Overview
Completion of the following curriculum will satisfy the requirements for the Associate in Science (AS) degree at a Kentucky Community and Technical College System (KCTCS) institution and leads to the Bachelor of Science (BS) in Mechatronics Engineering Technology degree at Northern Kentucky University (NKU).

Applying to the KCTCS2NKU Program
Students can apply to participate in the pathway program by completing the online application on the NKU transfer webpage. Students must be enrolled in at least six credit hours at their KCTCS institution, enrolled in an associate degree program, plan to transfer to NKU, and maintain a minimum 2.0 cumulative GPA at their KCTCS institution.

Degree Requirements for KCTCS
1) Completion of minimum 60 credit hours, 2) minimum cumulative GPA 2.0, 3) minimum of 15 credit hours earned at the institution awarding the degree, 4) cultural studies course, 5) demonstration of digital literacy, and 6) college success requirement.

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

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. A minor is not required for this major.

General Transfer Information
Students must complete the online application to NKU. There is no application fee for students who are transferring from a KCTCS institution.
KCTCS Scholars Award: Students who are KY residents transferring directly from a KCTCS institution with at least 36 hours from that institution and minimum GPA of 3.0, were never enrolled as a degree-seeking student at NKU, and will be enrolled in at least 12 credit hours both fall and spring semester are eligible for a limited number of $2,500 annual scholarships ($1,250 per fall and spring). Students must gain admission to NKU by June 15 for fall and November 1 for spring to be eligible for a possible scholarship. Online accelerated programs are not eligible for the KCTCS Scholars Award.
### Category 1: KCTCS General Education Requirements

<table>
<thead>
<tr>
<th>KCTCS Course</th>
<th>Course or Category</th>
<th>Credits</th>
<th>NKU Course</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 101</td>
<td>Writing I (WC)</td>
<td>3</td>
<td>ENG 101</td>
<td></td>
</tr>
<tr>
<td>ENG 102</td>
<td>Writing II (WC)</td>
<td>3</td>
<td>ENG 102</td>
<td></td>
</tr>
<tr>
<td>COM 181 or COM 252</td>
<td>Basic Public Speaking (OC) or Introduction to Interpersonal Communications (OC)</td>
<td>3</td>
<td>CMST 110</td>
<td>CMST 220</td>
</tr>
<tr>
<td>MAT 171</td>
<td>Precalculus (QR)</td>
<td>5</td>
<td>MAT 103 + MAT 119</td>
<td></td>
</tr>
<tr>
<td>MAT 150 or MAT 151 or MAT 161</td>
<td>College Algebra (QR) or Intro to Applied Statistics (QR) or Statistics and Algebra (QR)</td>
<td>3</td>
<td>(MAT 102 or MAT 103) + MAT 100T or STA 100G or STA 100G or (MAT 101 + MAT 102)</td>
<td></td>
</tr>
<tr>
<td>CHE 170/ CHE 175</td>
<td>General College Chemistry I and General College Chemistry Laboratory I (SL)</td>
<td>5</td>
<td>CHE 120/ CHE 120L</td>
<td></td>
</tr>
<tr>
<td>PHY 201/202</td>
<td>College Physics I/College Physics Laboratory I</td>
<td>5</td>
<td>PHY 211</td>
<td></td>
</tr>
<tr>
<td>TBS XXX</td>
<td>Social Behavioral Science Course (SB)</td>
<td>3</td>
<td>TBD XXX</td>
<td></td>
</tr>
<tr>
<td>TBS XXX</td>
<td>Social Behavioral Science Course (SB)</td>
<td>3</td>
<td>TBD XXX</td>
<td></td>
</tr>
<tr>
<td>TBS XXX</td>
<td>Arts &amp; Humanities (AH) – Heritage</td>
<td>3</td>
<td>TBD XXX</td>
<td></td>
</tr>
<tr>
<td>TBS XXX</td>
<td>Arts &amp; Humanities (AH) – Humanities</td>
<td>3</td>
<td>TBD XXX</td>
<td></td>
</tr>
</tbody>
</table>

**Subtotal General Education Core Courses**: 39

TBS XXX means to be selected by KCTCS student.
TBD XXX means to be determined by NKU based on course selected.

