

ENGINEERING TECHNOLOGY MANAGEMENT, BACHELOR OF SCIENCE WITH A CONCENTRATION IN MANUFACTURING (B.S.)

Graduates must have an overall GPA at or above 2.00, and 2.25 in the major with no major grade below a "C". Transfer students will be treated on an individual basis. The Engineering Technology Management program is accredited by the Association of Technology, Management, and Applied Engineering.

Program Requirements

CIP Code: 15.1501

Summary Checklist for General Education

| Code | Title | Hours |
|--------------------|---|-----------|
| Element 1 | | |
| A: | Written Communication (http://catalogs.eku.edu/undergraduate/general-academic-information/general-education-requirements/element-1/) | 3 |
| B: | Written Communication (http://catalogs.eku.edu/undergraduate/general-academic-information/general-education-requirements/element-1/) | 3 |
| C: | Oral Communication (http://catalogs.eku.edu/undergraduate/general-academic-information/general-education-requirements/element-1/) | 3 |
| Element 2 | | |
| | Quantitative Reasoning (http://catalogs.eku.edu/undergraduate/general-academic-information/general-education-requirements/element-2/) | 3 |
| Element 3 | | |
| A: | Arts (http://catalogs.eku.edu/undergraduate/general-academic-information/general-education-requirements/element-3/) | 3 |
| B: | Humanities (http://catalogs.eku.edu/undergraduate/general-academic-information/general-education-requirements/element-3/) | 3 |
| Element 4 | | |
| | Natural Sciences (http://catalogs.eku.edu/undergraduate/general-academic-information/general-education-requirements/element-4/) | 6 |
| Element 5 | | |
| A: | Historical Science (http://catalogs.eku.edu/undergraduate/general-academic-information/general-education-requirements/element-5/) | 3 |
| B: | Social Behavioral Science (http://catalogs.eku.edu/undergraduate/general-academic-information/general-education-requirements/element-5/) | 3 |
| Element 6 | | |
| | Diversity of Perspectives Experiences (http://catalogs.eku.edu/undergraduate/general-academic-information/general-education-requirements/element-6/) | 6 |
| Total Hours | | 36 |

Students are expected to complete Elements 1 and 2 within their first 60 hours of college credit.

Major

| Code | Title | Hours |
|--|--|------------|
| University Graduation Requirements | | |
| General Education | | 36 |
| <i>Student Success Seminar</i> | | |
| SCO 100 | Student Success Seminar (waived for transfers with 30+ hours) | 1 |
| Upper division courses (42 hours distributed throughout Major/Supporting/Gen Ed/Free Electives categories) | | |
| Major Requirements | | |
| <i>Core Courses</i> | | |
| AEM 195 | Computer Aided Drafting | 3 |
| AEM 202 | Introduction to Quality | 3 |
| AEM 308 | Methods of Lean Operations | 3 |
| AEM 310W | Technical Communication | 3 |
| AEM 332 | Process Control and Auditing | 3 |
| AEM 349 | Applied Learning in Industrial Technology | 1 |
| AEM 407 | Fundamentals of Project Management | 3 |
| AEM 408 | Human Resource Development | 3 |
| AEM 499 | Senior Capstone Project | 3 |
| CON 420 | Engineering Economy | 3 |
| STA 215 | Introduction to Statistical Reasoning | 3-4 |
| or STA 270 | Applied Statistics | |
| TEC 161 | Computer Applications in Technology | 3 |
| Concentrations | | |
| Students must select one of the following Concentrations: | | |
| Manufacturing Technology | | 33 |
| <i>Supporting Course Requirements</i> | | |
| Choose from one of the following: | | |
| CHE 101 & 101L | Introductory Chemistry and Introductory Chemistry Lab (Element 4) ^G | |
| CHE 111 & 111L | General Chemistry and General Chemistry Lab I (Element 4) ^G | |
| Choose from 0-3 hours of the following: | | 0-3 |
| ECO 120 | Economic Reasoning and Issues (Element 5B) ^G | |
| ECO 230 | Fundamentals of Microeconomics (Element 5B) ^G | |
| ACC 200 | Survey of Accounting | |
| Choose from 3-6 hours of the following: | | 3-6 |
| MAT 120 | Trigonometry (Element 2) ^G | |
| MAT 211 | Applied Calculus | |
| Or choose from six hours of higher-level MAT courses | | |
| PHY 131 | College Physics I (Element 4) ^G | |
| <i>Exit Requirements</i> | | |
| Students must take an AEM assessment examination before graduation (CR only, no hours). An exam fee is required. | | |
| AEM 467 | Comprehensive Exam for BS in ETM | 0 |
| <i>Free Electives</i> | | |
| Choose from 6-10 hours of free electives | | 6-10 |
| Total Hours | | 120 |

G

Course also satisfies a General Education element. Hours are included within the 36 hr. General Education requirement above. A maximum of 6 hours can apply toward Element 4.

Concentration

| Code | Title | Hours |
|---|-----------------------------------|--------------|
| Concentration Courses | | |
| AEM 201 | Metallic Material Processes | 3 |
| AEM 301 | Non-Metallic Material Processes | 3 |
| AEM 330 | Material Testing and Metrology | 3 |
| AEM 352 | Robotics and Automated Systems | 3 |
| AEM 371 | Hydraulics and Pneumatics | 3 |
| AEM 390 | 3-D Parametric Solid Modeling | 3 |
| EET 251 | Electricity and Electronics | 3 |
| <i>Technical Electives</i> | | |
| Choose from 12 hours of the following. Note that 9 hours must be upper division: ¹ | | 12 |
| AEM 336 | Reliability and Sampling | |
| AEM 382 | Advanced Material Processing | |
| AEM 383 | CAD/CAM Integration | |
| AEM 392 | Computer Aided Machine Drawing | |
| AEM 397 | Advanced Machine Drawing | |
| AEM 506 | Six Sigma Quality | |
| AEM 530 | Design of Experiments | |
| or STA 585 | Experimental Design | |
| CON 303 | Statics and Strength of Materials | |
| EET 252 | Digital Electronics | |
| EET 257 | Electronic Devices and Circuits | |
| EET 351 | Programmable Logic Controllers | |
| NET 303 | LANs & PC Communications | |
| NET 440 | Wired/Wireless Communications | |
| Total Hours | | 33 |

1

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.