

AGR 310, 350, 440, or 411.

Additional Veterinary School Requirements.....18-19 hours
CHE 361/361L, 362/362L, and 431; two classes of science electives from BIO 315(4), 320(4), 331, 348(4), or 546(4). Courses listed are those required by Auburn School of Veterinary Medicine for students with a Baccalaureate degree prior to starting veterinary school. *Courses listed are those required by Auburn School of Veterinary Medicine for students without a Baccalaureate degree prior to starting veterinary school.*

Supporting Course Requirements.....20-22 hours
BIO(^GElement 4A) 111(4), 112(4); CHE(^GElement 4B), 111/111L, 112/112L; ECO 230 (^GElement 5B); select one class from: MAT(^GElement 2)108, 109(5), 124(4), or 261; PHY 131(5), 132(5).

^G = Course also satisfies a General Education element. Hours are included within the 36 hr. General Education requirement above.

TOTAL HOURS TO COMPLETE DEGREE.....122-125 hours

DEPARTMENT OF APPLIED ENGINEERING AND TECHNOLOGY

Chair

Dr. L. Tim Ross
(859) 622-3232
Whalin 302

Faculty

A. Adams, J. Adamson, S. Arias, V. Chandra, D. Dailey, R. Davis, W. Davis, B. Dyer, D. Field, C. Gagel, R. Gibbs, G. Gow, J. Kilgore, T. Lloyd, M. Marchant, D. Rawat, W. Reynolds, R. Richardson, L. Ross, S. Sgro, G. Steinbach, and J. Stratman

The Department of Applied Engineering and Technology offers Bachelor of Science degree programs in six areas: Applied Engineering Management, Aviation, Construction Management, Graphic Communications Management, Network Security and Electronics and Career and Technical Education.

DEPARTMENT GOALS

The Department of Applied Engineering and Technology seeks to prepare professionals for careers in Aviation, Network Security and Electronics, Construction Management, Applied Engineering Management, and Graphic Communications Management through the Bachelor of Science degree programs; prepare technicians for careers in Computer Aided Drafting, Computer Electronics Technology, Digital Imaging Design and Quality Assurance Technology through options in the Associate of Applied Science in Technology degree program; prepare professionals for careers in Career and Technical Education through certification, Associate of Applied Science, Bachelor of Science and Master of Science degree programs; to prepare selected professionals for advanced career opportunities in Applied Engineering and Technology Management through the Master of Science degree program; and to provide programs of quality

instruction and professional services to the University and to the community.

AVIATION

The EKU aviation program offers a Bachelor of Science degree in Aviation with two options: Aerospace Management and Professional Flight. Both options combine courses in business management, communication, math, computer science and general education. The Aerospace Management Option prepares students for exciting professional careers in all aspects of the aerospace industry from a management perspective whereas the Professional Flight Option prepares students for careers as pilots. The Professional Flight Program is an FAA Part 141 approved Flight School.

NETWORK SECURITY AND ELECTRONICS

Graduates of the Network Security and Electronics program are prepared for a career in the high-tech computer electronics industry. Coursework in the program provides students with the knowledge and skills needed for installing, configuring, maintaining, and managing computer network systems and security, and digital electronic devices.

Graduates of this program will demonstrate proficiency in basic networking skills relevant to LAN/WAN environments, demonstrate proficiency in basic computing skills, demonstrate fundamental knowledge in electricity/electronics, and demonstrate effective communication skills while conveying information to technical and non-technical audiences. The Network Security and Electronics program is accredited by the Association of Technology, Management, and Applied Engineering.



**American Council for
Construction Education**

CONSTRUCTION MANAGEMENT

Graduates of the Construction Management program are prepared for careers with general contracting firms, starting in a variety of management positions. Typical entry-level positions include: assistant project manager, estimator, superintendent, project scheduler, cost engineer, and field engineer. The Construction Management program is accredited by the American Council for Construction Education. Graduates of this program will have oral, written and graphic communication skills for successful performance in a construction environment; possess functional computer skills including the utilization of general and construction application software; apply mathematical and scientific skills in the management and execution of construction projects; apply the concepts of management, accounting, economics and ethics in the management and execution of construction projects; possess a basic understanding of the science of materials and the methods by which they are placed into service; possess the essential plan reading, quantity takeoff and pricing skills to function as a junior estimator; be able to prepare a project budget, analyze cost reports and make cash flow projections for a project; be able to prepare a project schedule, monitor progress toward completion, and update the schedule as needed; possess a basic knowledge of OSHA standards and be able to establish and enforce a safety plan on a job site, be able to interpret site plans, establish horizontal and vertical control on a site, and perform

layout for buildings and utilities; be able to administer situations on a project site, including evaluation of subcontractor pay requests, writing of purchase orders, and recording change orders, subcontracts, shop drawings, and daily reports; and perform in an acceptable manner in internship work assignments.



The Association of
Technology,
Management, and
Applied Engineering

APPLIED ENGINEERING MANAGEMENT

Graduates of the Applied Engineering Management Program are prepared for professional careers in technology related businesses. These businesses offer many opportunities to pursue exciting, challenging and rewarding careers that require technical knowledge and managerial skills. Applied Engineering Management prepares individuals for entry-level positions that include: manufacturing engineer, production engineer, industrial supervisor, industrial engineer, industrial technician, and quality engineer.

