

# **TRANSFER PATHWAY GUIDE**

## **2025-2026**

Associate of Applied Science in Mechanical Engineering Technology at  
Sinclair College to a Bachelor of Science in Mechatronics  
Engineering Technology at Northern Kentucky University

### ***Overview***

Completion of the following curriculum will satisfy the requirements for the Associate of Applied Science (AAS) in Mechanical Engineering Technology degree at Sinclair College and leads to the Bachelor of Science (BS) in Mechatronics Engineering Technology degree at Northern Kentucky University (NKU).

### ***Degree Requirements for Sinclair College***

To earn a degree at Sinclair College, a student must complete a minimum of 60 credit hours, attain a minimum cumulative GPA of 2.0, and earn a minimum of 20 credit hours at Sinclair College.

### ***Admission Requirements for NKU***

Students completing an associate degree with a cumulative GPA of 2.0 or higher will be accepted into NKU.

This bachelor's degree program is designed to provide students with the knowledge and skills needed to succeed in today's highly integrated computer controlled manufacturing. Throughout their curriculum, students are required to take cooperative education ("co-op") in industry in their second or third year of the program, which often continues and leads to full-time employment. Graduates with a rigorous theoretical education and multidisciplinary technical skills are well prepared for engineering and technology positions in applied design, development, implementation, or oversight and maintenance of electromechanical systems and processes.

### ***Tuition and Scholarships***

For information on tuition and scholarships, please visit <https://nku.edu/admissions/adult/online.html>

### ***NKU Contact***

For more information, students should contact Kim McCoy, Assistant Director of Transfer Services, at [mccoyk8@nku.edu](mailto:mccoyk8@nku.edu).

### ***Degree Requirements for NKU***

To earn a bachelor's degree at NKU, students must complete a minimum of 120 credit hours with at least 45 credit hours numbered 300 and above. In addition, at least 25% of the credit hours required for the degree and the last 30 credit hours must be completed at NKU. Students must have an overall GPA of 2.0 and meet all prerequisites for courses and requirements for the major.

**SINCLAIR COLLEGE AAS IN MECHANICAL ENGINEERING TECHNOLOGY TO  
NKU BS IN MECHATRONICS ENGINEERING TECHNOLOGY CHECKLIST**

**Sinclair College**

**Category 1: Sinclair Requirements for the AAS in Mechanical Engineering Technology**

| <b>Sinclair Course</b>                  | <b>Course or Category</b>                                                 | <b>Credits</b> | <b>NKU Course</b>                                                | <b>Completed</b> |
|-----------------------------------------|---------------------------------------------------------------------------|----------------|------------------------------------------------------------------|------------------|
| COM 2211                                | Effective Public Speaking                                                 | 3              | CMST 101                                                         |                  |
| EET 1150                                | DC Circuits                                                               | 4              | EGT 161                                                          |                  |
| EET 1155                                | AC Circuits                                                               | 3              | EGT 243                                                          |                  |
| ENG 1101                                | English Composition I                                                     | 3              | ENG 101                                                          |                  |
| MAT 1470 and<br>MAT 1570 or<br>MAT 1580 | College Algebra and Analytic Geometry &<br>Trigonometry or<br>Precalculus | 5-6            | (MAT 102 or<br>MAT 103) +<br>MAT 100T +<br>MAT 119 or<br>MAT 119 |                  |
| MET 1111                                | Preparatory Math for Engineering<br>Technology                            | 3              | MAT 100T                                                         |                  |
| MET 1161                                | Software Tools for Engineering Technology                                 | 1              | EGT 100T                                                         |                  |
| MET 1231                                | Introduction to Engineering Design Using 3D<br>CAD                        | 4              | EGT 310                                                          |                  |
| MET 2101                                | Thermodynamics                                                            | 3              | EGT 450                                                          |                  |
| MET 2151                                | Material Science                                                          | 4              | EGT 261                                                          |                  |
| MET 2201                                | Statics                                                                   | 3              | MET 2201 +<br>MET 2251 =<br>EGT 300 +<br>EGT 300T                |                  |
| MET 2251                                | Strength of Materials                                                     | 3              | MET 2201 +<br>MET 2251 =<br>EGT 300 +<br>EGT 300T                |                  |
| MET 2281                                | Engineering Technology Professional<br>Practice                           | 3              |                                                                  |                  |
| MET 2301                                | Fluid Mechanics                                                           | 3              | EGT 361                                                          |                  |
| MET 2351                                | Dynamics                                                                  | 3              | EGT 340                                                          |                  |
| MET 2401                                | Machine Design                                                            | 3              | EGT 480                                                          |                  |
| MET 2780                                | Mechanical Engineering Technology<br>Capstone                             | 3              | EGT 200T                                                         |                  |
| PHY 1141                                | College Physics I                                                         | 4              | PHY 211                                                          |                  |
| SOC 1101                                | Introduction to Sociology                                                 | 3              | SOC 100                                                          |                  |
|                                         | <b>Total Associate Degree Hours</b>                                       | <b>61-62</b>   |                                                                  |                  |

