remain for the full class period. All cell phones, games, laptops, tablets, or other electronic devices must be turned off during class, unless approved by the instructor. Any questions and comments must be relevant to the topic being discussed.

Disruptive behaviors, including but not limited to excessive talking, arriving late to class, sleeping, reading newspapers, using unauthorized electronic devices, fighting, using profanity, personal or physical threats or insults, and damaging property will not be tolerated. **There is a zero tolerance for disruptive behavior. These behaviors will result in removal from class and the student(s) will be marked as absent for that day.**

**Emergency Procedures:**
Southern Illinois University Carbondale is committed to providing a safe and healthy environment for study and work. Because some health and safety circumstances are beyond our control, we ask that you become familiar with the SIUC Emergency Response Plan and Building Response Team (BERT) program. Emergency response information is available on posters in buildings on campus, available on BERT’s website at www.bert.siu.edu, Department of Safety’s website at www.dps.siu.edu (disaster drop down) and in the Emergency Response Guideline pamphlet. Know how to respond to each type of emergency.

Instructors will provide guidance and direction to students in the classroom in the event of an emergency affecting your location. It is important that you follow these instructions and stay with your instructor during an evacuation or sheltering emergency. The Building Emergency Response Team will assist your instructor in evacuating the building or sheltering within the facility.

**Academic Dishonesty:**
Students may be subject to disciplinary proceedings resulting in an academic penalty or disciplinary penalty for academic dishonesty. Academic dishonesty includes, but is not limited to, cheating on a test, plagiarism, or collusion.

**ADA Statement:**
As per 504 of the Vocational Rehabilitation Act of 1973 and the American Disabilities Act (ADA) of 1990, if accommodations are needed, please inform the instructor or program advisor as soon as possible.