Graduates of Applied Engineering Management will be able to relate terminology, techniques and methodology to applied technical managerial concepts; demonstrate the ability to formulate and apply technical problem solving and managerial concepts; and be able to apply the concepts of mathematics and the physical sciences to solve technical problems. The BS degree program in Applied Engineering Management is accredited by the Association of Technology, Management, and Applied Engineering.

GRAPHIC COMMUNICATIONS MANAGEMENT

Graduates of the Graphic Communications Management program are prepared for a balance of technical skills and managerial competence to obtain successful careers in the printing and publishing industries. This four-year degree program provides up-to-date instruction for a high tech future in the third largest of manufacturing industries.

Graduates of the Graphic Communications Management program will demonstrate advanced competencies in printing and publishing processes and procedures. They will demonstrate technical competence during a cooperative education experience; demonstrate an understanding of printing processes and methods; and demonstrate expertise in electronic and Web publishing.

CAREER AND TECHNICAL EDUCATION

Engineering/Technology Education Option

Graduates of the Engineering/Technology Education option of the B.S. degree program in Career and Technical Education are prepared for teaching careers at the middle school and high school levels. An Engineering/Technology Education teacher is prepared to enjoy a career that is rewarding in many ways. The opportunity to plan and guide the learning experiences of students in the use of robots, computers and other “high tech” equipment in problem solving and production activities are rewards found in few other professions.

Graduates of the Engineering/Technology Education Option of the Career and Technical Education program will complete a student teaching experience in a professional setting; will be able to prepare a portfolio that includes instructional material development, samples of assessment and a professional growth

plan; and will be able to demonstrate technical competence in the areas of 1) basic engineering/technology, 2) civil engineering/technology, 3) electrical engineering/technology, and 4) mechanical/industrial engineering technology.

Technical Education Option

Graduates of the Technical Education option of the B.S. degree program in Career and Technical Education are prepared for teaching careers in secondary schools and post-secondary technical colleges in technical areas such as: computer electronics, computer aided drafting (CAD), graphic arts and other technical occupational areas. An option is also offered in Occupational Training Development for those interested in training for business and industry.

Graduates of the Technical Education Option of the Career and Technical Education program will be able to plan and implement instruction for technical education courses; be able to develop and analyze assessment instruments for technical education courses; be able to develop and apply appropriate teaching strategies for technical education courses; be able to complete a Practicum in Career and Technical Teaching in a professional setting; and will be able to demonstrate occupational/technical competence by obtaining discipline-specific expertise.

Occupational Training and Development Option

Graduates of the Occupational Training and Development option of the B.S. degree program in Career and Technical Education are prepared to plan and implement instruction for technical courses in a business and industry setting; are able to develop and analyze assessment instruments for technical courses; are able to develop and apply appropriate teaching strategies for technical courses; and are able to complete a Practicum in Career and Technical Teaching.

The BS program in Career and Technical Education is accredited by the National Council for Accreditation of Teacher Education.

ASSOCIATE OF APPLIED SCIENCE

The Department of Applied Engineering and Technology also offers Associate of Applied Science degree programs (two-year programs) in Technology and Career and Technical Education. The Associate of Applied Science degree in Technology offers the student a choice of technical concentration in four options: Computer Aided Drafting, Computer Electronics, Digital Imaging Design, and Quality Assurance. The AAS degree program in Technology is accredited by the Association of Technology, Management, and Applied Engineering.



The Association of
Technology,
Management, and
Applied Engineering

ASSOCIATE OF APPLIED SCIENCE - TECHNOLOGY

Computer Aided Drafting

Graduates of the Computer Aided Drafting (CAD) program option are prepared for careers as drafters or designers who use computer aided drafting and design systems to generate drawings. Graduates obtain jobs in technology based businesses.

Graduates of the CAD option of the AAS in Technology program will be able to apply 2D software applications to

communicate and solve design problems; apply 3D software applications to communicate and solve design problems; and will be able to convert orthographic and pictorial sketch information into detailed 2D/3D Computer Aided Drafting drawings that meet or exceed current industry standards.

Computer Electronics

Graduates of the Computer Electronics (CE) program option are prepared for rewarding careers as computer electronic technicians in the public and private sector. Computer Electronics program graduates are qualified to obtain jobs in a wide variety of information technology, manufacturing and service industries. These jobs require skilled technicians for installing, troubleshooting and maintaining microprocessor-based systems, programmable logic controllers, computer hardware and software.

Graduates of the CE option of the AAS in Technology program will demonstrate fundamental knowledge in electricity/electronics at the technician’s level; demonstrate proficiency in basic computing skills; demonstrate proficiency in basic networking skills relevant to LAN/WAN environments; and demonstrate effective communication skills while conveying information to technical and non-technical audiences.

Digital Imaging Design

Graduates of the Digital Imaging Design (DID) program option are prepared with skills to create well designed images and documents for the printing and publishing industries and for the World Wide Web.

Graduates of the DID option of the AAS in Technology program will demonstrate competency in digital imaging design processes and procedures; be able to create documents for publication using software common to the industry; be able to create documents for the world-wide-web using software common to the industry; and will demonstrate competence in the common printing process.

