ANGELO STATE UNIVERSITY

Bachelor of Science Health Science Professionals

HSP 4337
Statistical Techniques for Health Science Professionals
Fall 2017
Dr. Allyn Byars, Ph.D., CSCS, *D

ANGELO STATE UNIVERSITY
Department of Physical Therapy
COURSE NUMBER
HSP 4337

COURSE TITLE
Statistical Techniques for Health Science Professionals

CREDITS
Three Semester Credit Hours (3-0-0)

PREREQUISITE COURSES
None

CO-REQUISITES
None

PRE-REQUISITE SKILLS
Accessing internet web sites, use of ASU Library resources, and proficiency with Microsoft Word and/or PowerPoint are expectations of the Bachelor of Science Health Science Professionals. Computer access requirements are further delineated in the Undergraduate Handbook. Tutorials for ASU Library and for Blackboard are available through RamPort. The ASU Undergraduate/Graduate Student Handbook should be reviewed before taking this course.

BROWSER COMPATIBILITY CHECK
It is the student’s responsibility to ensure that the browser used to access course material on his/her computer is compatible with ASU’s Blackboard Learning System. The faculty reserves the right to deny additional access to course assignments lost due to compatibility issues. Students are responsible for reviewing the guidelines posted in this course regarding accessing Blackboard assignments.

Problems in this area need to be discussed with faculty at the time of occurrence, either via email (preferred) or by appointment.

Be sure to perform a browser test. Select the “Support” tab from the Blackboard homepage (http://www.blackboard.angelo.edu) Select “Test your Browser” option.

FACULTY
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OFFICE HOURS
By Appointment

COURSE DESCRIPTION
Examines statistical techniques required to analyze data with specific applications for health professionals. Emphasis placed upon data analysis, and interpretation of findings. Techniques include measures of central tendency and variability, correlation, regression, t-tests, analysis of variance, chi-square, nonparametric statistics, and various advanced statistics.
PROGRAM OUTCOMES
Upon completion of the program of study for the Bachelor of Science Health Science Professionals, the graduate will be prepared to:

STUDENT LEARNING OUTCOMES

<table>
<thead>
<tr>
<th>Student Learning Outcome</th>
<th>Assignment(s) or activity(ies) validating outcome achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demonstrate independent problem solving and critical thinking skills by asking appropriate research questions.</td>
<td>Exams, quizzes, and SPSS data analysis software textbook activities</td>
</tr>
<tr>
<td>Demonstrate the ability to organize, analyze, synthesize, and interpret statistical data related to health care.</td>
<td>Exams, quizzes, and SPSS data analysis software textbook activities</td>
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<tr>
<td>Summarize the results of data analysis in a professional format.</td>
<td>SPSS data analysis software textbook activities</td>
</tr>
<tr>
<td>Demonstrate a basic awareness of research questions and how to apply appropriate statistical techniques to answer these questions.</td>
<td>Exams, quizzes, and SPSS data analysis software textbook activities</td>
</tr>
<tr>
<td>Demonstrate proficiency using statistical data analysis software to analyze data from various health professions</td>
<td>SPSS data analysis software textbook activities</td>
</tr>
</tbody>
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REQUIRED TEXTS AND MATERIALS

GRADING SYSTEM
Final grades will be dependent upon completing course requirements and meeting the student learning outcomes.

The following grading scale is in use for this course:

A = 450-500 points  
B = 400-449 points  
C = 350-399 points  
D = 300-349 points  
F = < 300 points

EVALUATION AND GRADES
The overall course grade is based on the following point values for quizzes, exams, and assignments:

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPSS Activities</td>
<td>100</td>
</tr>
<tr>
<td>Quizzes</td>
<td>100</td>
</tr>
<tr>
<td>Exams</td>
<td>300</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>500 points</strong></td>
</tr>
</tbody>
</table>
TEACHING STRATEGIES

- The course will include lecture, discussion, instructional videos, PowerPoint presentations, and practical experience through various textbook activities (e.g., SPSS activities).
- Students are expected to be “active learners.” It is a basic assumption of the instructor that students will be involved (beyond the materials and lectures presented in the course) discovering, processing, and applying the course information using peer-review journal articles, researching additional information and examples on the Internet, and discussing course material with their peers.

