Department of Applied Engineering and Technology
School of Applied Sciences and Technology
College of Business & Technology (2019-20)

Cyber Systems Technology
B.S. Degree

Cyber Systems Technology at EKU

Students enrolled in the Cyber Systems Technology Bachelor of Science (BS) degree program on a full-time basis can complete the degree in eight semesters. They complete coursework related to Electricity and Electronics Technology (EET), computer Networking Technology (NET), and Applied Engineering Management (AEM). This 120-hour program prepares students to serve in a wide range of companies and other organizations where installation, monitoring, support, analysis, security, troubleshooting and management of Local Area Networks (LANs), Wide Area Networks (WANs) and Internet systems is required, as well as interfacing with Internet of Things (IoT) technologies. With the ongoing expansion of networked cyber systems and online commercial services assures exciting opportunities for skilled professionals in this area. The Cyber Systems Technology program is accredited by the Association of Technology, Management and Applied Engineering (ATMAE). It includes two concentrations which share a common core and supporting course requirements:

Concentration in Network Security & Electronics

24 hours of coursework related to electronics systems, advanced computer networking topics including security, and supporting coursework in computer software and the sciences.

Concentration in Tech Systems

24 hours of technical electives as approved by major advisor. This is the recommended option for transfer students.

Cyber Systems Technology Careers

Graduates from EKU in the Cyber Systems Technology program are prepared to begin work as technical professionals in the computer networking field. While completing the coursework, students may seek professional certifications in various computer electronic and networking areas. Many graduates of the program find careers as network managers or network specialists in fields including banking, healthcare, manufacturing and more. On-the-job experience is valued highly by employers. The cooperative education requirement in the program provides students with the opportunity to gain college credit for professional experience. With resumes that reflect technical and managerial classes, co-op experience and computer systems related certifications, graduates often find rewarding careers and fast advancement in the computer electronic networking field.

Department Facilities, Faculty and Student Organizations

The Department is located in the Ralph W. Whalin Technology Complex which includes approximately 100,000 square feet of classroom and laboratory space. Laboratories housed in the Whalin Complex include aviation, automation, electronics, computer aided drafting (CAD), graphic communications, quality assurance and metrology, materials and metallic processes, construction estimating, fluid power and computer applications. The facilities are located in the central portion of campus, close to the library, classroom buildings and dormitories. Faculty in the department have diversified academic and experience backgrounds. They are experienced, enthusiastic and devoted to providing students the skills necessary to succeed. The primary organization for students in the Cyber Systems Technology degree program is the Student Computer Information Technology Association (SITO). SITO is a student-led organization that holds lunch meetings many times each semester with presentations on current networking topics such as operating systems, motherboards, gaming, wireless, security, certification and virtualization.

For More Information

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307 Whalin Complex
Eastern Kentucky University
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Richmond, KY 40475-3102
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ACCREDITED BY ATMAE
The Association of Technology, Management, and Applied Engineering

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Suggested Curriculum Guide for Cyber Systems Technology

Freshman (1st Semester) 16 hrs

BTO 100* Academic Orientation (1 hr)
(co) EET 252* Digital Electronics
(co) TEC 161* Computer Applications in Technology
(n) EET 251* Electricity and Electronics
(su) E-2 Select from **MAT 112A & B** Algebra **or higher**
(ge) E-1A ENG 101 English Comp I or **ENG 105** Honors Eng

Freshman (2nd Semester) 15 hrs

(co) NET 302 PC Troubleshooting & Construction
(co) NET 303 LANs & PC Communications
(n) EET 257 Electronic Devices and Circuits
(n) CSC 160 Intro to Programming or CIS 215 Intro to Business Programming or (INF 301 or higher)
(ge) E-1B ENG 102 English Composition II

Sophomore (1st Semester) 15 hrs

(co) Select from **EET 253** Microprocessor Control Systems **or EET 351** Programmable Logic Controllers **or AEM 352** Automated Technology Devices
(co) NET 354 Microcomputer & Network Security
(n) NET 395 Special Topics in NET
(n) Higher CSC course above CSC 160 **or Higher CIS** course above CIS 215 **or Higher INF** course above INF 130
(ge) E-1C Select from **CMS 100** Human Communication **or CMS 210** Public Speaking **or EES 250** Basic Social Intelligence Skills

