The purpose of this course is to provide a broad overview of human characteristics related to health technology. Topics will include physical (e.g., anthropometry, biomechanics); sensory (e.g., vision, hearing), cognitive (e.g., learning capabilities, memory limitations); attitudinal (e.g., technology acceptance, behavior change), socioemotional (e.g., personality, motivation), and organizational (e.g., workplace policies, culture) characteristics. Students will learn to apply theories of human behavior related to health technology use such as behavior change, reasoned action, self-determination, person-environment fit to guide design and deployment of health technology. 4 graduate hours. No professional credit. Prerequisite: Priority is given to Health Technology graduate students. Other students please contact the instructor.

In this course, students will explore the role of hardware in developing health technologies. Students will understand how various health technologies are developed and how they operate. HT 503 surveys hardware-engineering topics for health technology and will include exposure to and initial examination of topics. Topics may include: Sensors and Actuators in Healthcare; Common Prototyping platforms (Arduino, Raspberry Pi, Jetson Nano); Robot Operating System (ROS) Platforms; Cameras, LIDARs, Motion-Detection Systems (Microsoft Kinect, etc); Haptic Sensors; Dynamics of Wheeled Personal Transport Systems (Wheelchairs, etc.); Integrative Final Course-Project. Although there is not a traditional lab associated with this class, the course will include lectures, discussion, and hands-on activity based projects. 4 graduate hours. No professional credit. Registration priority will be given to Health Technology graduate students. Other students please contact the instructor.

The purpose of this course is to introduce students to the basic tenets of human factors methods to enable successful user-centered design of healthcare technologies. Students will learn about socio-technical systems and develop an understanding of interactions among humans and other elements of a system. Students will acquire skills to apply theory, principles, data, and methods to design that will optimize human well-being and overall system performance. Students will learn how to find information to guide design through literature review, standards evaluation, and comparative assessments. 4 graduate hours. No professional credit. Prerequisite: Priority will be given to Health Technology graduate students. Other students please contact the instructor.

In this course, students will be introduced to aspects of software engineering to become familiar with rapid prototyping software, programming languages, and app development tools. HT 504 surveys software engineering topics for health technology and will include exposure to and initial examination of topics. Topics may include: Integrated Development Environments (IDEs) for Android/iPhone applications; Virtual Reality (VR) Environments; Basics of AWS-Lambda functions for voice-applications; Software for Analytics and Data-analytics overview; Software for Machine-Learning; MATLAB, SIMULINK and associated packages; User Interface Compilers (UIC); JAVA; PYTHON; MATLAB; ROS; Integrative Final Course-Project. Although there is not a traditional lab associated with this class, the course will include lectures, discussion, and hands-on activity based projects. 4 graduate hours. No professional credit. Registration priority will be given to Health Technology graduate students. Other students please contact instructor.

In this course, students will be introduced to topics critical to their success in developing their Capstone Project in the area of health technology. These topics include: ethics and IRB, government regulations and policies in devices, and design thinking. Students will finalize the details of their Capstone Project topic, connect with community/industry/academic partners. Students will explore possible Capstone Project topics and will decide on their capstone project by the end of the semester. HT 510 prepares students and is a prerequisite of HT 511. 1 graduate hour. No professional credit. Prerequisite: Restricted to majors only.

In this course, students will be introduced to aspects of software engineering to become familiar with rapid prototyping software, programming languages, and app development tools. HT 504 surveys software engineering topics for health technology and will include exposure to and initial examination of topics. Topics may include: Integrated Development Environments (IDEs) for Android/iPhone applications; Virtual Reality (VR) Environments; Basics of AWS-Lambda functions for voice-applications; Software for Analytics and Data-analytics overview; Software for Machine-Learning; MATLAB, SIMULINK and associated packages; User Interface Compilers (UIC); JAVA; PYTHON; MATLAB; ROS; Integrative Final Course-Project. Although there is not a traditional lab associated with this class, the course will include lectures, discussion, and hands-on activity based projects. 4 graduate hours. No professional credit. Registration priority will be given to Health Technology graduate students. Other students please contact the instructor.

In this course, students will be introduced to aspects of software engineering to become familiar with rapid prototyping software, programming languages, and app development tools. HT 504 surveys software engineering topics for health technology and will include exposure to and initial examination of topics. Topics may include: Integrated Development Environments (IDEs) for Android/iPhone applications; Virtual Reality (VR) Environments; Basics of AWS-Lambda functions for voice-applications; Software for Analytics and Data-analytics overview; Software for Machine-Learning; MATLAB, SIMULINK and associated packages; User Interface Compilers (UIC); JAVA; PYTHON; MATLAB; ROS; Integrative Final Course-Project. Although there is not a traditional lab associated with this class, the course will include lectures, discussion, and hands-on activity based projects. 4 graduate hours. No professional credit. Registration priority will be given to Health Technology graduate students. Other students please contact the instructor.

