

**Health Services
Administration**

**University of Wyoming
PHCY 5147 40
HEOR Data Analytics -
SAS II
Fall 2020
October 18 – December 11**



College of Health Sciences
School of Pharmacy

HEOR Data Analytics - SAS II

Fall 2020

The purpose of this course is an introduction to intermediate and advanced methods of analyzing healthcare data by exposure to utilizing clinical risk adjustment models in SAS currently used in industry. This course will further explore the features and complexities of medical and pharmacy data and build upon the Introduction to HEOR Data Analytics Using SAS I course by focusing on analyzing and interpreting patient outcomes in HEOR using sample data to complete the objectives of a research study. This is a 3 credit hour course.

STUDENT LEARNING OUTCOMES AND GOALS:

Upon successful completion of this course, students will be able to:

- Describe the prominent issues and resolutions used when working with medical and pharmacy claims data in an HEOR study
- Have exposure and understand different models of clinical analysis and risk adjustment (CCS, CDPS, MRX, HCC, etc.) as applied to patient populations in an HEOR study
- Explain risk adjustment and impact on HEOR studies
- Understand the most common conditions and data sources necessary in clinical analytics and risk adjustment and how to identify, utilize them, and interpret results

REQUIRED SOFTWARE / TEXTS:

- SAS Enterprise Guide – provided to student
- Text/ Readings / course materials are provided to student
- See [Appendix A](#) for a complete list of reading assignments.

INSTRUCTOR AVAILABILITY/ CONTACT INFORMATION:

Jason Scott, M.Sc., M.P.H., M.B.A.

Office Hours: By Appointment

Email: j.scott@ufl.edu

Office: Off campus

Phone: 502-709-2812

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 submitted by the student). The student is expected to utilize the site and accept changes from this syllabus as amended on the site. You will not be able to see the course materials until after Aug 21.

LIVE SESSIONS:

Live class sessions will be held each **INSERT DATE AND TIME**. We will use Zoom for these live sessions. **INSERT ZOOM LINK**

COURSE PREREQUISITES, CO-REQUISITES, ENROLLMENT RESTRICTIONS:

This course is designed for students in the Master of Science in Health Services Administration HEOR track. Other track students may take the course as an elective. Pre-require: Introduction to HEOR Data Analytics Using SAS I

Enrollment in or completion of a degree in the health sciences administration program is strongly recommended.

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. The structure includes; Live online video and recorded class sessions, homework assignments, pharmacy application papers, and other self-directed learning activities are required (e.g. videos, readings, web-based learning, etc.).

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 prior to the live online date listed in the course calendar. Students are encouraged to participate in live class sessions; active participation will also count towards your discussion board grade (see last page of syllabus for Guideline for Evaluating Participation).

In order for a discussion or dialogue to be successful, students must have read the assigned readings, watched any video recording and have completed some assignments **before** joining class. Assignments will be clearly indicated whether due before or after the live session. Whether a lecture or discussion, students should feel free to ask questions during class or on-line. If you have a question, other students may have the same question.

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 us 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. 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

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, 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, www.uwyo.edu/stop, 766-3296) (or SAFE Project (www.safeproject.org, 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.

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, 766-3073, 128 Knight Hall, www.uwyo.edu/udss
- COUNSELING CENTER: uccstaff@uwyo.edu, 766-2187, 766-8989, 341 Knight Hall, www.uwyo.edu/ucc
- ACADEMIC AFFAIRS: 766-4286, 312 Old Main, www.uwyo.edu/acadaffairs
- DEAN OF STUDENTS OFFICE: dos@uwyo.edu, 766-3296, 128 Knight Hall, www.uwyo.edu/dos UW
- POLICE DEPARTMENT: uwpd@uwyo.edu, 766-5179, 1426 E Flint St, www.uwyo.edu/uwpd
- STUDENT CODE OF CONDUCT WEBSITE: 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. Visit their website for more information: 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).

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>

GRADES

The numbers assigned to the grades shall be

A=90 and above,

B=80 to <90;

C=70 to <80;

D=60 to <70;

F=below 60.

The +/- system is not used by the School of Pharmacy. Graduate students, including those enrolled in the Master of Science in Health Services Administration, must maintain a 3.00 GPA (B or better). Note: there is no rounding of grades – an 89.9 is not 90.

EVALUATION METHODS

- Midterm Exam 25%
- Final Exam 25%
- Pharmacy Application Papers 30%
- SAS/SQL Homeworks 15%
- Class Participation 5%

Pharmacy Application Papers

You are expected to apply material by submitting a topic paper and completing homework assignments in SAS and participating in the group discussion during the workshops.

Weekly topic paper should be single-spaced with one-inch margins and at most one page long using Times New Roman 12 point font. The paper should be well-organized and written in a professional tone. It should be concise and relate the topic to the class material. (ONLY 3 PAPERS ARE REQUIRED THIS SEMESTER)

SAS/SQL Homeworks

Three homework assignments using data sets provided to you are assigned throughout the semester and you will answer the questions using SAS/SQL.

Exams

The exam will consist of completing a series of questions using the data set of a patient population provided to the student. The exam will cover the concepts from class lectures and the assigned textbooks.

Make-up Quiz/Exam Policy

Make-up exams for the exams will be given only if you have written official documentation of a valid excuse.

Policy on Old Quizzes and Assignments

No old quizzes or assignments are provided.

Assignment Deadlines

Late assignments will not be accepted.

COURSE SCHEDULE:

See Appendix B

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)