Computer Engineering (BS) | College of Engineering

Department of Electrical and Computer Engineering · 453 F. Paul Anderson Tower · Lexington, KY 40506-0046 · Contact: Dr. Jim Lumpp - jel@uky.edu

Computer engineers design computer systems, both hardware and software, to create new technologies and meet the ever-changing needs of society. The field of computer engineering covers a wide range of topics including computer architecture, operating systems, communications, computer networks, robotics, artificial intelligence, supercomputers, computer-aided design and neural nets. Whether designing and developing new products or improving manufacturing processes, computer engineers work at the frontier of technology.

### Freshman Year

**FALL SEMESTER**
- EGR 101 - ENGINEERING EXPLORATION I - 1
- EGR 102 - FUNDAMENTALS OF ENGINEERING COMPUTING - 2
- Choose CHE 105 or PHY 231 - 4
- PHY 241 - GENERAL UNIVERSITY PHYSICS LABORATORY - 1
- UK Core - Comp. & Comm. I - 3
- MA 113 - CALCULUS I - 4

**SPRING SEMESTER**
- EGR 103 - ENGINEERING EXPLORATION II - 2
- UK Core - Comp. & Comm. II - 3
- MA 114 - CALCULUS II - 4
- Choose CHE 105 or PHY 231 - 4
- CS 215 - INTRODUCTION TO PROGRAM DESIGN, ABSTRACTION, AND PROBLEM SOLVING - 4

**TOTAL HOURS: 15**

Total Freshman Hours: 32

### Sophomore Year

**FALL SEMESTER**
- MA 213 - CALCULUS III - 4
- PHY 232 - GENERAL UNIVERSITY PHYSICS - 4
- PHY 242 - GENERAL UNIVERSITY PHYSICS LABORATORY - 1
- CS 216 - INTRODUCTION TO SOFTWARE ENGINEERING TECHNIQUES - 3
- CPE 282 - DIGITAL LOGIC DESIGN - 4

**SPRING SEMESTER**
- MA 214 - CALCULUS IV - 3
- EE 211 - CIRCUITS I - 4
- CPE 287 - INTRODUCTION TO EMBEDDED SYSTEMS - 4
- CS 270 - SYSTEMS PROGRAMMING - 3
- CS 275 - DISCRETE MATHEMATICS - 4

**TOTAL HOURS: 16**

Total Sophomore Hours: 34

### Junior Year

**FALL SEMESTER**
- EE 223 - AC CIRCUITS - 4
- CS 315 - ALGORITHM DESIGN AND ANALYSIS - 3
- CPE 380 - COMPUTER ORGANIZATION - 3
- STA 381 - ENGINEERING STATISTICS-A CONCEPTUAL APPROACH - 3
- UK Core - Humanities - 3

**SPRING SEMESTER**
- EE 421G - SIGNALS AND SYSTEMS - 3
- EE 461G - INTRODUCTION TO ELECTRONICS - 3
- CPE 480 - ADVANCED COMPUTER ARCHITECTURE - 3
- CPE Elective - 3
- Technical Elective - 3
- UK Core - Social Sciences - 3
TOTAL HOURS: 16  
Total Junior Hours: 34

TOTAL HOURS: 18

Senior Year

FALL SEMESTER
CPE 490 - ECE CAPSTONE DESIGN I - 3
CPE Elective - 3
Technical Elective - 3
Supportive Elective - 3
UK Core - Community, Culture and Citizen - 3
TOTAL HOURS: 15

SPRING SEMESTER
CPE 491 - ECE CAPSTONE DESIGN II - 3
Hardware Elective - 3
Software Elective - 3
CPE Elective - 3
UK Core - Global Dynamics - 3
TOTAL HOURS: 15

Total Senior Hours: 30

Total Minimum hours Required for Degree: 130 hours

University of Kentucky is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award associate, baccalaureate, masters, and doctorate degrees. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097, call 404-679-4500, or online at www.sacscoc.org for questions about the accreditation of University of Kentucky.

Current UK students: Please login to http://myUK.uky.edu to access your personalized major template and degree audit via the Graduation Planning System (GPS). This major template is the curriculum requirements for completion of the degree program only and is not a personalized audit based on your completed coursework. This major template does not reflect entrance requirements for selective majors. Please consult with the college to learn more about admission to this major.