Quality Assurance

Graduates of the Quality Assurance (QA) program option are prepared for careers in technology based businesses as quality assurance technicians. Their task is to assist in controlling and monitoring the process so that a quality product is produced.

Graduates of the QA option of the AAS in Technology will demonstrate proficiency in the fundamentals of practical statistical methods as applied to quality concepts and techniques; apply principles and make calculations in the areas of sampling and reliability; and will be able to anticipate, recognize, and evaluate the impacts of quality assurance efforts.

ASSOCIATE OF APPLIED SCIENCE - CAREER AND TECHNICAL EDUCATION

The Career and Technical Education associate of applied science degree program is designed for in-service technical teachers employed in area technical centers and post-secondary technical schools. Graduates of the Career and Technical Education AAS degree program will be able to plan and implement instruction for technical education courses; develop and analyze assessment instruments for technical education courses; develop and apply appropriate teaching strategies for technical education courses; and complete a Practicum in Career and Technical Teaching.

MINORS

The department also offers minors in Applied Engineering Management, Aviation Administration, Aviation (Flight), Digital Imaging Design, Computer Electronics Technology, Construction Management, Quality Assurance, and Web Publishing.

ENDORSEMENT/CERTIFICATES

An endorsement in Industrial Computer Technology, a university certificate in Land Surveying, and a Career and Technical Education certificate program for in-service technical teachers are also offered by the Department of Applied Engineering and Technology.

Baccalaureate Degrees

**BACHELOR OF SCIENCE (B.S.)
APPLIED ENGINEERING MANAGEMENT**
CIP Code: 15.0612

Prior to enrolling in the last 60 hours of the Applied Engineering Management degree program students must complete AEM 201, 202, TEC 161, 190, MAT 108, PHY 131, CHE 101, 101L (1) or CHE 111, 111L (1); and STA 215 or 270 or QMB 200 and have an overall 2.0 GPA and 2.25 major GPA. Graduates must have an overall GPA of 2.25 in the major with no major grade below a “C”. Transfer students will be treated on an individual basis. The Applied Engineering Management program is accredited by the Association of Technology, Management, and Applied Engineering.

UNIVERSITY GRADUATION REQUIREMENTS

- General Education36 hours
- Student Success Seminar (BTO 100; waived for transfers with 30+ hrs.).....1 hour
- Wellness3 hours
- Writing Intensive Course (Hrs. incorporated into Major/ Supporting/Gen Ed/Free Electives category)
- Upper division courses (42 hrs. distributed throughout Major/Supporting/Gen Ed/Free Electives categories)
- ACCT Applied Engineering Management majors fulfill ACCT with AEM 499. (Credit hours are incorporated into program requirements below.)

Total hours University Graduation Requirements.....40 hours

MAJOR REQUIREMENTS

College Requirement

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

Core Courses.....47 hours

EET 251; AEM 201, 202, 301, 308, 310, 332, 338(4), 349(1), 352, 371, 406, 408, 499; TEC 161, 190.

Applied Engineering Management Electives.....15 hours

Select 3 technical hours from: EET 252, AEM 195; GCM 211.

Select 12 hours of upper division technical electives from: EET 350, 351, 452, NET 440; CON 303; AEM 320, 336, 382, 383, 390, 392, 395, 397, 506, 530, STA 585, or GCM 313.

Supporting Course Requirements.....15 hours

ECO 230(⁶Element 5B); CON 420 or ECO 300; CHE 101/101L(⁶Element 4B) or 111/111L(⁶Element 4B); MAT

Business and
Technology

108^(G)Element 2) and (211 or 261), or six hours of higher level MAT courses; PHY 131(5)(Gen. Ed. E-5B); STA 215 or 270 or QMB 200.

^G = Course also satisfies a General Education element. Hours are included within the 36 hr. General Education requirement above. A maximum of 3 hrs can apply toward Element 4B.

Exit Exam Requirement:

Students must take an AEM assessment examination before graduation. An exam fee is required.

Free Electives.....3 hours

TOTAL HOURS TO COMPLETE DEGREE.....120 hours

Students must take an assessment examination before graduation. An exam fee is required.

+Transfer students with an associate degree in a technical related field may not need to take these 12 hours of electives if upper division requirement can be completed.

**BACHELOR OF SCIENCE (B.S.) AREA MAJOR
AVIATION**

CIP Code: 49.0102

UNIVERSITY GRADUATION REQUIREMENTS

- General Education36 hours
- Student Success Seminar (BTO 100; waived for transfers with 30+ hrs.).....1 hour
- Wellness.....3 hours
- Writing Intensive Course (Hrs. incorporated into Major/Supporting/Gen Ed/Free Electives category)
- Upper division courses (42 hrs. distributed throughout Major/Supporting/Gen Ed/Free Electives categories)
- ACCT - Aviation majors will fulfill ACCT with AVN 402. (Credit hours are incorporated into program requirements below.)

