

**Health Services  
Administration**

**University of Wyoming  
PHCY 5042  
Statistics for Health  
Services Administration  
Summer 2021  
July 5 through August 15**



**PHCY 5042**  
**Statistics for Health Services Administration**  
**Summer 2021**

This course will introduce students to biostatistics focusing on common concepts, terminology, and the appropriate selection of statistical tests and interpretation of the output of statistical tests.

Statistics is the tool to answer scientific questions given data. Your goal is to read scientific claims and understand the limits of their research, interpret what the results mean, and demonstrate the ability to analyze their data. The topics include descriptive statistics, one sample mean and proportion, two sample means and proportions, regression, and chi-squared tests. This course is focused on helping Master's students understand the real-world application of statistical methods in healthcare.

**STUDENT LEARNING OUTCOMES AND GOALS:**

At the end of the course, students will be able to:

- Focus on applying the statistics learned to healthcare settings
- Determine appropriate statistical tests for the type of data being used
- Interpret and analyze results provided in journal articles and papers

**REQUIRED TEXTS:**

“Clinical Biostatistics and Epidemiology Made Ridiculously Simple” by Weaver A, Golding S. ISBN-13: 978-1935660026. This text can be purchased from Amazon for less than \$25.

**INSTRUCTOR AVAILABILITY/ CONTACT INFORMATION:**

Dr. Paul Carnes

Email: [pcarnes@uwyo.edu](mailto:pcarnes@uwyo.edu)

Dr Carnes will be available via electronic mail

Note: Responses to emails will occur within 48 hours.

**CLASS WEBSITE:**

The WyoCourses site is accessible from the University website via WyoWeb. Class lectures and slide sets will be posted or linked on this site. Assignments will also be posted there (both by the instructor and the student). The student is expected to utilize the site and accept changes from this syllabus as amended on the site. You may not be able to see the course materials until two weeks prior to the course.

## **LIVE SESSIONS:**

Live class sessions will be held each **Wednesday from 6-7pm MST**. We will use WyoCourses for these live sessions. You do not need to show yourself on video but Dr. Carnes may use video and may also use screen-share to display information.

## **COURSE PREREQUISITES, CO-REQUISITES, ENROLLMENT RESTRICTIONS:**

This course is required for students in the Master of Science in Health Services Administration program. Please check the catalog for listing of any prerequisites for the course. This course can be used for a core component of a track or as an elective for other tracks. Permission from the department may be requested for those outside the MS HAS program should they be interested in the class.

## **COURSE PROCEDURES:**

All students will join the class at the same time (synchronous). Some activities, such as viewing recorded lectures can be done at the student's selected times (asynchronous). Opening and closing times for the modules, quizzes, or other activities will be posted and enforced.

A class session/assignment is the time that includes the live session, the pre-session work, and any immediate post-session work. For this class, a session/assignment will become available as noted in the Syllabus with due dates listed for each item.

Instructional procedures consist of pre-recorded lecture, discussion, participation exercises plus assigned readings and projects. The distance education model of this course requires some adaptation by the students and instructor from the traditional classroom setting. **You may be recorded with your face and name.** This recording will be placed on a password protected site, but no guarantees are made on its security.

Different people have different learning styles. Lecture where the instructor talks and students listen is passive on the part of the student. Discussion requires active participation on the part of the learner. In this class, some topics are appropriate for lectures; some are appropriate for discussion; and some will be conducted through active participation such as analysis of case studies and or discussion boards.

## **GENERAL REQUIREMENTS AND EXPECTATIONS:**

Students should obtain the required textbook and complete assigned readings by the due date. It is acceptable for students to communicate with each other about assignments. Students are encouraged to participate in live class sessions; however, attendance will not count towards your grade.

You are encouraged to begin reading the assigned book chapters or articles prior to the live class session on Wednesday. During the Wednesday session, Dr. Carnes will highlight key items related to the assigned readings for that week and will answer questions. A quiz on the assigned material for that week will open on Thursday and must be completed before Saturday at midnight MST.