ASSIGNMENT/ACTIVITY DESCRIPTIONS

Three scheduled exams (300 points) and fourteen quizzes (100 points) will be announced throughout the semester and consist of multiple choice questions and scored as either correct or incorrect. Questions will be taken from the daily lectures and the textbook. Only ten quizzes will be used to determine the overall quiz grade. The four lowest quiz scores will be dropped which includes any missed quizzes.

Ten scheduled SPSS Activities (100 points) will be assigned from textbook chapters and announced throughout the semester. Activities will consist of data analysis and interpretation utilizing Statistical Package for the Social Sciences (SPSS) data analysis software. Each activity requires the student to answer open-ended questions specific to data analysis and interpretation in which there is only one correct response and therefore scored as either correct or incorrect (100 points).

GENERAL POLICIES RELATED TO THIS COURSE

All students are required to follow the policies and procedures presented in the following documents:

- Angelo State University Student Handbook located on the ASU website http://www.angelo.edu/student-handbook/
- ASU Undergraduate Catalog located on the ASU website https://www.angelo.edu/content/files/16795-201213-undergraduate-catalog

STUDENT RESPONSIBILITY & ATTENDANCE

There are readings which you will have to complete to be able to adequately participate in individual assignments. In order to complete this course successfully, you do have to participate in all course activities. Students are expected to complete all course requirements and submit their work by scheduled due dates and times. Scholarly contribution is an expectation. For planning purposes, this class will probably require a minimum of 6-9 study hours per week on average.

Students are expected to attend all scheduled class meetings. Attendance will be taken daily. If a student arrives to class late or leaves early, it is the student’s responsibility to inform the instructor as to the reason. Chronic failure to attend class will affect your final grade in this class. This also includes students consistently arriving late or leaving early and/or leaving and coming back to class during the scheduled meeting time.

CLASSROOM POLICIES

The following classroom policies and student responsibilities will be enforced:

1. There will be no smoking or use of smokeless tobacco.

2. There will be NO use of cell phones (including TEXT MESSAGING) or any other unauthorized electronic equipment during lectures and quizzes. Use of cell phones
during class is **strictly prohibited**. Upon entering the classroom turn all cell phones and/or other handheld electronic devices off to prevent distractions affecting other student’s learning opportunities.

3. Please be **considerate** to others while in class. **Classroom conversations** will be limited to the lecture discussions only unless otherwise noted.

4. **Professional behavior is expected.** Everyone in the classroom is considered to be an adult professional and therefore should conduct themselves as one.

5. It is the **student’s responsibility** for the information discussed in class even in lieu of one’s absence. It is also the student’s responsibility for all work and is encouraged to have a contact within the class. All students are encouraged to set up an appointment to meet with the professor as needed throughout the duration of the course. The purpose of the aforementioned is for additional assistance in understanding of the concepts presented in the course.

6. There are **NO extra credit** opportunities in this course. Therefore, please do not inquire about such and/or raising your grade particularly at the end of the semester.

**COMMUNICATION**

Faculty will generally respond to email and/or telephone messages within 24 hours during working hours Monday through Friday. Students will be notified of exceptions (e.g., professional conferences). Weekend messages will not be returned until Monday. **Written communication via email:** All private communication will be done exclusively through your ASU email address. Check frequently for announcements and policy changes. **Virtual communication:** Office hours and/or advising may be conducted via telephone correspondence.

**Note:** It is inappropriate to contact the professor by calling his/her personal phone number unless permission is granted.

**ASSIGNMENT SUBMISSION**

In this class, all assignments need to be submitted through the Assignments link in the Blackboard course site. This is for grading purposes. Issues with technology use arise from time to time. If a technology issue does occur regarding an assignment submission, email me at allyn.byars@angelo.edu and attach a copy of what you are trying to submit. This lets your faculty know you completed the assignment on time and are just having problems with the online submission feature in Blackboard. Once the problem is resolved, submit your assignment through the appropriate link. This process will document the problem and establish a timeline. Be sure to keep a backup of all work.

