## CSCI 2500 Discrete Structures

(3-0-3)

This course provides a brief introduction to mathematical logic and typical proof methods, followed by a discussion of sets, function and relations. The course also focuses on the mathematical techniques that are frequently used in computer science such as counting techniques, elementary probability theory, combinatorics, recurrence relations and asymptotic notation.

Prerequisite: MATH 1112, MATH 1113, MATH 2205 or MATH 1151.

Corequisites: None.

Offered: On demand.

## CTCP 2100 Introduction to Computed Tomography

(2-0-2)

This course serves as an introduction to computed tomography with an emphasis on basic patient care while in a Computed Tomography department, as well as the history of CT and the components of a CT scanner. Additional topics include patient history, vital signs, laboratory values, contrast agents (oral and intravenous,) medical ethics, patient confidentiality, as well as research contributors in CT, historical events, scanner generations, characteristics of radiation, detectors and data acquisition system.

Corequisite: Graduation from an accredited Radiology, Nuclear Medicine or Radiation Therapy Program.

Prerequisite: Registered Radiologic Technologist, Nuclear Medicine Technologist, or a Radiation Therapy Technologist with the ARRT or Nuclear Medicine Technology Certification Board (NMTCB.)

Offered: Fall, Spring and Summer.

## CTCP 2110 Physical Principle, Instrumentation and Quality Control

(3-0-3)

This course is an overview of the system operation, components and quality control. To be able to understand the different functions and capabilities and identify the components of the CT scanner to provide quality care during a CT examination. Topics include data acquisition, data processing, reconstruction, manipulation, image quality, console, high voltage generator, filter, detectors, and convolution, interpolation, and pitch.

Corequisite: Graduate from an accredited Radiology, Nuclear Medicine or Radiation Therapy Program.

Prerequisite: Registered Radiologic Technologist, Nuclear Medicine Technologist, or a Radiation Therapy Technologist with the ARRT or Nuclear Medicine Technology Certification Board (NMTCB).

Offered: Spring, Summer and Fall.

## CTCP 2120 Sectional Anatomy I

(4-0-4)

This is an overview of cross-sectional anatomy that is imaged during a Computed Tomography examination. This course will provide information about normal head, spine and chest anatomy. Students will be able to identify and recall normal anatomical structures on cross-sectional images in order to perform quality care for patients. Topics include the circle of Willis, gray/white matter, pons, vertebral body, lamina, spinous process, sinal cord, heart (ventricle/atrium,) lungs and ribs.

Corequisite: Graduation from an accredited Radiology, Nuclear Medicine or Radiation Therapy Program.

Prerequisite: Registered Radiologic Technologist, Nuclear Medicine Technologist, or a Radiation Therapy Technologist with the ARRT or Nuclear Medicine Technology Certificate Board (NMTCB).

Offered: Spring, Summer and Fall.