## **ATTENDANCE AND ABSENCE POLICIES:**

Students should regularly attend online classes and productively participate in class. Since some of the projects may be started in the live sessions, missing class can make projects much more difficult. Because of the multiple available times for posting assignments as well as for taking any quizzes or

examinations, the need for an excused absence would be a rare event. Only rationale accepted by the University of Wyoming as an excused absence will be accepted. Any anticipated absence from the live sessions should be discussed in advance with the instructor.

### **CLASSROOM BEHAVIOR POLICY:**

At all times, treat your presence in the classroom and your enrollment in this course as you would any professional activity. Act professionally, arrive on time, pay attention, complete your work in a timely and professional manner, and treat all deadlines seriously. All of us will be respectful of each other. Spirited debate and disagreement are to be expected in any graduate level course and all views will be heard fully, but at all times we will behave civilly and with respect towards one another. Personal attacks, offensive language, name-calling, and dismissive gestures are not warranted in a learning atmosphere. This is a safe environment and as the instructor, I have the right to dismiss anyone from the classroom, study sessions, electronic forums, and other areas where disruptive behavior occurs – there is zero tolerance on this issue.

### **CLASSROOM STATEMENT ON DIVERSITY:**

The University of Wyoming values an educational environment that is diverse, equitable, and inclusive. The diversity that students and faculty bring to class, including age, country of origin, culture, disability, economic class, ethnicity, gender identity, immigration status, linguistic, political affiliation, race, religion, sexual orientation, veteran status, worldview, and other social and cultural diversity is valued, respected, and considered a resource for learning. Diversity helps all of use gain a better understanding and perspective of the subjects we will be covering in the course.

### **DISABILITY SUPPORT:**

The University of Wyoming is committed to providing equitable access to learning opportunities for all students. If you have a disability, including but not limited to physical, learning, sensory or psychological disabilities, and would like to request accommodations in this course due to your disability, please register with and provide documentation of your disability as soon as possible to Disability Support Services (DSS), Room 128 Knight Hall. You may also contact DSS at (307) 766-3073 or [udss@uwyo.edu](mailto:udss@uwyo.edu). It is in the student's best interest to request accommodations within the first week of classes, understanding that accommodations are not retroactive. Visit the DSS website for more information at: [www.uwyo.edu/udss](http://www.uwyo.edu/udss)

### **ACADEMIC DISHONESTY POLICIES:**

**Academic dishonesty, discrimination, and harassment will not be tolerated in this class!** Cases of academic dishonesty will be treated in accordance with UW Regulation 2-114. The penalties for academic dishonesty can include, at my discretion, an "F" on an exam, an "F" on the class component exercise, and/or an "F" in the entire course. Academic dishonesty includes plagiarism, which means anything that represents someone else's ideas as your own without attribution. It is intellectual theft – stealing - and includes (but is not limited to) unapproved assistance on examinations, plagiarism (use of any amount of another person's writings, blog posts, publications, and other materials without attributing that material to that person with citations), or fabrication of referenced information. Facilitation of another person's academic dishonesty is also considered academic dishonesty and will be treated identically.

Such conduct is described within and will result in sanctions pursuant to the following School of Pharmacy and University policy and regulations:

University of Wyoming Code of Conduct

<http://www.uwyo.edu/dos/conduct/>

University of Wyoming Regulations

<http://www.uwyo.edu/generalcounsel/files/docs/UW%20Reg%20Updates%202016/UW%20Reg%206-802.pdf>

## **DUTY TO REPORT:**

While this is a safe environment and I want you all to feel comfortable coming to me with issues you may be struggling with or concerns you may be having, please be aware that I have some reporting obligations that are part of my faculty requirements at UW.