Total hours University Graduation Requirements....40 hours

MAJOR REQUIREMENTS

College Requirement: Professional Skills Seminar

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

Core Courses.....27 hours

AVN 150, 315, 325, 340, 350, 401, 402, 410, 460. Majors must also select an option in one of the professional flight options or aerospace management

Options:

Professional Flight - Single Engine (SEL).....31 hours
AVN 192 (4), 192A (1), 193A (1), 220 (4), 221A (1), 222A (1), 300 (2), 301A (1), 302A (1), 303A (1), 304A (1), 305 (1), 305A (1), 415, 425, and 415A (1), 421 (2), 421A (1), 422A (1), or AVN elective (5).

Professional Flight - Multiengine (MEL).....31 hours
AVN 192 (4), 192A (1), 193A (1), 220 (4), 221A (1), 222A (1), 305 (1), 305A (1), 300 (2), 331A (1), 332A (1), 333A (1), 334A (1), 415, 425 and 416A (1), 421 (2), 421A (1), 423A (1), or AVN elective (5).

Aerospace Management.....27 hours
ACC 201; AVN 360, 370, 390; ECO 231; 12 hrs* from the following prefixes: ACC, AFS, AVN 192, 194A,

205A, 206A, 220, 220A, CIS, ECO, FIN, GBU, INS, MGT, MKT, MSL, PUB.

*Note: selecting only lower division courses may result in additional course work being needed to meet the University requirement of 42 hours of upper division credits. Students are referred to DegreeWorks to check for course pre-requisites and monitor upper division hours.

Supporting Course Requirements.....22 hours

TEC 161; ECO 230^(G)Element 5B); GEO 315; MAT 211^(G)Element 2) or 261^(G)Element 2); MGT 300 or 301; PHY 131(5)^(G)Element 4B), 132(5); PSY 200 or 200W; and STA 215.

^G = Course also satisfies a General Education element. Hours are included within the 36 hr. General Education requirement above.

Free Electives.....0-4 hours

Exit Exam Requirement:

Students must take an Aviation exit examination before graduation.

TOTAL HOURS TO COMPLETE DEGREE.....120 hours

**BACHELOR OF SCIENCE (B.S.) AREA MAJOR
CAREER AND TECHNICAL EDUCATION/
TEACHING**

CIP Code: 13.1320

UNIVERSITY GRADUATION REQUIREMENTS

- General Education36 hours
- Student Success Seminar (BTO 100; waived for transfers with 30+ hrs.).....1 hour
- Wellness.....3 hours
- Writing Intensive Course (Hrs. incorporated into Major/Supporting/Gen Ed/Free Electives category)
- Upper division courses (42 hrs. distributed throughout Major/Supporting/Gen Ed/Free Electives categories)
- ACCT - Career and Technical Education majors will fulfill ACCT with CTE 463 or ESE 499. (Credit hours are incorporated into program requirements below.)

Total hours University Graduation Requirements....40 hours

MAJOR REQUIREMENTS

College Requirements:

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

Pre-Service Teacher Education Program

Professional Education Core.....38 hours
CTE 262, 361, 363, 463(12) or ESE 499(12); EDF 103(1), 310(1), 319 or 319W; ESE 490, 552; SED 401 or 401S; and 3 hrs of Applied learning Experience: EDF 349Q(0.5), 349R(0.5); EMS 349Q(0.5), 349R; ESE 349(1).

Agriculture Education(includes all areas below)..45 hours

Animal Science AGR 125, 126 and one class from AGR 321, 327, 328 or 380; Agricultural Systems Management AGR 213 and one class from AGR 272, 311, 362 or 383; Soil Science AGR 215 and one class from AGR 315, 317, or 318; Plant Science AGR 130, 131 or OHO 131, 132 and one class from AGR 312, 417 and OHO 384 or 385; Agriculture Business AGR 308 and one class from AGR 310, 350, 409 or 440. AGR 304, 305 plus Agriculture

or Horticulture electives to make 45 credit hours selected in consultation with your advisor.

Technical Education**45 hours
 Forty-five semester hours of technical courses to be chosen in consultation with the advisor. A maximum of eighteen semester hours (in CTE 204, 205, 206, 304, 305, and 306 may be allowed by proficiency examination; TEC 349*[9 hours]).

Engineering/Technology Education[†]45 hours
 CON 121, 201, 294; EET 252, NET 302, 303; AEM 195, 201, 371, 383; TEC 161, 190, 303, 404; select 3 hours from AVN 150, GCM 211, TEC 102 and 141.

In-Service Teacher Education Program

Professional Education Core28 hours
 CTE 164, 261, 361, 363, 364, 463(4); EDF 320; SED 104 and TEC 161.

In-Service Teacher Education/Training and Development Options:

Technical Education45 hours
 Forty-five semester hours of technical courses to be chosen in consultation with the advisor. A maximum of eighteen semester hours (in CTE 204, 205, 206, 304, 305 and 306 may be allowed by proficiency examination).

Occupational Training and Development45 hours
 Technical courses chosen in consultation with advisor. A maximum of eighteen semester hours (in CTE 204, 205, 206, 304, 305 and 306 may be allowed by proficiency examination).

Supporting Course0^G hours
 MAT 107 (^GElement 2) or higher.

^G = Course also satisfies a General Education element.

