Computer Engineering Technology

College of Engineering

The Bachelor of Science (B.S.) in Computer Engineering Technology (CPT) degree offers curriculum designed to provide in-depth knowledge of hardware and software design, development, applications, and maintenance with a mix of both classroom and laboratory experiences that is in demand by industry.

The four year B.S. in CPT is designed as a feeder-completer program in which students earn an Associate in Applied Science (A.A.S.) in CPT from the Bluegrass Community and Technical College (BCTC) and then a B.S. in CPT from UK. In this arrangement, the UK will offer only junior and senior level course work.

A total of 127 credit hours are required with 68 credit hours taken at BCTC and 59 at UK. Of the courses taken at UK, 50 credit hours consist of major requirements and the other 9 credit hours are guided electives.

Degree Requirements

In addition to fulfilling UK Core and College of Engineering requirements, students must complete the computer engineering curriculum. The following curriculum meets the requirements for the B.S. degree.

Freshman Year

First Semester — Hours
ENG 101 Writing I 3
MAT 170 Elementary Calculus and Its Applications 3
CIT 111 Introduction to Software and Hardware 4
UK Core – 1st Social and Behavioral Science 3
CIT 120 Computational Thinking 3

Second Semester
ENG 102 Writing II 3
STA 296 Statistical Methods and Motivations 3
CHE 107 General College Chemistry I 4
UK Core – Oral Communications 3
CS 115 Introduction to Computer Programming 3

Summer Session
UK Core – Heritage 3
CIT 170 Database Design Fundamentals 3

Sophomore Year

First Semester — Hours
MAT 171 Algebra and Trigonometry for Calculus 5
CS 215 Introduction to Program Design, Abstraction, and Problem Solving 4
UK Core – Humanities 3
ELT 110 DC Circuits and Lab 5

Second Semester
PHY 211 General Physics 5
UK Core – Social and Behavioral Science 3
ELT 120 Digital Logic and Lab 3
CIT 160/161 Introduction to Networks 4

Junior Year

First Semester — Hours
MA 113 Calculus I 4
CPT 287 Introduction to Embedded System + Lab 3
WRD 204 Technical Writing 3
CPT 314 Wireless Communication 3

Second Semester
CPT 223 AC Circuits + Lab 3
CPT 315 Digital System Design 3
CPT 316 Electronics Prototyping and Construction 4
CPT 317 Software Engineering Process and Methods 3

Senior Year

First Semester — Hours
CPT 409 Capstone I 3
CPT 419 Signals, Systems, and Transforms 3
CPT 420 Embedded Applications 4
CPT/LST 400 Engineering Economics 2
Technical Elective 3

Second Semester
CPT 410 Capstone II 3
CPT/LST 402 Fundamentals of OSHA 2
CPT/LST 425 Project Management 3
Technical Elective 3
Technical Elective 3