CTSC 5960
Introduction to Medical Informatics

Faculty: Vitaly Herasevich, M.D., Ph.D.
Credits: 2
Quarter: Spring
Prerequisites: None

Overview
This course is intended to provide an introduction to the principles of informatics in the context of clinical research. Information science (IS) is now playing a major role in many clinical research studies, from managing vast volumes of genomic and clinical data to integration of data, information, and knowledge, and finally, to executing complex and reproducible analyses. This course is divided into four thematic areas: Data Integration and Information Extraction, Knowledge Representation and Interoperability Standards, Clinical Data and Electronic Health Records, and Translational Science which will be explored through lectures by faculty and guests and student discussion. Students will have the opportunity to apply the topics learned in a final paper which is expected to be the resource and methodology sections of a grant proposal and/or research protocol with emphasis being placed on the informatics resources and methods.

Objectives
- To describe basic motivations, principles, and practices within the discipline of informatics
- To understand the relationship between informatics and clinical research
- To identify and access informatics resources that are relevant to a clinical research study
- To demonstrate an understanding and application of informatics principles, methodologies and tools to a clinical research study

Evaluation
Evaluation will be based on class participation and discussion, targeted literature review and presentation on the informatics needs of the proposed project, and one final report (3-4 pages) incorporating informatics resources and methodologies for the team project.

Students will be expected to spend approximately four to six hours per week on content from this 2-credit course.

Additional online modules related to this topic are available on the Continuous Professional Development website.

For specific dates and times this course is provided, please see the quarterly detailed course schedule.
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