Free Electives:0-7 hours

TOTAL HOURS TO COMPLETE DEGREE.....120-123 hours

**Graduates completing the Pre-Service Teacher Education option must have a minimum of 2000 clock hours of planned and supervised work experience in the occupation in which they will teach or a minimum of three years of approved work experience in the occupation in which they will teach. Students must also take the PRAXIS II Specialty Examination before graduation.

Candidates earning a degree that leads to pre-service teacher certification must take the PRAXIS Series (Professional Assessments for Beginning Teachers) and PLT (Principles of Learning and Teaching) exams as a requirement for graduation. Candidates are encouraged to review the schedule for PRAXIS and PLT registration deadlines prior to beginning the senior year (<http://www.kyepsb.net/assessment/index.asp> AND www.ets.org/praxis). Specialty exams are required for each certification area sought and it may take more than one test date to complete all requirements. Candidates should confer with their education advisor/counselor to determine the most optimal time to take required exams.

† Those desiring eligibility to teach in pre-engineering education programs at the middle school and high school level should take the following general education courses: CHE 111, MAT 107, 108, PHY 131.

Career and Technical Education options require all pre-service students to meet the general education knowledge for initial teacher preparation requirements (see College of Education

section of this *Catalog*).

The BS degree program in Career and Technical Education is accredited by the National Council for Accreditation of Teacher Education.

**BACHELOR OF SCIENCE (B.S.)
 CONSTRUCTION MANAGEMENT**

CIP Code: 52.2001

Business and
 Technology

UNIVERSITY GRADUATION REQUIREMENTS

- General Education36 hours
- Orientation Course (waived for transfers with 30+ hrs.)1 hour
- Wellness3 hours
- Writing Intensive Course (Hrs. incorporated into Major/Supporting/Gen Ed/Free Electives category)
- Upper division courses ((42 hrs. distributed throughout Major/Supporting/Gen Ed/Free Electives categories)
- ACCT - Construction Management majors will fulfill ACCT with CON 499. (Credit hours are incorporated into program requirements below.)

Total hours University Graduation Requirements.....40 hours

MAJOR REQUIREMENTS

College Requirement: Professional Skills Seminar

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

Major Requirements56 hours

CON 121, 201, 202, 221, 294, 303, 307, 320, 322, 323, 324, 349 (2), 420, 421, 423, 425, 426, 499; OSH 379. (*Two separate enrollments of CON 349 are recommended in order to achieve a total of 2 cr. hrs.*)

Supporting Course Requirements27 hours

ACC 201 or FIN 310; CCT 201; ECO 230(^GElement 5B); GBU 204; GLY 108(^GElement 4B); TEC 161; MAT 108(^GElement 2) and 117(1) and 261, or 7 hrs of higher level MAT courses; MGT 301 or AEM 408; PHY 131(5); and 3 hrs of ACC, CCT, CIS, ECO, FIN, GBU, INS, MGT, MKT, QMB, or RST electives* as approved by major advisor**.

^G = Course also satisfies a General Education element.

Hours are included within the 36 hr. General Education requirement above. A maximum of 3 hrs will count toward Element 4B.

**Business electives may be upper or lower division as necessary in order to complete upper division requirement.*

*** Students wishing to pursue the Minor in Business must confer with their major advisor to make substitutions to the supporting course requirements. INS, QMB and RST courses do not apply to the Minor in Business.*

Exit Exam Requirement:

Students must take a construction assessment examination before graduation. An exam fee is required.

TOTAL HOURS TO COMPLETE DEGREE.....123 hours

The Construction Management program is accredited by the American Council for Construction Education.

**BACHELOR OF SCIENCE (B.S.)
GRAPHIC COMMUNICATIONS
MANAGEMENT**

CIP Code: 10.0302

UNIVERSITY GRADUATION REQUIREMENTS

- General Education36 hours
- Orientation Course (waived for transfers with 30+ hrs.).....1 hour
- Wellness.....3 hours
- Writing Intensive Course (Hrs. incorporated into Major/Supporting/Gen Ed/Free Electives category)
- Upper division courses ((42 hrs. distributed throughout Major/Supporting/Gen Ed/Free Electives categories)
- ACCT - Graphic Communications Management majors will fulfill ACCT with GCM 414 or 349 A-N. (Credit hours may be incorporated into Major or Supporting requirements)

Total hours University graduation requirements.....40 hours

MAJOR REQUIREMENTS

College Requirement

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

Core Courses.....48 hours

AEM 202, 408; GCM 211, 217, 255, 313, 316, 317, 318, 319, 349 (3 hours), 355, 410, 414, 455; TEC 161.

Supporting Course Requirements.....19 hours

ACC 201; CHE 101/101L(^GElement 4B); ECO 230 (^GElement 5B); GBU 204; MAT 107 (^GElement 2); MGT 301, MKT 301; PHY 101 (^GElement 4B) and STA 215.

(^G=Course also satisfies a General Education element

Free Electives.....13 hours

At least 3 hours must be upper division credit.

Exit Requirement.....0 hours

Students must take a Graphic Communications Management assessment examination before graduation.