A grade of A or B in MAT 150 equates to MAT 103 + MAT 100T. Grade of C or D in MAT 150 equates to MAT 102 + MAT 100T.

One of these courses must be selected from the KCTCS identified Cultural Studies course list, indicate by placing (CS) next to the course name in Category 1 or 2 table.

### Category 2: KCTCS AS Requirements

<table>
<thead>
<tr>
<th>KCTCS Course</th>
<th>Course or Category</th>
<th>Credits</th>
<th>NKU Course</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 175</td>
<td>Calculus I</td>
<td>5</td>
<td>MAT 129</td>
<td></td>
</tr>
<tr>
<td>STA 220 or STA 251</td>
<td>Statistics or Applied Statistics</td>
<td>3</td>
<td>STA 205</td>
<td></td>
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</tbody>
</table>

**Subtotal AS Requirement Courses**: 8

STA 251 equates to STA 205 only with the completion of MAT 151, STA 151 or MAT 161.
### Category 3: KCTCS Electives

<table>
<thead>
<tr>
<th>KCTCS Course</th>
<th>Course or Category</th>
<th>Credits</th>
<th>NKU Course</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAD 100</td>
<td>Introduction to Computer Aided Design</td>
<td>3</td>
<td>EGT 212</td>
<td></td>
</tr>
<tr>
<td>FYE XXX</td>
<td>First Year Experience</td>
<td>0-3</td>
<td>UNV100T</td>
<td></td>
</tr>
<tr>
<td>ELT 110</td>
<td>Circuits I</td>
<td>5</td>
<td>EGT 161</td>
<td></td>
</tr>
<tr>
<td>ELT 114</td>
<td>Circuits II</td>
<td>5</td>
<td>EGT 243</td>
<td></td>
</tr>
</tbody>
</table>

**Subtotal Elective Courses**: 13-16

**TOTAL Associate Degree Hours**: 60-63

### Northern Kentucky University

### Category 4: Major Requirements for BS in Mechatronics Engineering Technology

<table>
<thead>
<tr>
<th>NKU Course</th>
<th>Course</th>
<th>Credits</th>
<th>KCTCS Course</th>
<th>Taken at KCTCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHE 130</td>
<td>Chemistry: An Engineering Approach</td>
<td>4</td>
<td>Waived by CHE 170/175</td>
<td>x</td>
</tr>
<tr>
<td>CHE 130L</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAT 119</td>
<td>Precalculus Mathematics</td>
<td>3</td>
<td>MAT 160 or MAT 171</td>
<td>x</td>
</tr>
<tr>
<td>MAT 129</td>
<td>Calculus I</td>
<td>4</td>
<td>MAT 175</td>
<td>x</td>
</tr>
<tr>
<td>PHY 211</td>
<td>General Physics with Laboratory I</td>
<td>4</td>
<td>PHY 201/202</td>
<td>x</td>
</tr>
<tr>
<td>PHY 213</td>
<td>General Physics with Laboratory II</td>
<td>4</td>
<td>PHY 203/204</td>
<td></td>
</tr>
<tr>
<td>STA 205</td>
<td>Statistical Methods</td>
<td>3</td>
<td>STA 220 or (MAT 151 or MAT 161) + STA 251</td>
<td>x</td>
</tr>
<tr>
<td>EGT 116</td>
<td>Introduction to Manufacturing</td>
<td>3</td>
<td>WLD 152</td>
<td></td>
</tr>
<tr>
<td>EGT 161</td>
<td>D.C. Circuit Analysis</td>
<td>3</td>
<td>ELT 110</td>
<td>x</td>
</tr>
<tr>
<td>EGT 212</td>
<td>Computer-Aided Drafting and Design</td>
<td>3</td>
<td>CAD 100</td>
<td>x</td>
</tr>
<tr>
<td>EGT 243</td>
<td>A.C. Circuit Analysis</td>
<td>3</td>
<td>ELT 114</td>
<td>x</td>
</tr>
<tr>
<td>EGT 245</td>
<td>Digital Electronics</td>
<td>3</td>
<td>ELT 120 + EGT 220 = EGT 245 + EGT 300T</td>
<td></td>
</tr>
<tr>
<td>EGT 261</td>
<td>Engineering Materials</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EGT 267</td>
<td>Programming for Engineering Applications</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EGT 300</td>
<td>Statics and Strength of Materials</td>
<td>3</td>
<td>ELT 201</td>
<td></td>
</tr>
<tr>
<td>EGT 301</td>
<td>Cooperative Education in Engineering Technology</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EGT 310</td>
<td>Project Management and Problem Solving</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EGT 317</td>
<td>Introduction to Capstone Project in EGT</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EGT 340</td>
<td>Applied Dynamics</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EGT 361</td>
<td>Fluid Power</td>
<td>3</td>
<td>FPX100/101</td>
<td></td>
</tr>
<tr>
<td>EGT 367</td>
<td>Microprocessors</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EGT 408</td>
<td>Mechatronics Topics</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EGT 417</td>
<td>Senior Design in Technology</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EGT 448</td>
<td>Network Hardware</td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Students must choose one of the following tracks: Automated Systems Track, Alternative Energy Track, Laser Technology Track or Computer Science Track. Credits hours for the tracks and bachelor degree can vary based on the courses taken at KCTCS. Some courses in the Alternative Energy Track and the Laser Technology track will be taken at Cincinnati State Technical and Community College.

