

**Semester:** Spring **Year:** 2022  
**Class Day/Time:** Online **Class Location:** Online  
**Instructor of Record:** Harrison Ndetan Instructor  
**Office:** H251  
**Office Phone:** (903) 877-1405  
**Email:** [harrison.ndetan@uthct.edu](mailto:harrison.ndetan@uthct.edu)  
**Office Hours:** Wednesday 8:30-10:30 am\_ By Appointment

### **Course Description:**

Develops skills in the use of statistical packages in public health research. Emphasis is on data definition, verification, descriptive examination, and graphical presentation. Statistical packages will include SAS software.

**Prerequisite:** PBHL 5317 - Biostatistics I; PBHL 5342 - Epidemiology

**Co-requisite:** N/A

### **Student Learning Outcomes (SLO or “course objective”):**

The Foundational Learning Objectives of this course are to:

- explain the role of quantitative & qualitative methods & sciences to describe & assess a population's health and
- analyze quantitative & qualitative data using appropriate biostatistics, informatics, computer-based programming & software.

Data is collected for evaluation and monitoring of a population's health. Such data needs to be stored safely, evaluated for accuracy and prepared for analysis. We focus on the data management aspect in this course. Students will participate in multiple activities including reading manuscripts, completing assignments, quizzes, projects involving real-life data and exams to enhance the knowledge of this competency. PLO 1,3,4, 5, and 6

Specific learning outcomes are listed below:

- By the end of the course students will be able to retrieve and manipulate data, conduct descriptive analyses, and present and interpret their results.

### **Course Assessment/Methods of Evaluation:**

#### **Course Requirements and Grading:**

**Students are expected to keep track of their performance throughout the semester and seek guidance from instructor if their performance drops below satisfactory levels.** Grades will be based on the number of points earned in exams, quizzes, homework assignments, and participation. A total of 440 points are possible to earn. On a percentage basis, final grades will be computed as: 90%+ = A, 80%-89% = B, 70%-79% = C, 60%-69% = D, < 60% = F.

**Quizzes (20%):** There will be 11 graded quizzes (10 points each), given at the beginning of each class. Quizzes will run for 10minutes based on the material of the previous lecture. And there shall be no make-up quizzes.

**Projects (60%):** There will be 2 projects, each worth 100 points. Projects would be completed in a small group based on the class size and would be graded based on a rubric that would include individual participation. Apart from written submission, there shall be group presentations. Work must be completed on stipulated due dates to earn any points. Due dates for the projects are detailed below in the course content section.

**Homework (20%):** Homework would be assigned, grade (10%) and discussed in class. Participating in this and other class discussions is essential and will be scored at 10% of the final course grade. Not attending a class will result in a decrease in your participation grade, because you will not be present to participate.

Quizzes = 20%

Homework/class participation = 20%

Midterm = 20%

Final project = 40%

### **Linked Program Learning Outcomes:**

The student learning outcomes listed above address the following MPH Program PLOs:

- PLO1 - The student will demonstrate mastery in each of the five core knowledge areas in public health: Biostatistics, Epidemiology, Social & Behavioral Sciences, Health Policy and Management, and Environmental Health Sciences.
- PLO3 - The student will demonstrate proficiency in using multiple informational resources to gather, analyze, apply and report solutions to public health problems with a special emphasis on rural community health.
- PLO4 - The student will demonstrate proficiency in English communication in both oral (public speaking) and written forms as they pertain to conveying key concepts in public health.
- PLO5 - The student will demonstrate proficiency in using computers and other forms of digital technology and media as they pertain to research, office management and public health issues.
- PLO6 - The student will demonstrate independent and critical thinking skills.

### **Textbook:**

A Gentle Introduction to Statistics Using SAS Studio in the Cloud

Ron Cody

EISBN13: 9781954844476

<https://support.sas.com/cody>

Fundamentals of Programming in SAS

James Blum; Jonathan Duggins

EISBN13: 9781635266719

<https://support.sas.com/blum>

### **Recommended (Optional) Textbook:**

The Little SAS Book 6<sup>th</sup> Edition

Lora D. Delwiche; Susan J. Slaughter

EISBN13: 9781642953435

<https://support.sas.com/delwiche>

Learning SAS by Example: A Programmer's Guide 2nd edition

Publisher: SAS Institute

EISBN13: 9781635266566

<https://support.sas.com/cody>

SAS Certification Prep Guide: Base Programming for SAS 9, Third Edition

Publisher : SAS Institute

ISBN-13: 978-1607649243

ISBN-10: 1607649241

**Required supplies:**

- You will need to obtain the Statistical Analysis Software (SAS). The SAS Studio is available for free via the SAS On Demand for Academics Dashboard at: [https://www.sas.com/en\\_us/software/on-demand-for-academics.html](https://www.sas.com/en_us/software/on-demand-for-academics.html)
- Step-by-step guide to register and access SAS studio: <https://sascrunch.com/how-to-install-sas-studio/>
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**Course Content:**

Week	Date	Course Session Topic	Instructor	Format	Assessment
1	Jan. 10 - 16	Essentials: Introduction to SAS University/SAS Studio, Programing (process, tools, syntax) Writing your First SAS Program Reading Raw Data from External Files	Ndetan	Virtual Synchronous	Quiz#1 HW#1
2	Jan. 17 - 23	Accessing Data Creating Permanent SAS Data Sets SAS Libraries	Ndetan	online	HW#2
3	Jan. 24 - 30	Exploring and Validating Data (Filtering, formatting, sorting and removing duplicates)	Ndetan	Virtual Synchronous	Quiz#2 HW#3
4	Jan. 31 - Feb. 6	Preparing Data for analysis (Reading/filtering, creating new variables, using character/date functions, conditional processing)	Ndetan	online	HW#4
5	Feb. 7 - 13	Analyzing and Reporting on Data (Enhancing Reports with Titles, Footnotes, and Labels; Demonstration: Creating Frequency Reports/Graphs, summary statistics)	Ndetan	Virtual Synchronous	Quiz#3 HW#5