TOTAL HOURS TO COMPLETE DEGREE.....120 hours

**BACHELOR OF SCIENCE (B.S.)
NETWORK SECURITY AND ELECTRONICS**

CIP Code: 15.1299

UNIVERSITY GRADUATION REQUIREMENTS

- General Education36 hours
- Student Success Seminar (BTO 100; waived for transfers with 30+ hrs.).....1 hour
- Wellness.....3 hours
- Writing Intensive Course (Hrs. incorporated into Major/Supporting/Gen Ed/Free Electives category)
- Upper division courses ((42 hrs. distributed throughout Major/Supporting/Gen Ed/Free Electives categories)
- ACCT - Network Security and Electronics majors will fulfill ACCT with NET 499. (Credit hours may be incorporated into Major or Supporting requirements)

Total hours University graduation requirements.....40 hours

MAJOR REQUIREMENTS

College Requirement: Professional Skills Seminar

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

Core Courses.....40 hours

EET 251, 252, 253, 257; NET 302, 303, 343, 354, 403, 440, 454, 499; select 4 hours from NET 349, 395, EET 351, 452.

Supporting Courses.....34-35 hours

CSC 160 and 3 hrs of higher CSC courses; ECO 230(^GElement 5b); MAT (^GElement 2) 108, and (124(4) or 211 or 261); AEM 202, 310, 406, 408; PHY 101(^GElement 4b); CHE 101/101L, or higher; STA 215 or 270; TEC 161; as approved by major advisor select 3 upper division hrs from ACC, AEM, CCT, CIS, FIN, GBU, INS, MGT, MKT, or QMB.

^G = Course also satisfies a General Education element.

Hours are included within the 36 hr. General Education requirement above.

Free Electives.....5-6 hours

(A minimum of 2 semester hours must be Upper Division courses including Cooperative Education.)

TOTAL HOURS TO COMPLETE DEGREE120 hours

The Department of Applied Engineering and Technology's Network Security and Electronics degree program has an articulation agreement for transfer of credit and cooperation with Bluegrass Community and Technical College's (formerly Lexington Community College) Associate in Applied Science Degree in Engineering Technology with Electrical Specialization.

*Prerequisite may be required for some course selections.

Students must take at least one computer systems, networking, security, electronics, or telecommunications technology certification or license approved by the advisor.

Students must take a Network Security and Electronics exit examination before graduation. Graduates must have an overall GPA of 2.25 in major requirements.

The Network Security and Electronics program is accredited by the Association of Technology, Management, and Applied Engineering (ATMAE).

Associate Degrees

CAREER AND TECHNICAL EDUCATION

(TEACHING) (A.A.S.)

CIP Code: 13.1319

Note: Enrollment in this program is restricted to in-service technical teachers and graduates of a Kentucky Vocational/Technical School post-secondary program.

UNIVERSITY GRADUATION REQUIREMENTS

- General Education20-21 hours
- Elements: 1A, 1B (ENG 101,102, or 105 with a grade of "A" or "B"); 2 (MAT 107 or higher); any 3B or 3A/B; 5A or 5B; 5 hrs of any other General Education

coursework.
 • Student Success Seminar (BTO100; waived for transfers with 30+ hrs.) 1 hour
 Total Hours University Graduation Requirements.....21-22 hours

MAJOR REQUIREMENTS

The AAS degree program in Career and Technical Education is accredited by the National Council for Accreditation of Teacher Education.

Graduates of this program must have a minimum of 4,000 hours of supervised work experience or four years of occupational experience in the area to be taught.

Core Courses.....24 hours
 TEC 161; 21 hr from the technical area, or related to the area in which the individual proposes to teach, as approved by the advisor; a maximum of 9 hrs (CTE 204, 205, 206) may be earned by proficiency examination; 9 hrs credit may be supervised work experience (TEC 349).

Supporting Courses.....21 hours
 CTE 261, 361, 364, 463*(12).
 *In-service teachers should substitute CTE 164, 363, 463 (4), and EDF 319 or SED 104 for CTE 463 (12).

Exit Exam:
 Students must take a professional vocational technical education assessment examination and the Teacher Occupational Competency Test (TO CT) before graduation. Candidates earning a degree that leads to teacher certification must take the PRAXIS Series (Professional Assessments for Beginning Teachers) and PLT (Principles of Learning and Teaching) exams as a requirement for graduation.

Candidates are encouraged to review the schedule for PRAXIS and PLT registration deadlines prior to beginning the senior year (<http://www.kyepsb.net/assessment/index.asp> AND www.ets.org/praxis). Specialty exams are required for each certification area sought and it may take more than one test date to complete all requirements. Candidates should confer with their education advisor/counselor to determine the most optimal time to take required exams.

TOTAL HOURS TO COMPLETE DEGREE66-67 hours

TECHNOLOGY (A.A.S.)

CIP Code: 15.0612

UNIVERSITY GRADUATION REQUIREMENTS

General Education 18 hours
 Elements: 1A,1B (ENG 101,102, or 105 with a grade of "A" or "B"); 1C (CMS 100 or 210); 2 (MAT 107 or higher); 3B or 3A/B ; 5B (ECO 230).

Student Success Seminar (BTO 100; waived for transfers with 30+ hrs.).....1 hour

Total Hours University Graduation Requirements19 hours

MAJOR REQUIREMENTS

The AAS degree program in Technology is accredited by the

Association of Technology, Management, and Applied Engineering.