TBS XXX means to be selected by Sinclair College student.

TBD XXX means to be determined by NKU based on course selected at Sinclair College.

A grade of A or B in MAT 1470 equates to MAT 103 + MAT 100T. Grade of C or D in MAT 1470 equates to MAT 102 + MAT 100T.

## Northern Kentucky University

### Category 2: NKU Additional General Education Requirements

| NKU Course                                | Course               | Credits   | Sinclair Course | Taken at Sinclair |
|-------------------------------------------|----------------------|-----------|-----------------|-------------------|
| TBS XXX                                   | Cultural Pluralism   | 3         |                 |                   |
| TBS XXX                                   | Individual & Society | 3         |                 |                   |
| TBS XXX                                   | Culture & Creativity | 6         |                 |                   |
| TBS XXX                                   | Global Viewpoints    | 3         |                 |                   |
| <b>Subtotal General Education Courses</b> |                      | <b>15</b> |                 |                   |

### Category 3: NKU Major Requirements for the BS in Mechatronics Engineering Technology

| NKU Course | Course                                          | Credits | Sinclair Course         | Taken at Sinclair |
|------------|-------------------------------------------------|---------|-------------------------|-------------------|
| EGT 116    | Introduction to Manufacturing                   | 3       |                         |                   |
| EGT 161    | D.C. Circuit Analysis                           | 3       | EET 1150                | x                 |
| EGT 212    | Computer-Aided Drafting and Design              | 3       |                         |                   |
| EGT 243    | A.C. Circuit Analysis                           | 3       | EET 1155                | x                 |
| EGT 245    | Digital Electronics                             | 3       | EET 1198                |                   |
| EGT 261    | Engineering Materials                           | 3       | MET 2151                | x                 |
| EGT 267    | Programming for Engineering Applications        | 3       | EGR 2261                |                   |
| EGT 291W   | Writing in Engineering Technology               | 3       |                         |                   |
| EGT 280    | Introduction to Microsystems                    | 3       |                         |                   |
| EGT 300    | Statics and Strength of Materials               | 3       | MET 2201 +<br>MET 2251  | x                 |
| EGT 301    | Cooperative Education in Engineering Technology | 3       |                         |                   |
| EGT 310    | Project Management and Problem Solving          | 3       | MET 1231                | x                 |
| EGT 320    | Robotic Systems and Material Handling           | 3       |                         |                   |
| EGT 340    | Applied Dynamics                                | 3       | MET 2351                | x                 |
| EGT 361    | Fluid Power                                     | 3       | MET 2301 or<br>EGR 1217 | x                 |
| EGT 367    | Microprocessors                                 | 3       | EET 2261                |                   |
| EGT 386    | Electromechanical Instrumentation and Control   | 3       | EET 2281 +<br>EET 2282  |                   |
| EGT 402    | Control Systems                                 | 3       |                         |                   |
| EGT 408    | Mechatronics Topics                             | 3       |                         |                   |
| EGT 416    | Capstone I                                      | 1       |                         |                   |
| EGT 417    | Capstone II                                     | 3       |                         |                   |
| EGT 448    | Network Hardware                                | 3       |                         |                   |

