



Applied Engineering Management 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

Applied Engineering Management at EKU

Applied Engineering Management prepares individuals to achieve professional positions in technology related businesses. These businesses offer many opportunities to pursue exciting, challenging and rewarding careers that require technical knowledge and managerial skills. Graduates of the program study a technical, managerial and general education curriculum which prepares them to meet future challenges. Emphasis on hands-on instruction allows students to apply technology in business and industries to a variety of products such as automobiles, appliances, plastic products, electronic devices, etc.

Careers

Graduates of the program receive a Bachelor of Science degree. Recent graduates have been employed in positions such as manufacturing engineer, quality engineer, industrial engineer, continuous improvement leader, product engineer, process engineer, quality manager, and lean manufacturing coordinator. Many graduates have advanced to managerial leadership positions of significant responsibility. A sample of companies that employ EKU technology graduates include Lockheed Martin, Nacom Corporation, Lexmark, Toyota Motor Manufacturing, Hitachi Automotive Products, Osram Sylvania, Tokico, Cooper Tire and Rubber, Mid-South Electronics, Trane, YH America, NACCO Material Handling Group, Hendrickson Commercial Vehicle Suspension, General Electric, Johnson Control, Parker-Hannifin, Ed Bullard, Dana Corporation, KI-USA, and Aventics. According to the Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*, 2016-17 Edition, the median salary for Industrial Production Managers in 2016 was \$97,140.

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), 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 and 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. Applied Engineering Management students have an opportunity to develop extracurricular leadership skills through the following student organization: Association of Technology, Management, and Applied Engineering (ATMAE). Several scholarship opportunities are also available.

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 the AEM Accelerated 3+2 program

Freshman (1st Semester) 16 hrs

- BTO 100 Orientation (1 hr)
- E-1A Written Communication
- AEM 201 Metallic Material Process**
- E-2 MAT 120 Trigonometry
- TEC 161 Computer Application in Technology**
- AEM 195 Computer Aided Drafting**

Sophomore (1st Semester) 14 hrs

- E-5B ECO 230 Principles of Economics I
- AEM 390 Advanced Computer Aided Design**
- E-4 PHY 131 College Physics I (5 hrs)
- STA 270 Stats I or STA 215 Elementary Probability & Statistics

Junior (1st Semester) 16 hrs

- AEM 308 Methods Lean Operations
- AEM 310W Computer Communications in Industry**
- AEM 332 Process Control & Auditing
- Elective (4 hrs)
- E-3A Arts

Senior (1st Semester) 15 hrs

- AEM 352 Automated Devices**
- AEM 371 Hydraulics & Pneumatics**
- AEM 804 Project Management **
- AEM 706 Six Sigma Quality **
- E-6 Diversity of Perspectives & Experiences

Freshman (2nd Semester) 16 hrs

- E-4 CHE 101/101L or 111/111L Chemistry/Lab (4 hrs)
- EET 251 Electricity and Electronics**
- E-1B Written Communication
- E-1C Oral Communication
- Elective (3 hrs)

Sophomore (2nd Semester) 15 hrs

- AEM 202 Introduction to Quality**
- AEM 301 Non-Metallic Material Processes**
- AEM 330 Materials Testing and Metrology**
- MAT 211 Applied Calculus
- E-5A Historical Perspectives

Junior (2nd Semester) 16 hrs

- E-3B Humanities
- Elective (3 hrs)
- AEM 801 Economics for Lean Operations
- AEM Tech Elective** (3 hrs)
- AEM Tech Elective** (3 hrs)
- AEM 349 Cooperative Study in Technology** (1 hr)
- BTS 300 Professional Skills Seminar (0 hrs)

Senior (2nd Semester) 12 hrs

- AEM 408 Human Resource Development**
- AEM 499 Manufacturing Senior Project**
- AEM Tech Elective** (3 hrs)
- E-6 Diversity of Perspectives & Experiences
- BTS 400 College to Careers Seminar (0 hrs)
- AEM 467 Comprehensive Exam for BS in AEM (0 hrs)

**Technical courses in the department.

Prior to enrolling in the last 60 hours of the Applied Engineering Management degree program students must complete AEM 201, 202, 330, TEC 161, MAT 120, PHY 131, CHE 101, 101L(1) or CHE 111, 111L(1); and STA 270 or STA 215 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.

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..... 52 hrs

EET 251, AEM 195, 201, 202, 301, 308, 310W, 330, 332, 349(1), 352, 371, 390, 408, 467(0), 499, 706, 804; TEC 161.

Supporting Course Requirements 12 hrs

AEM 801; CHE101/101L (4) (^GElement 4) or 111/111L (4) (^GElement 4); ECO 230 (^GElement 5B); MAT 120 (^GElement 2) and 211 (^GElement 2), or six hours of higher level MAT courses; PHY 131(5) (^GElement 4); STA 215 (^GElement 2) or 270 (^GElement 2).

^G = Course also satisfies a General Education element. Hours are included within the 36 hr. General Education requirement above. A maximum of 3 hours can apply to Element 2 and 6 hours toward Element 4.

AEM Electives⁺ 9 hrs

Select 9 hours from the following technical electives. Note that 6 hours must be upper division: AEM 320, 336, 382, 383, 392, 395, 397, 530 or STA 585, CON 303, EET 252, 350, 351, 452, NET 440, or TEC 190.

Exit Exam Requirement 0 hrs

AEM 467 (0). Students must take an AEM assessment examination before graduation. An exam fee is required.

Free Electives..... 10 hrs

Total Curriculum Requirements 120 hrs

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