



# Network Security & Electronics 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

### **Network Security & Electronics at EKU**

The Network Security and Electronics (NET) program prepares students to serve in a wide range of companies and other organizations where installation, monitoring, support, analysis, security and troubleshooting of Local Area Networks (LANs), Wide Area Networks (WANs) and Internet Systems is required. The ongoing expansion of networked computer systems and online commercial services assures exciting opportunities for skilled professionals in this area. The Network Security and Electronics program is accredited by the Association of Technology, Management and Applied Engineering (ATMAE).

### **Network Security & Electronics Careers**

Graduates from EKU in the Network Security and Electronics 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, electronics, computer aided drafting (CAD), quality assurance, industrial materials, metallic materials, construction fabrication, hydraulics/pneumatics and computer applications. 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 Network Security and Electronics degree program is the Eastern Student Computer Association (ESCA). ESCA is a student-led organization that holds lunch meetings many times per semester with presentations on current computing topics such as operating systems, motherboards, displays, gaming, memory, wireless computing, studying for certification and other topics identified by students or the faculty advisor.

### **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>



The Association of Technology,  
Management, and Applied Engineering



**Suggested Curriculum Guide for Network Security and Electronics – ‘3+2’**

**Freshman (1<sup>st</sup> Semester) 16 hrs**

**BTO 100\*** Academic Orientation (1 hr)  
**EET 251\*** Electricity and Electronics  
**EET 252\*** Digital Electronics  
**TEC 161** Computer Applications in Technology  
**E-2 Select** from **MAT 114** College Algebra **or higher**  
**E-1A ENG 101** English Comp I or **ENG 105** Honors English

**Sophomore (1<sup>st</sup> Semester) 15 hrs**

**Select** from **EET 253** Microprocessor Control Systems **or EET 351** Programmable Logic Controllers **or AEM 352** Automated Technology Devices  
**NET 354^** Microcomputer & Network Security  
**E-2 MAT 120** Trigonometry  
**E-1C Select** from **CMS 100** Human Communication **or CMS 210** Public Speaking **or EES 250** Basic Social Intelligence Skills  
**Free Elective** (3 hrs)

**Junior (1<sup>st</sup> Semester) 15 hrs**

**NET 344** Advanced Network Switches & Routers  
**Select** from **NET 395** Special Topics in NET **or NET 440** Fiber Optics & Communications  
**AEM 202** Introduction to Quality  
**Higher CSC** course **above CSC 160**  
**Free Elective** (3 hrs), Recommend co-op

**Senior (1<sup>st</sup> Semester) 15 hrs**

**NET 454** Wireless/WAN Security  
**AEM 804** Project Management  
**E-5A** History  
**E-6** Diversity of Perspectives & Experiences  
**TEC 830** Creative Problem Solving  
**Apply for Graduation** (0 hrs)

\*These courses should be taken during the first semester of the program  
 ^Some courses may have prerequisites.

**Freshman (2<sup>nd</sup> Semester) 15 hrs**

**EET 257** Electronic Devices and Circuits  
**NET 302^** PC Troubleshooting & Construction  
**NET 303^** LANs & PC Communications  
**CSC 160** Intro to Programming  
**E-1B ENG 102** English Composition II

**Sophomore (2<sup>nd</sup> Semester) 16-17 hrs**

**NET 343** Network Switches & Routers  
**E-4 Select** from **PHY 101** Concepts of the Physical World **or higher**  
**E-5B ECO 230** Economics  
**E-3B** Humanities or **3A/B** Integrated Arts and Humanities  
**STA 215** Intro to Statistical Reasoning or **STA 270** (4) Applied Statistics I  
**NET 349** Co-operative (Co-op) Education (1)

**Junior (2<sup>nd</sup> Semester) 16 hrs**

**NET 403** Advanced LANs and PC Communications  
**AEM 310W** Computer Communications in Industry  
**Upper Division** Management Supporting Course^ from ACC, AEM, CCT, CIS, FIN, GBU, INS, MGT, MKT, or QMB (3 hrs)  
**E-3A** Arts **or 3A/B** Integrated Arts and Humanities  
**E-4 CHE 101** Chemistry in Everyday Life  
**E-4 CHE 101L** Introductory Chemistry Lab (1)  
**BTS 300** Professional Skills Seminar (0 credit)

**Senior (2<sup>nd</sup> Semester) 12 hrs**

**NET 499** Senior Capstone  
**AEM 408** Human Resource Management  
**E-6** Diversity of Perspectives & Experiences  
**AEM 801** Economics for Lean Operations  
**BTS 400** College to Careers Seminar (0 credit)  
**NET 467 Exit Exam** Departmental (0 credit) **and Certification Exam** (0 credit)

**University Requirements**

General Education..... 36 hrs  
 Student Success Seminar (BTO 100; waived for transfers with 30+ hrs.) ..... 1 hr  
 Wellness .....3 hrs  
 Total Hours University Graduation Requirements ..... 40 hrs

**College Requirements:**

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

**Core Courses (Major Requirements)** ..... 43 hrs

EET 251, 252, (EET 253 or 351 or AEM 352), 257; NET 302, 303, 343, 344, 349(1), 354, (395 or 440), 403, 454, 499; **AEM 801**; **TEC 830**. Exit requirement NET 467 (0).

**Supporting Course Requirements** ..... 34 hrs

CSC 160 and 3 hours of higher CSC courses; ECO 230; MAT114 or higher; 120, AEM 202, 310 or 310W, 407, 408, **804**; PHY 101 or higher; CHE 101/101L or higher; STA 215 or 270; TEC 161; and 3 hours of ACC, AEM, CCT, CIS, FIN, GBU, INS, MGT, MKT, or QMB electives as approved by major advisor.

**Free Electives** ..... 2-3 hrs

(Up to 3 semester hours of Upper Division courses including Cooperative Education, may be needed for meeting the 42 hour requirement.)

**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.