Sophomore (2nd Semester) 16-17 hrs

(co) NET 343 Network Switches & Routers
(co) NET 349 Co-operative (Co-op) Education (1 hr)
(su) STA 215 Intro to Statistical Reasoning or **STA 270** (4) Applied Statistics I
(su) E-4 Select from **PHY 101** Concepts of the Physical World **higher**
(su) E-5B ECO 130 Contemporary Economic Problems **or higher**
(ge) E-3B Humanities or **3A/B** Integrated Arts and Humanities

Junior (1st Semester) 15 hrs

(co) Select from **NET 395** Special Topics in NET **or NET 440** Wired/Wireless Communications
(co) AEM 202 Introduction to Quality
(n) Higher CSC course above CSC 160 **or Higher CIS** course above CIS 215 **or Higher INF** course above INF 130
(n) NET 344 Advanced Network Switches & Routers
Free Elective (3 hrs), Recommend Co-op

Junior (2nd Semester) 15 hrs

(co) NET 403 Advanced LANs and PC Communications
(co) AEM 310W Computer Communications in Industry
(su) Upper Division Management Supporting Course^ from ACC, AEM, CCT, CIS, FIN, GBU, MGT, MKT, or QMB (3 hrs)
(ge) E-4 Natural Science
(ge) E-3A Arts **or 3A/B** Integrated Arts and Humanities
BTS 300 Professional Skills Seminar (0 credit)
Apply for Graduation (0 hrs)

Senior (1st Semester) 15 hrs

(co) AEM 407 Fundamentals of Project Management
(n) NET 454 Wireless/WAN Security
(ge) E-5A History
(ge) E-6 Diversity of Perspectives & Experiences
Free Elective (3 hrs), Recommend Co-op

Senior (2nd Semester) 12-13 hrs

(co) NET 499 Senior Capstone
(co) AEM 408 Human Resource Management
(co) NET 467 Exit Exam Departmental (0 credit)
(ge) E-6 Diversity of Perspectives & Experiences
Free Elective (3-4 hrs), Recommend Co-op
BTS 400 College to Careers Seminar (0 credit)

*These courses should be taken during the first semester of the program; ^Some courses may have prerequisites
(co)-core courses; (n)-NET concentration courses; (su)-supporting courses; (ge)-general education courses

University Requirements

General Education ..... 36 hrs
Student Success Seminar (BTO 100; waived for transfers with 30+ hrs.) ..... 1 hr
Total Hours University Graduation Requirements ..... 37 hrs

College Requirements:
BTS 300 (CR only, no hours) and BTS 400 (CR only, no hours).

Core Courses (Major Requirements) ..... 43 hrs
AEM 202, 310W, 407, and 408; 3 hours from (AEM 352, EET 253, or EET 351); EET 252; NET 302, 303, 343, 349(1), and 354; (395 or 440); 403, and 499; TEC 161. Exit requirement NET 467 (0).

Network Security & Electronics Concentration (Major Requirements) ..... 24 hrs
EET 251, 257; NET 344, 395, 454; 9 hours of CSC/CIS/INF courses (CSC 160 or higher), or (CIS 215 or higher), or (INF 130 or higher).

Tech Systems Concentration (Major Requirements) ..... 24 hrs
Computer systems, electricity & electronics, and networking related technical electives as approved by major advisor. This is the recommended option for transfer students.

Supporting Course Requirements ..... 6-7 hrs
ECO 130 or higher (GElement 5B); MAT (112A and 112B) or higher (GElement 2); PHY 101 or higher (GElement 4); STA 215 or 270(4), and three hours of ACC, AEM, CCT, CIS, FIN, GBU, MGT, MKT, QMB, or RMI electives as approved by major advisor.

Free Electives ..... 9-10 hrs
Total Curriculum Requirements ..... 120 hrs

+ Graduates must have an overall GPA of 2.25 in major requirements. Students must take a departmental exit examination before graduation. Students must take at least one computer systems, networking, security, electronics, or telecommunications technology certification or license approved by the advisor.