6	Feb. 14 - 20	Exporting Results to excel, PDF, RTF	Ndetan	online	HW#6
7	Feb. 21 - 27	Using Structured Query Language (SQL) in SAS (Reading/Filtering Data & Joining tables)	Ndetan	Virtual Synchronous	Quiz#4 HW#7
8	Oct. 16	MIDTERM	Ndetan	online	PROJECT#1
9	Mar. 7 - 13	SPRING BREAK			
10	Mar. 14 - 20	Controlling DATA Step Processing. Processing Data in Groups.	Ndetan	Virtual Synchronous	Quiz#5 HW#8
11	Mar. 21 - 27	Manipulating Data with Functions: Numeric and character functions, shifting dates; Special Functions to Convert Column Type	Ndetan	online	HW#9
12	Mar. 28 – Apr. 3	Creating Custom Formats Combining Tables: Concatenation & merging	Ndetan	Virtual Synchronous	Quiz#6 HW#10
13	Apr. 4 - 10	Processing Repetitive Codes	Ndetan	online	HW#11
14	Apr. 11 - 17	Restructuring Tables (SAS Data sets) Working with multiple observations per subject	Ndetan	Virtual Synchronous	Quiz#7 HW#12
15	Apr. 18 - 24	Introducing the SAS Macro Language	Ndetan	online	HW#13
16	Apr. 25 – May 1	Final project presentation	Ndetan	Virtual Synchronous	PROJECT#2

**Note: Homework is due 11:59 pm every Sunday of the assigned week. The course syllabus is a guide for this class, but it is subject to change. Students will be informed of any change in content or exam/assignment dates.**

## Other Class Policies

### **Attendance/Participation:**

Regular and punctual attendance is expected. You should arrive on time and participate in all class activities. If a student misses a class or lab, the student is responsible for obtaining any information distributed during those times. Make-ups are possible only under certain instances. Arrangements for any make-ups should be discussed directly with the instructor for that day's class.

### **Email Correspondence:**

All email correspondence will be through the UTHSCT email system. Personal email accounts will not be used for any class-related matters (ex. assignments, absence notifications, grades, etc.). All students are responsible for checking their UTHSCT email account regularly. Any questions regarding UTHSCT individual student email accounts should be addressed to the Help Desk at 903.877.7700.

### **Academic Honesty:**

Any student who commits an act of scholastic dishonesty is subject to discipline. Scholastic dishonesty includes, but is not limited to, cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts.

#### Cheating

Dishonesty of any kind involving examinations, assignments, alteration of records, wrongful possession of examinations, and unpermitted submission of duplicate papers for multiple classes or unauthorized use of keys to examinations is considered cheating. Cheating includes but is not limited to:

- Using or attempting to use unauthorized materials to aid in achieving a better grade on a component of a class.
- Falsifying or inventing any information, including citations, on an assigned exercise.
- Helping or attempting to help another in an act of cheating or plagiarism.

#### Plagiarism

Plagiarism is presenting the words or ideas of another person as if they were your own. Materials, even ideas, borrowed from others necessitate full and complete acknowledgment of the original authors. Offering the work of another as one's own is plagiarism and is unacceptable in the academic community. A lack of adequate recognition constitutes plagiarism, whether it utilizes a few sentences, whole paragraphs, articles, books, audio-visual materials, or even the writing of a fellow student. In addition, the presentation of material gathered, assembled or formatted by others as one's own is also plagiarism. Because the university takes such misconduct very seriously, the student is urged to carefully read university policies on Misconduct in Research and Other Scholarly Activity 05.00. Examples of plagiarism are:

- Submitting an assignment as if it were one's own work when, in fact, it is at least partly the work of another.
- Submitting a work that has been purchased or otherwise obtained from an Internet source or another source.
- Incorporating the words or ideas of an author into one's paper without giving the author due credit.

### **Adding/Dropping**

The official deadline for adding and dropping courses is as published in the academic calendar and Graduate Bulletin (typically the day before Census Day). However, students are strongly encouraged to meet with their graduate advisor or the Program Coordinator prior to adding/dropping courses. Movement into and out of classes after the 4th class day requires approval of the Program Director. Students can drop until mid-semester without a WP or WF. Drops after mid-semester require approval of the Dean. Each student is responsible for their own enrollment status with the university.

**Disability Accommodations**

UTHSCT abides by Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act, which mandate reasonable accommodations be provided for students with documented disabilities. If you have a disability and may require some type of instructional and/or examination accommodations, please contact me early in the semester so that I can provide or facilitate provision of accommodations you may need. If you have not already done so, you will need to register with the Student Services Office (located on the UT Tyler Campus). You may call 903-566-7079 for more information.

**Student Absence Due to Religious Observance**

Students who anticipate being absent from class due to a religious observance are requested to inform the instructor of such absences by the second class meeting of the semester.

**Emergency Exits and Evacuation**

Everyone is required to exit the building when a fire alarm goes off. Follow your instructor's directions regarding the appropriate exit or action. If you require assistance during an evacuation, inform your instructor in the first week of class. Do not re-enter the building unless given permission by the Health Center Police or Fire Department.

**Technical Support**

If you experience technical problems or have a technical question about this course, you can obtain assistance by emailing me at [harrison.ndetan@uthct.edu](mailto:harrison.ndetan@uthct.edu) or calling the Help Desk at 903.877.7700.