CET-Computer Engineering Tech

CET235 - Digital Electronics Design

This is a first course in digital electronics dealing with the theory and practice of modern electronic computer circuitry. Major units of the course include logic gates, integrated circuits, latches, counters, shift registers, arithmetic circuits and memory elements. Laboratory exercises reinforce the theoretical concepts by providing hands-on experience with digital integrated circuits, logic system simulation software, and digital troubleshooting equipment.

CET270 - Introduction to Microprocessor Design

This course introduces the microprocessor from both the hardware and software viewpoints. It covers the stored program concept, addressing modes, the instruction set, bus operation and machine language implementation of software algorithms. Laboratory exercises are based on a microprocessor evaluation system and/or simulator to provide hands-on experience with course topics.

CET335 - Microprocessor Interfacing

This course deals with advanced concepts in the programming and the interfacing of microprocessors/ microcontrollers to the outside world as demonstrated by a variety of application examples. It covers the advanced architecture of modern processors and the many I/O peripherals now commonly found on-board the device. Detailed studies of computer I/O and interrupt techniques as applied to analog-to-digital, digital -to-analog, timers, parallel and serial interfaces are included. Laboratory activities provide the student with experience in developing the hardware and software required to incorporate microprocessors into systems that solve real-world interfacing problems.

CET350 - Technical Computing Using Java

This course enables the student to acquire a thorough understanding of the Java language and its application in solving engineering and real world problems. Both Java programs and Applets will be studied. Emphasis is placed on efficient software development using structured programming techniques. Students are required to design, write, test, and run programs using an appropriate version of Java.

CET360 - Microprocessor Engineering

This course examines the product development cycle of a typical microcontroller-based product. Methods of hardware and software development as well as their integration and debugging are studied. The student will design and implement a major term project utilizing theses concepts plus various laboratory development tools as well as produce written documentation on the project, including both requirements/specification and final reports. Also included is a survey of recent developments in microcontroller technology.

CET440 - Computer Networking

This course involves the electronic hardware of networking systems such as those used to connect heterogeneous computers. Major topics include locality, topologies, media standards, Internet working devices and protocols. Hands-on application of network theory is provided via a laboratory-style term project involving a multiuser network computer system. The student will design and develop the hardware and communication software required to implement access to a network-available, shared resource.

CET485 - Special Topics in CET

This course allows current topics in computer engineering technology to be offered in a timely fashion. The topics are not covered in other courses and will not be regularly offered as a special topic; however, they are appropriate to a senior-level course. The course topic depends upon current trends in computer engineering technology,

interests of the student, and the instructor. The student may take the course multiple times as long as each instance covers topics different than those already covered.

CET490 - Senior Project I: Software Engineering

This course introduces students to software engineering. They will study its history, terminology, requirements, specifications and design. Students will write requirements, specifications and design documents, and one or more papers on software engineering topics.

CET492 - Senior Project II

This course is a continuation of the Senior Project I software engineering course and the capstone course of the program. The project proposal developed and designed in the first senior project class will be implemented in this course. The student will produce a project users' manual and will demonstrate proficiency in the academic program through the development of the project.

CET495 - Computer Engineering Technology Internship

Student interns work with professionals in a computer engineering technology-related field to apply their understanding of computer hardware and software. The intent of the internship is to provide the student with practical work experience solving actual problems in a dynamic environment, yielding enhanced job opportunities upon graduation.