| NKU Course   | Course                                                                       | Credits        | Sinclair Course      | Taken at Sinclair |
|--------------|------------------------------------------------------------------------------|----------------|----------------------|-------------------|
| CHE 130/130L | Chemistry: An Engineering Approach                                           | 4              | Waived by CHE 1211   |                   |
| MAT 119      | Precalculus Mathematics                                                      | 3              | MAT 1570<br>MAT 1580 | x                 |
| MAT 129      | Calculus I                                                                   | 4              | MAT 2270             |                   |
| STA 205      | Statistical Methods                                                          | 3              | MAT 1450             |                   |
| PHY 211      | General Physics with Laboratory I                                            | 4              | PHY 1141             | x                 |
| PHY 213      | General Physics with Laboratory II                                           | 4              | PHY 1142             |                   |
| SOC 100      | Introduction to Sociology                                                    | 3              | SOC 1101             | x                 |
|              | <b>Select 4 elective courses from the following totaling 12 credit hours</b> |                |                      |                   |
| EGT 211      | Quality Control                                                              | 3              |                      |                   |
| EGT 260      | Industrial Standards, Safety, and Codes                                      | 3              |                      |                   |
| EGT 265      | Manufacturing Processes and Metrology                                        | 3              | CAM 1109             |                   |
| EGT 318      | Introduction to Nanotechnology                                               | 3              |                      |                   |
| EGT 321      | Productivity Management, Scheduling, and Planning                            | 3              |                      |                   |
| EGT 330      | Electrical Machines                                                          | 3              |                      |                   |
| EGT 344      | Analog Electronics                                                           | 3              | EET 2201             |                   |
| EGT 362      | Tool Design and Computer Aided Manufacturing                                 | 3              |                      |                   |
| EGT 365      | CNC & Manufacturing Process Planning                                         | 3              |                      |                   |
| EGT 366      | Additive Manufacturing                                                       | 3              |                      |                   |
| EGT 377      | Power Electronics                                                            | 3              |                      |                   |
| EGT 392      | Directed Research: Eng. Technology                                           | 0-3            |                      |                   |
| EGT 394      | Special Topics (1-3 credits)                                                 | 1-3            |                      |                   |
| EGT 404      | Signals and Systems                                                          | 3              |                      |                   |
| EGT 405      | Metrology and Geometric Tolerancing                                          | 3              |                      |                   |
| EGT 411      | Quality Assurance and Auditing                                               | 3              |                      |                   |
| EGT 412      | Advanced CADD                                                                | 3              |                      |                   |
| EGT 423      | Planning and Design of Industrial Facilities                                 | 3              |                      |                   |
| EGT 450      | Thermodynamics and Heat Transfer                                             | 3              | MET 2101             | x                 |
| EGT 462      | Finite Element Modeling                                                      | 3              |                      |                   |
| EGT 465      | Automated Manufacturing Systems                                              | 3              |                      |                   |
| EGT 467      | Advanced Microprocessors                                                     | 3              |                      |                   |
| EGT 477      | Electrical Power Systems                                                     | 3              |                      |                   |
| EGT 480      | Machine Design                                                               | 3              | MET 2401             | x                 |
|              | <b>Total NKU Major Credit Hours</b>                                          | <b>98</b>      |                      |                   |
|              | <b>Less Major Credit Hours from Sinclair</b>                                 | <b>37</b>      |                      |                   |
|              | <b>Subtotal Major Credit Hours at NKU</b>                                    | <b>61</b>      |                      |                   |
|              | <b>Total Baccalaureate Degree Credit Hours</b>                               | <b>137-138</b> |                      |                   |

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