

ENRH-160: Clinical Informatics in Medicine
Fall 2021

Course Directors: Sherry Parker, MS2 and Ashish Chowdary, MS2

Faculty Sponsors: Mujeeb Basit, M.D. & Christoph Lehmann, M.D.

Departments: Lyda Hill Department of Bioinformatics, Department of Internal Medicine, and Department of Pediatrics

Requirements:

Minimum participants: 5

Maximum participants: N/A

Rationale: The Clinical Informatics in Medicine elective aims to connect students with high profile faculty and hospital leadership within UTSW's informatics community, including DuWayne Willett, MD (Chief Medical Informatics Officer for the UTSW Health System), and Seth Toomay, MD (Health System Chief Medical Officer), and those actively engaged in health informatics research. 3 hands-on workshops will be held to introduce students to working with real world healthcare data in R and Epic.

Objectives: The intent of the lecture discussions is to give students an introduction to clinical informatics, and demonstrate how data and informatics are currently used at UTSW in guiding clinical practice and decision making. During the one hour lecture series, clinical faculty will present a core theme of informatics and examples of its application across medicine here at UTSW. Students will learn how data is being used to drive evidence based medicine and build impactful clinical decision support models, how healthcare data is collected, managed, wrangled, and analyzed, and how to critically evaluate data models. Additionally, students will be introduced to real-world examples of informatics being used in both clinical and basic science research. We will cover the use of ClinDEN and single cell RNA sequencing to expand on the research skillset of students. A brief, hands on overview of navigating Epic will also be covered.

Format: One semester, 6 one hour sessions, and 3 two hour workshops. Classes will consist of guest presentations or interactive workshops.

Student Evaluation: Grading will be pass/fail. To receive transcript acknowledgment, students must attend 9 of 12 participant hours and complete the online REDCap course evaluation form.

Course Schedule

Session	Topic	Speaker	Proposed Date	Location
Session 1	Introduction to Clinical Informatics (1 hr.)	Christoph Lehmann, MD	8/31/2021 @12PM	D1.100
Session 2	Evidence Based Medicine and Clinical Decision Support (1 hr.)	Mujeeb Basit, MD	09/07/2021 @12PM	D1.100
Session 3	Health Information Technology (1 hr.)	DuWayne Willett, MD	09/12/2021	D1.100
Session 4	Workshop 1: Clinical Data Analytics (2 hrs.)	Sherry & Ashish	09/28/2021 @4PM	D1.100
Session 5	Precision Medicine (1 hr.)	Josh Peterson, MD	10/19/2021 @12PM	D1.100 Zoom
Session 6	Workshop 2: Bioinformatics (2 hrs.)	Ashish & Sherry	11/02/2021 @4PM	D1.100
Session 7	Workshop 3: Introduction to Epic (2 hrs.)	Alyssa, Sherry, & Ashish	11/16/2021 @4PM	D1.100
Session 8	Assessing Model Performance (1 hr.)	Sam McDonald, MD	11/30/2021 @12PM	D1.100
Session 9	Leveraging Data and ML for Leadership Decision Making (1 hr.)	Seth Toomay, MD	12/07/2021 @12PM	D1.100