**LATE WORK OR MISSED ASSIGNMENTS POLICY**

Due dates and times for exams, quizzes, and assignments are shown on the course outline posted within Blackboard. Failure of a student to complete an exam, quiz, or assignment within the stated timeframe allotted will result in a score of zero. Exceptions to this policy are on a case by case basis (e.g., prior approval of faculty).

**ACADEMIC HONESTY**

Academic honesty is expected on all work. Students are expected to maintain complete honesty and integrity in their online experiences. Any student found guilty of any form of dishonesty in academic work is subject of disciplinary action and possible expulsion from ASU.
The Physical Therapy Department adheres to the academic honesty statement as set forth in the Angelo State University Student Handbook (2011-2012) [http://www.angelo.edu/student-handbook/code-of-student-conduct/misconduct.php](http://www.angelo.edu/student-handbook/code-of-student-conduct/misconduct.php). The University "faculty expects all students to engage in all academic pursuits in a manner that is above reproach and to maintain complete honesty and integrity in the academic experience both in and out of the classroom setting and may initiate disciplinary proceedings against a student accused of any form of academic dishonesty, including but not limited to, cheating on an examination or other academic work, plagiarism, collusion, and the abuse of resource materials."

**PLAGIARISM**

Plagiarism at ASU is a serious topic. The Angelo State University’s Honor Code gives specific details on plagiarism and what it encompasses. Plagiarism is the action or practice of taking someone else's work, idea, etc., and passing it off as one's own. Plagiarism is literary theft.

**STUDENTS WITH DISABILITIES**

1. “Angelo State University is committed to the principle that no qualified individual with a disability shall, on the basis of disability, be excluded from participation in or be denied the benefits of the services, programs, or activities of the university, or be subjected to discrimination by the university, as provided by the Americans with Disabilities Act of 1990 (ADA), the Americans with Disabilities Act Amendments Act of 2008 (ADAAA), and subsequent legislation.”

2. The Office of Student Affairs is the designated campus department charged with the responsibility of reviewing and authorizing requests for reasonable accommodations based on a disability, and it is the student’s responsibility to initiate such a request by contacting the Office of Student Affairs, University Center, Room 112 at (325) 942-2047 or (325) 942-2211 (TDD/FAX) or by e-mail at studentservices@angelo.edu to begin the process. The Office of Student Affairs will establish the particular documentation requirements necessary for the various types of disabilities.

Reasonable accommodations will be made for students determined to be disabled or who have documented disabilities.

**INCOMPLETE GRADE POLICY** ([OP 10.11 Grading Procedures](http://www.angelo.edu/student-handbook/code-of-student-conduct/misconduct.php))

It is policy that incomplete grades be reserved for student illness or personal misfortune. Please contact faculty if you have serious illness or a personal misfortune that would keep you from completing course work. Documentation may be required.

**STUDENT ABSENCE FOR OBSERVANCE OF RELIGIOUS HOLY DAYS**

“A student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence.” Please see ASU Operating Policy [10.19](http://www.angelo.edu/student-handbook/code-of-student-conduct/misconduct.php).

**COPYRIGHT POLICY**

Students officially enrolled in this course should make only one printed copy of the given articles and/or chapters. You are expressly prohibited from distributing or reproducing any portion of course readings in printed or electronic form without written permission from the copyright holders or publishers.
SYLLABUS CHANGES
The faculty member reserves the option to make changes as necessary to this syllabus and the course content. If changes become necessary during this course, the faculty will notify students of such changes by email, course announcements and/or via a discussion board announcement. It is the student’s responsibility to look for such communications about the course on a daily basis.

COURSE EVALUATION
Students are provided the opportunity, and are strongly encouraged to participate in a course evaluation at the end of the semester. Areas on the IDEA evaluation include:
1. Gaining factual knowledge (terminology, classifications, methods, trends)
2. Learning fundamental principles, generalizations, or theories
3. Learning to apply course material (to improve thinking, problem solving, and decisions)
4. Developing specific skills, competencies, and points of view needed by professionals in the field most closely related to this course