Computer Aided Drafting.....39 hours
 AEM 195, 201, 338(4), 383, 390, 392, 397; CON 294; MAT 108; PHY 131(5); TEC 161, 190.

Computer Electronics39 hours
 CSC 160 or higher; EET 251, 252, 253, 257; NET 302, 303, 343, 399; EET 351 or NET 354; MAT 108; PHY 101; TEC 161.

Digital Imaging Design37 hours
 CHE 101/101L; GBU 204; GCM 211, 217, 255, 313, 316, 317, 318, 319, 355; TEC 161.

Quality Assurance38 hours
 CHE 101/101L, or CHE 111/111L; EET 251; AEM 201, 202, 301, 332, 336, 338(4); MAT 108; QMB 200 or STA 215 or 270; TEC 161, 190.

Free Electives.....2-4 hours

Exit Exam: Students must take an assessment examination before graduation.

TOTAL HOURS TO COMPLETE DEGREE60 hours

Students must take an assessment examination before graduation.

The AAS degree program in Technology is accredited by the Association of Technology, Management, and Applied Engineering.

Minors

MINOR IN APPLIED ENGINEERING MANAGEMENT

Requirements.....18 hours
 TEC 190, AEM 201, 202*, 308, and six hours of AEM upper division electives. No more than nine hours of courses taken for a major may be counted toward this minor.

*STA 215 or 270 and MAT 107 or higher are prerequisites for AEM 202.

**MINOR IN AVIATION (FLIGHT)
 Aviation Program**

Requirements.....23 hours
 A student may minor in aviation (flight) by completing a minimum of 23 semester hours as follows: AVN 150, 192, 194A, 205A, 206A, 220, 220A, 300; 315; GEO 215. No more than 12 hours of core courses taken for the aviation (administration option) major may be counted toward the minor in aviation (flight).

**MINOR IN AVIATION ADMINISTRATION
 Aviation Program**

Requirements.....21 hours
 A student may minor in aviation administration by completing a minimum of 21 semester hours as follows: AVN 150, 315, 340, 350, 410, 460, and three hours of approved electives. No more than 12 (flight) hours of core courses taken for the aviation major may be counted toward the minor in aviation administration.



MINOR IN DIGITAL IMAGING DESIGN

This minor provides students with the ability to create professional quality documents using the latest in computer technology. Students from various majors have found that the information and skills taught in these courses have been very valuable in assisting them to be successful in their occupation.

- Required Courses.....12 hours**
GCM 211, 217, 313 and 317.
- Supporting Courses6 hours**
Select six semester hours from GCM 255, 316, 318, 319, 355 and 455.
- Total Requirements.....18 hours**

MINOR IN COMPUTER ELECTRONICS TECHNOLOGY

Requirements.....18 hours
EET 251, 252, 253, NET 302, 303, and (EET 351 or NET 354). No more than nine hours of courses taken for a major may be counted toward this minor.

MINOR IN CONSTRUCTION MANAGEMENT

The Construction Management minor provides technical and managerial knowledge about the construction industry. It is an appropriate supplement to a student who is majoring in a profession affiliated with construction. This minor is particularly relevant to students majoring in business, insurance, management, manufacturing, and marketing.

Requirements.....21 hours
CON 121, 201, 202, 294, 323, 324, and 421. No more than nine hours of courses taken for a major may be counted toward this minor.

MINOR IN LAND SURVEYING

Designed to prepare students to take the Fundamentals of Land Surveying Examination (administered by the Kentucky State Board of Licensure for Professional Engineers & Land Surveyors) upon completion of the core curriculum in land surveying or during final year in a Baccalaureate Degree program if twelve (12) hours or more of the core curriculum in land surveying have been completed. This minor program includes all requirements of the core curriculum in land surveying.

Requirements.....21 hours
CON 221, 294, 320, 321; GEO 353, 425, 455. Non-Construction Management majors must also take GBU 204.

MINOR IN QUALITY ASSURANCE TECHNOLOGY

Requirements.....18 hours
STA 215 or 270, AEM 202, 332, 336, 506, and 530 or STA 585. No more than nine hours of courses taken for a major may be counted toward this minor.

MINOR IN WEB PUBLISHING

A minor in Web Publishing will add a valuable set of skills to a student's portfolio for many different majors. Students learn to create professionally designed web sites using current web standards.

Requirements18 hours
CIS 240; GCM 255, 313, 355, 455; NET 303.

Concentrations

**APPLIED ENGINEERING AND TECHNOLOGY
CONCENTRATION IN THE ASSOCIATE OF GENERAL
STUDIES DEGREE**

See page 72 of this *Catalog* for the Applied Engineering and Technology Concentration requirements listed in the Associate of General Studies degree section.

**COMPUTER NETWORKING SYSTEMS CONCENTRATION
IN THE ASSOCIATE OF GENERAL STUDIES DEGREE**

See page 72 of this *Catalog* for the Computer Networking Systems Concentration requirements listed in the Associate of General Studies degree section.

**ELECTRICITY AND ELECTRONICS CONCENTRATION IN
THE ASSOCIATE OF GENERAL STUDIES DEGREE**

See page 72 of this *Catalog* for the Electricity and Electronics Concentration requirements listed in the Associate of General Studies degree section.

