

## EKU Department of Engineering and Technology

### Suggested Curriculum Guide for Engineering Technology Management, B.S. (2026-2027) - Rev. 5/5/2026

#### Concentration: Advanced Manufacturing & Lean Systems:

| First Year First Semester (15 Hours)                   |   | Second Semester (17 Hours)                                                                                |   |
|--------------------------------------------------------|---|-----------------------------------------------------------------------------------------------------------|---|
| <b>GSD 101</b> - Foundations of Learning               | 3 | <b>AEM 195</b> - Computer Aided Drafting                                                                  | 3 |
| <b>ENG 101</b> - Reading, Writing, and Rhetoric (E-1A) | 3 | <b>ENG 102</b> - Research, Writing, and Rhetoric (E-1B)                                                   | 3 |
| <b>TEC 161</b> - Computer Applications in Technology   | 3 | <b>PHY 131</b> - College Physics I (E-2B)                                                                 | 5 |
| <b>MAT 120</b> - Trigonometry (E-2A)                   | 3 | <b>MAT 211</b> - Applied Calculus                                                                         | 3 |
| <b>Gen. Ed. 1C</b> - Oral Communication                | 3 | <b>ECO 201</b> or <b>ECO 230</b> - Economic Reasoning and Issues or Fundamentals of Microeconomics (E-4B) | 3 |

| Second Year First Semester (15 Hours)                                                          |   | Second Semester (16 Hours)                                                                               |   |
|------------------------------------------------------------------------------------------------|---|----------------------------------------------------------------------------------------------------------|---|
| <b>AEM 201</b> - Metallic Material Processes                                                   | 3 | <b>AEM 202</b> - Introduction to Quality                                                                 | 3 |
| <b>Gen. Ed. 3B</b> - Beginning Ethics                                                          | 3 | <b>AEM 301</b> - Non-Metallic Material Processes                                                         | 3 |
| <b>Gen. Ed. 3A</b> - Arts                                                                      | 3 | <b>CHE 101/101L</b> or <b>CHE 111/111L</b> - Introductory Chemistry or General Chemistry (Gen. Ed. Flex) | 4 |
| <b>Gen. Ed. 4A</b> - Historical & Global Dimensions                                            | 3 | <b>AEM 310</b> - Technical Communication                                                                 | 3 |
| <b>STA 215</b> or <b>STA 270</b> - Introduction to Statistical Reasoning or Applied Statistics | 3 | <b>EET 251</b> - Electricity and Electronics                                                             | 3 |

| Third Year First Semester (15 Hours)            |   | Second Semester (15 Hours)                    |   |
|-------------------------------------------------|---|-----------------------------------------------|---|
| <b>AEM 308</b> - Methods of Lean Operations     | 3 | <b>AEM 332</b> - Process Control and Auditing | 3 |
| <b>AEM 352</b> - Robotics and Automated Systems | 3 | <b>AEM 371</b> - Hydraulics and Pneumatics    | 3 |
| <b>AEM 408</b> - Human Resource Development     | 3 | <b>AEM 382</b> - Advanced Material Processing | 3 |
| <b>Technical Elective</b>                       | 3 | <b>AEM 406</b> - Integrated Materials Mgmt.   | 3 |
| <b>Free Elective</b>                            | 3 | <b>Free Elective</b>                          | 3 |

| Fourth Year First Semester (15 Hours)           |   | Second Semester (12 Hours)                               |   |
|-------------------------------------------------|---|----------------------------------------------------------|---|
| <b>AEM 330</b> - Material Testing and Metrology | 3 | <b>AEM 499</b> - Senior Capstone Project                 | 3 |
| <b>AEM 507</b> - Project Management             | 3 | <b>AEM 349</b> - Engineering Technology Internship/Co-op | 1 |
| <b>AEM 506</b> - Six Sigma Quality              | 3 | <b>EGR 501</b> - Engineering Economic Analysis           | 3 |
| <b>AEM 545</b> - Design of Lean Systems         | 3 | <b>Free Elective</b>                                     | 5 |
| <b>Free Elective</b>                            | 3 |                                                          |   |

## Concentration Requirements

### Advanced Manufacturing & Lean Systems Concentration (27 Hours):

- **Required Courses (24 Hours):** AEM 201 - Metallic Material Processes, AEM 301 - Non-Metallic Material Processes, AEM 330 - Material Testing and Metrology, AEM 352 - Robotics and Automated Systems, AEM 371 - Hydraulics and Pneumatics, AEM 382 - Advanced Material Processing, AEM 545 - Design of Lean Systems, EET 251 - Electricity and Electronics
- **Technical Elective (3 Hours) - Select one from:** AEM 336, AEM 383, AEM 392, AEM 397, AEM 530, EET 252, EET 257, EET 351.