For example, if you inform me of an issue of sexual harassment, sexual assault, or discrimination I will keep the information as private as I can, but I am required to bring it to the attention of the institution's Title IX Coordinator. If you would like to talk to those offices directly, you can contact Equal Opportunity Report and Response (Bureau of Mines Room 319, 766-5200, [report-it@uwyo.edu](mailto:report-it@uwyo.edu), [www.uwyo.edu/reportit](http://www.uwyo.edu/reportit)). Additionally, you can also report incidents or complaints to the UW Police Department. You can also get support at the STOP Violence program ([stopviolence@uwyo.edu](mailto:stopviolence@uwyo.edu), [www.uwyo.edu/stop](http://www.uwyo.edu/stop), 766-3296) (or SAFE Project ([www.safeproject.org](http://www.safeproject.org), [campus@safeproject.org](mailto:campus@safeproject.org), 766-3434, 24-Hour hotline: 745-3556).

Another common example is if you are struggling with an issue that may be traumatic or unusual stress. I will likely inform the Dean of Students Office or Counseling Center. If you would like to reach out directly to them for assistance, you can contact them using the info below or going to [www.uwyo.edu/dos/uwyocares](http://www.uwyo.edu/dos/uwyocares).

Finally, know that if, for some reason, our interaction involves a disruptive behavior or potential violation of policy, I must inform the Dean of Students, even when you and I may have reached an informal resolution to the incident. The purpose of this is to keep the Dean apprised of any behaviors (by students or faculty) and what was done to resolve them.

## **SUBSTANTIVE CHANGES TO THE SYLLABUS:**

All deadlines, requirements, and course structure are subject to change if deemed necessary by the instructor. Students will be notified verbally in class or on our WyoCourses announcement page and/or via email of these changes.

## **STUDENT RESOURCES:**

- **DISABILITY SUPPORT SERVICES:** [udss@uwyo.edu](mailto:udss@uwyo.edu), 766-3073, 128 Knight Hall, [www.uwyo.edu/udss](http://www.uwyo.edu/udss)
- **COUNSELING CENTER:** [uccstaff@uwyo.edu](mailto:uccstaff@uwyo.edu), 766-2187, 766-8989, 341 Knight Hall, [www.uwyo.edu/ucc](http://www.uwyo.edu/ucc)
- **ACADEMIC AFFAIRS:** 766-4286, 312 Old Main, [www.uwyo.edu/acadaffairs](http://www.uwyo.edu/acadaffairs)
- **DEAN OF STUDENTS OFFICE:** [dos@uwyo.edu](mailto:dos@uwyo.edu), 766-3296, 128 Knight Hall, [www.uwyo.edu/dos](http://www.uwyo.edu/dos) UW
- **POLICE DEPARTMENT:** [uwpd@uwyo.edu](mailto:uwpd@uwyo.edu), 766-5179, 1426 E Flint St, [www.uwyo.edu/uwpd](http://www.uwyo.edu/uwpd)
- **STUDENT CODE OF CONDUCT WEBSITE:** [www.uwyo.edu/dos/conduct](http://www.uwyo.edu/dos/conduct)

"If you have a physical, learning, sensory or psychological disability and require accommodations, please let me know as soon as possible. You will need to register with, and possibly provide documentation of your disability to Disability Support Services (DSS), room 109 Knight Hall. You may also contact DSS at (307) 766-3073 or [udss@uwyo.edu](mailto:udss@uwyo.edu). Visit their website for more information: [www.uwyo.edu/udss](http://www.uwyo.edu/udss)."

**COVID-19 Policies** – during this pandemic, you must abide by all UW policies and public health rules put forward by the City of Laramie (or by Natrona County if at UW-Casper), the University of Wyoming and the State of Wyoming to promote the health and well-being of fellow students and your own personal self-care. The current policy is provided for review at: <https://www.uwyo.edu/alerts/campus-return/index.html>

As with other disruptive behaviors, we have the right to dismiss you from the classroom (Zoom and physical), or other class activities if you fail to abide by these COVID-19 policies. These behaviors will be referred to the Dean of Students Office using the UWYO Cares Reporting Form for Student Code of Conduct processes ([https://cm.maxient.com/reportingform.php?UnivofWyoming&layout\\_id=5](https://cm.maxient.com/reportingform.php?UnivofWyoming&layout_id=5)).

