



Cyber Systems Technology B.S. and M.S. Degrees

ACCELERATED 3+2 DUAL DEGREE PROGRAM

Students accepted to the 3+2 Accelerated Dual Degree option are able to complete their B.S. degree and M.S. degree within 5 calendar years because of the accelerated curriculum and because 9 semester hours of graduate coursework will apply to both the undergraduate B.S. degree and the graduate M.S. degree. Only undergraduate students of proven academic ability will be considered for the program. Students should be aware that, in order to maintain their progress in the accelerated 3+2 program, careful coordination with their advisor is required. Depending upon undergraduate progress at the time of 3+2 admission, some summer-school classes may be needed.

Admission Requirements:

Students interested in the 3+2 option must satisfy all the following conditions:

1. Junior or Senior standing
2. Overall grade point average (GPA) of at least 3.0 at the time of admission
3. Approval from department and Graduate School (see the form at <http://gradschool.eku.edu/graduate-school-forms>)
4. Maintain an overall undergraduate and graduate grade point average (GPA) of at least 3.0 throughout the program

Cyber Systems Technology at EKU

The Cyber Systems Technology 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. The ongoing expansion of networked cyber systems and online commercial services assures exciting opportunities for skilled professionals in this area. It includes two 24 credit-hour concentrations:

Concentration in Network Security & Electronics

Electronics systems, advanced computer networking topics including security; computer software and the sciences.

Concentration in Tech Systems

Technical electives as approved by major advisor. This is the recommended option for transfer students.

Cyber Systems Technology Careers

Cyber Systems Technology program graduates 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. The cooperative education requirement in the program provides students with the opportunity to gain college credit for professional experience, which along with technical and managerial classes, allows graduates to find rewarding careers and fast advancement in the cyber 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

Department of Applied Engineering and Technology
307 Whalin Complex
Eastern Kentucky University
521 Lancaster Avenue
Richmond, KY 40475-3102
859-622-3232; <http://technology.eku.edu>





Suggested Curriculum Guide for Cyber Systems Technology – ‘3+2’

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 112 & B Algebra** or higher
- (ge) **E-1A ENG 101** English Comp I or **ENG 105** Honors Eng

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

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

Senior (1st Semester) 15 hrs

- (co) **NSM 815** Foundations of Network Security
- (n) **NET 454** Wireless/WAN Security
- (su) **AEM 804** Project Management
- (ge) **E-5A** History
- (ge) **E-6** Diversity of Perspectives & Experiences

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 (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 (2nd Semester) 15 hrs

- (co) **NET 403** Advanced LANs and PC Communications
- (co) **AEM 310W** Computer Communications in Industry
- (ge) **E-4** Natural Science
- (ge) **E-3A Arts** or **3A/B** Integrated Arts and Humanities
- Free Elective** (3 hrs), Recommend Co-op
- BTS 300** Professional Skills Seminar (0 credit)
- Apply for Graduation** (0 hrs)

Senior (2nd Semester) 12-13 hrs

- (co) **NET 499** Senior Capstone
- (co) **NSM 845** Advanced Server Security
- (co) **AEM 408** Human Resource Management
- (co) **NET 467 Exit Exam** Departmental (0 credit)
- (ge) **E-6** Diversity of Perspectives & Experiences
- Free Elective** (0-1 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) 46 hrs

AEM 352 or EET 253 or EET 351; AEM 202, 310W, 408; EET 252; NET 302, 303, 343, 349(1), 354; (395 or 440); 403, and 499; NSM 815, 845; and 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

AEM 804; ECO 130 or higher (^oElement 5B); MAT (112A and 112B) or higher in ^oElement 2; PHY 101 or higher (^oElement 4); STA 215 or 270(4).

Free Electives 6-7 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.