The purpose of this course is to introduce students to the basic tenets of human factors methods to enable successful user-centered design of healthcare technologies. Students will learn about socio-technical systems and develop an understanding of interactions among humans and other elements of a system. Students will acquire skills to apply theory, principles, data, and methods to design that will optimize human well-being and overall system performance. Students will learn how to find information to guide design through literature review, standards evaluation, and comparative assessments. 4 graduate hours. No professional credit. Prerequisite: Priority will be given to Health Technology graduate students. Other students please contact the instructor.

The purpose of this course is to introduce students to the basic tenets of human factors methods to enable successful user-centered design of healthcare technologies. Students will learn about socio-technical systems and develop an understanding of interactions among humans and other elements of a system. Students will acquire skills to apply theory, principles, data, and methods to design that will optimize human well-being and overall system performance. Students will learn how to find information to guide design through literature review, standards evaluation, and comparative assessments. 4 graduate hours. No professional credit. Prerequisite: Priority will be given to Health Technology graduate students. Other students please contact the instructor.

The purpose of this course is to introduce students to the basic tenets of human factors methods to enable successful user-centered design of healthcare technologies. Students will learn about socio-technical systems and develop an understanding of interactions among humans and other elements of a system. Students will acquire skills to apply theory, principles, data, and methods to design that will optimize human well-being and overall system performance. Students will learn how to find information to guide design through literature review, standards evaluation, and comparative assessments. 4 graduate hours. No professional credit. Prerequisite: Priority will be given to Health Technology graduate students. Other students please contact the instructor.

The purpose of this course is to introduce students to the basic tenets of human factors methods to enable successful user-centered design of healthcare technologies. Students will learn about socio-technical systems and develop an understanding of interactions among humans and other elements of a system. Students will acquire skills to apply theory, principles, data, and methods to design that will optimize human well-being and overall system performance. Students will learn how to find information to guide design through literature review, standards evaluation, and comparative assessments. 4 graduate hours. No professional credit. Prerequisite: Priority will be given to Health Technology graduate students. Other students please contact the instructor.

The purpose of this course is to introduce students to the basic tenets of human factors methods to enable successful user-centered design of healthcare technologies. Students will learn about socio-technical systems and develop an understanding of interactions among humans and other elements of a system. Students will acquire skills to apply theory, principles, data, and methods to design that will optimize human well-being and overall system performance. Students will learn how to find information to guide design through literature review, standards evaluation, and comparative assessments. 4 graduate hours. No professional credit. Prerequisite: Priority will be given to Health Technology graduate students. Other students please contact the instructor.

In this course, students will be introduced to aspects of software engineering to become familiar with rapid prototyping software, programming languages, and app development tools. HT 504 surveys software engineering topics for health technology and will include exposure to and initial examination of topics. Topics may include: Integrated Development Environments (IDEs) for Android/iPhone applications; Virtual Reality (VR) Environments; Basics of AWS-Lambda functions for voice-applications; Software for Analytics and Data-analytics overview; Software for Machine-Learning; MATLAB, SIMULINK and associated packages; User Interface Compilers (UIC); JAVA; PYTHON; MATLAB; ROS; Integrative Final Course-Project. Although there is not a traditional lab associated with this class, the course will include lectures, discussion, and hands-on activity based projects. 4 graduate hours. No professional credit. Registration priority will be given to Health Technology graduate students. Other students please contact instructor.

The purpose of this course is to introduce students to the basic tenets of human factors methods to enable successful user-centered design of healthcare technologies. Students will learn about socio-technical systems and develop an understanding of interactions among humans and other elements of a system. Students will acquire skills to apply theory, principles, data, and methods to design that will optimize human well-being and overall system performance. Students will learn how to find information to guide design through literature review, standards evaluation, and comparative assessments. 4 graduate hours. No professional credit. Prerequisite: Priority will be given to Health Technology graduate students. Other students please contact the instructor.

In this course, students will be introduced to aspects of software engineering to become familiar with rapid prototyping software, programming languages, and app development tools. HT 504 surveys software engineering topics for health technology and will include exposure to and initial examination of topics. Topics may include: Integrated Development Environments (IDEs) for Android/iPhone applications; Virtual Reality (VR) Environments; Basics of AWS-Lambda functions for voice-applications; Software for Analytics and Data-analytics overview; Software for Machine-Learning; MATLAB, SIMULINK and associated packages; User Interface Compilers (UIC); JAVA; PYTHON; MATLAB; ROS; Integrative Final Course-Project. Although there is not a traditional lab associated with this class, the course will include lectures, discussion, and hands-on activity based projects. 4 graduate hours. No professional credit. Registration priority will be given to Health Technology graduate students. Other students please contact instructor.