**Syllabus Changes:** I will alert you to any possible course format changes in response to UW decisions about community safety during the semester.

### **HyFlex, Zoom, and WyoCourses expectations:**

As with all UW coursework, this course will be educational and useful to you. I will respond to questions, concerns, and feedback in a timely manner.

Your responsibilities:

- Give and receive feedback from me and your classmates respectfully and constructively in all interactions. This includes in Zoom chats, on WyoCourses boards, and within physical classroom spaces.
- Actively engage in civil discourse in a respectful manner. Use professional language in all course related forums.
- Communicate professionally. Whenever you send class-related email or messages, please include a clear, specific subject line and use the body of the email or message to explain the purpose for the email and any attached materials. Conduct yourself professionally.
- Meet assignment deadlines. We expect that you're interacting with course material multiple times during the week.
- Ask for help when you need it. For academic assistance for this course please contact me for available resources. For Dean of Students assistance please see: <https://www.uwyo.edu/dos/student-resources/covid-19-student-resources.html>
- Please let us know if you notice another student who needs help in our (anonymous) WyoCares referral option (<https://www.uwyo.edu/dos/students-concern/index.html>).

**Information Technology (IT):** If you have any IT related challenges, please contact the UWIT Service Center: <https://uwyo.teamdynamix.com/TDClient/1940/Portal/Requests/ServiceDet?ID=8890>

### **Quizzes/Exams:**

There will be six quizzes (one per week). The quizzes will open on Thursday and close on Saturday at midnight MST. You can complete the quiz any time within that window from Thursday through Saturday. Quizzes will be “open book” and you will be allowed up to 60 minutes to complete each quiz.

## GRADES

Quiz 1	17%	<b>A: 90-100</b>
Quiz 2	17%	<b>B: 80-89</b>
Quiz 3	17%	<b>C: 70-79</b>
Quiz 4	17%	<b>D: 60-69</b>
Quiz 5	17%	<b>F: Below 60</b>
Quiz 6	15%	

## COURSE SCHEDULE

<b>Week</b>	<b>Readings</b>	<b>Live Class</b>	<b>Quiz Due</b>
1	Book: Chapters 1-4	July 7	July 10
2	Book: Chapters 5-7	July 14	July 17
3	Book: Chapters 8-12	July 21	July 24
4	Book: Chapters 13-15 Article TBD	July 28	July 31
5	Book: Chapter 16 Articles TBD	August 4	August 7
6	Book: Chapters 17-18 Articles TBD	August 11	August 14

## GUIDELINES FOR EVALUATING PARTICIPATION

**Outstanding Contributor:** Contributions in class reflect exceptional preparation. Ideas offered are always substantive; provide one or more major insights as well as direction for the class. Challenges are well substantiated and persuasively presented. If this person were not a member of the class, the quality of discussion would be diminished markedly.  
(A range of grade)

**Good Contributor:** Contributions in class reflect thorough preparation. Ideas offered are usually substantive; provide good insights and sometimes direction for the class. Challenges are well substantiated and often persuasive. If this person were not a member of the class, the quality of discussion would be diminished.  
(B range of grade)

**Adequate Contributor:** Contributions in class reflect satisfactory preparation. Ideas offered are sometimes substantive, provide generally useful insights but seldom offer a new direction for the discussion. Challenges are sometimes presented, fairly well substantiated, and are sometimes persuasive. If this person were not a member of the class, the quality of discussion would be diminished somewhat.  
(C range of grade)

**Non-Participant:** This person says little or nothing in class. Hence, there is not an adequate basis for evaluation. If this person were not a member of the class, the quality of discussion would not be changed.  
(D range of grade)

**Unsatisfactory Contributor:** Contributions in class reflect inadequate preparation. Ideas offered are seldom substantive; provide few if any insights and never a constructive direction for the class. Integrative comments and effective challenges are absent. If this person were not a member of the class, quality discussion time for others would increase. (Below D range of grade)