Certificates

UNIVERSITY CERTIFICATE IN LAND SURVEYING

The curriculum for the Land Surveying Certificate is aimed at students who have, or are pursuing, a four-year degree in a program other than land surveying from a college or university of recognized standing. This certificate program includes all requirements of the Kentucky core curriculum in Land Surveying. Upon completion of this curriculum, students will receive a certificate permitting them to take the Kentucky Fundamentals of Land Surveying Examination.

Requirements.....24 hours
CON 221, 294, 320, 321; GBU 204; GEO 353, 425, 455.

**CAREER AND TECHNICAL EDUCATION PROFESSIONAL
CERTIFICATION***

Enrollment in this program is restricted to those who are currently employed as technical teachers and required to become certified as teachers of Vocational/Technical Education: Industrial Education.

General Education Requirements20 hours

ENG 101, 102; MAT 107, three hours of General Education humanities, three hours of General Education social science and five hours of General Education electives.

Professional Education Requirements22 hours
CTE 164, 261, 361, 363, 364, 463 (4 hrs.); EDF 319 or SED 104.

Major Requirements.....24 hours
TEC 161 and 21 hours chosen from the technical area, or related to the area, in which the individual is teaching, as approved by the advisor. Eighteen hours may be allowed by proficiency examination (CTE 204, 205, 206, 304, 305, and 306). Nine hours by proficiency examination may be applied to the Associate Degree and 18 hours to the Bachelors Degree in Career and Technical Education.

Total Curriculum Requirements66 hours

*Based on recommendation from ECU, Certificate is awarded by the Education Professional Standards Board.

DEPARTMENT OF COMMUNICATION

Chair

Dr. Elizabeth Hansen
(859) 622-1871
Combs 317

Faculty

D. Anderson, R. Beehner, M. Branstetter, C. Cogdill, J. Fairchild, J. Fitch, D. Givens, J. Gleason, K. Keltner-Previs, K. Kimmel, E. Meiners, K. Rudick, J. Strada, J. Taylor, A. Thieme, J. Violette, A. Walker, and G. Whitehouse.

The Department of Communication offers four-year Bachelor of Arts degree programs in four areas: Broadcasting and Electronic Media, Communication Studies, Journalism, and Public Relations.

DEPARTMENT GOALS

The Department of Communication's student-centered program seeks to transform lives through excellence in instruction, advising, scholarship, and service. The department strives to produce creative and effective communicators by providing cutting-edge programs emphasizing hands on and practical learning. Empowered by this experience, students are prepared to work, lead and serve in a global society.

PROGRAM OBJECTIVES

BROADCASTING AND ELECTRONIC MEDIA

Graduates of the Broadcasting and Electronic Media program pursue careers in the broadcasting/film industry, as well as in cable companies, industrial and corporate video facilities, advertising agencies, and production houses. Students in the General Option must demonstrate excellence in their ability to produce and edit either audio or video material to create a variety of projects. Students in the News Option must demonstrate excellence in gathering information, writing, and visual story-telling that meets accepted journalistic standards using a variety of visual platforms.

Students in the Film Techniques and Technology Option must demonstrate excellence in writing, visualizing, shooting, editing, and cinematic story telling.

JOURNALISM

Graduates of the Journalism program find jobs with newspapers, newsletters, magazines, online publications, businesses, governmental public information offices, and advertising firms. Journalism majors must be able to accurately gather information, analyze it, and present it to audiences using a variety of media platforms.

PUBLIC RELATIONS

Graduates of the Public Relations program pursue careers with corporations, non-profit organizations, education, government, and public relations agencies. Activities include providing appropriate counsel, writing and producing news releases, speeches and newsletters, using social media and planning events. Students must demonstrate excellence in research, planning, communication and evaluation of public situations using a variety of platforms to meet standards for public relations education as published by the Public Relations Society of America.

COMMUNICATION STUDIES

Graduates of the Communication Studies (CMS) program pursue careers in labor relations, human resources, tourism, banking, corporate relations, sales, and many other professional contexts. Communication Studies students learn how to successfully demonstrate and promote effective human communication, including relationship building and maintenance, resolving conflict, persuading and negotiating, professional speaking, communication training and development, and leadership skills. CMS students must exhibit cognitive and behavioral learning by demonstrating (a) sufficient knowledge about various human communication processes and (b) satisfactory skills related to communication competency.

MINORS

The department also offers minors in Advertising, Broadcast News, Broadcasting and Electronic Media, Communication Studies, Dispute Resolution, Journalism, Public Relations, and Visual Media.

MEDIA PRODUCTIONS

The student newspaper, *The Eastern Progress*, is housed in the Department of Communication. Numerous video productions and films are also produced within the department. Majors and non-majors can receive academic credit for work on some productions.

REQUIREMENTS

Some courses may require special skills and equipment such as the ability to keystroke a minimum of 25 words per minute. Instructors will notify students of these requirements at the first class meeting.

Students may earn up to 16 credit hours toward their degree by enrolling in cooperative education courses. Credit for additional practical experience may be earned through practicums. Students majoring or minoring in the Department of Communication are