# PHCY/5147: Introduction to HEOR Data Analytics Using SAS II

**3 Semester Credit Hours**

**Course Purpose:**

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.

**Course Faculty and Office Hours**

***Course Coordinator:***

Jason Scott, M.Sc., M.P.H., M.B.A.
Email: jscott53@uwyo.edu
Office: N/A
Phone: 502-709-2812

***Office Hours***
By Appointment

**Place and Time of Class Sessions:** Sundays 7:00pm – 9:00pm (All times Eastern) and recorded lectures to be viewed during the week when feasible for the student

**Course Objectives**
Upon completion of this course, the student will:

- 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

**Pre-Requisite Knowledge and Skills**
PHCY/5146: Introduction to HEOR Data Analytics Using SAS I

**Course Structure & Outline**

**Course Structure.** 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.).

**Course Outline/Activities.** Refer to Appendix A for the tentative class schedule.

**Required Software** SAS Enterprise Guide **–** provided to student

**Recommended Textbooks** Course materials are provided to student
See Appendix B for a complete list of reading assignments.

**Student Evaluation & Grading**

**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**

3 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.

**Grading Scale**

95-100 = A
90-94 = A-
86-89 = B+
83-85 = B
80-82 = B-
76-79 = C+
73-75 = C
70-72 = C-
66-69 = D+
63-65 = D
60-62 = D-
<60 = E

**Class Attendance Policy**
Attendance to live sessions is required. Class participation grades will be reduced for not attending.

**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.

**General College of Pharmacy Course Policies**
The College of Pharmacy has a website that lists course policies that are common to all courses. This website covers the following:

1.University Grading Policies
2.Academic Integrity Policy
3.How to request learning accommodations
4.Faculty and course evaluations
5.Student expectations in class
6.Discussion board policy
7.Email communications
8.Religious holidays
9.Counseling & student health
10.How to access services for student success

**Appendix A: Class Schedule**
See corresponding Excel spreadsheet

**Appendix B: Reading Assignments**
Varies by semester, includes contemporary empirical literature on pharmacy informatics and health economics and outcomes research that are informative and applicable to the student to integrate into course material. Please refer to the documentation that has been posted in the corresponding folders by subject matter in Canvas. SUGI (SAS Users Group International) papers have been posted in Canvas for your use to provide supplemental materials to aid understanding the course concepts. Additional learning materials as provided by the SAS Institute will also be posted in Canvas.