Category 5: NKU Requirements for the Automated Systems Track

<table>
<thead>
<tr>
<th>NKU Course</th>
<th>Course or Category</th>
<th>Credits</th>
<th>KCTCS Course</th>
<th>Taken at KCTCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGT 320</td>
<td>Robotic Systems and Material Handling</td>
<td>3</td>
<td>ELT 260</td>
<td></td>
</tr>
<tr>
<td>EGT 365</td>
<td>CNC &amp; Manufacturing Process Planning</td>
<td>3</td>
<td>ISM 210 + ELT 250 = EGT 386 + EGT 300T ELT 244 + ELT 250 = EGT 386 + EGT 300T</td>
<td></td>
</tr>
<tr>
<td>EGT 386</td>
<td>Electro-Mechanical Instrumentation and Control</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EGT 402</td>
<td>Control Systems</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EGT 465</td>
<td>Automated Manufacturing Systems</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EGT XXX</td>
<td>Select 3 additional credit hours of EGT courses at NKU</td>
<td>3</td>
<td></td>
<td></td>
</tr>
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</table>

Additional Track Credit Hours 18

Category 6: NKU Requirements for the Alternative Energy Track

<table>
<thead>
<tr>
<th>NKU Course</th>
<th>Course or Category</th>
<th>Credits</th>
<th>KCTCS Course</th>
<th>Taken at KCTCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take at CState (equates to EGT 140)</td>
<td>Power Systems Foundations (PSET 140 at Cincinnati State)</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NKU Course</td>
<td>Course or Category</td>
<td>Credits</td>
<td>KCTCS Course</td>
<td>Taken at KCTCS</td>
</tr>
<tr>
<td>------------</td>
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<td>---------</td>
<td>--------------</td>
<td>----------------</td>
</tr>
<tr>
<td>Take at CState (equates to EGT 151)</td>
<td>Introduction to Controls and Robotics (EMET 150 at Cincinnati State)</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Take at CState (equates to EGT 210)</td>
<td>Energy Efficiency and Audits (EMET 210 at Cincinnati State)</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Take at CState (equates to EGT 325)</td>
<td>Solar and Renewable Energy (EMET 225 at Cincinnati State)</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EGT 450</td>
<td>Thermodynamics and Heat Transfer</td>
<td>3</td>
<td>ELT 260 = EGT 320 ELT 244 + ELT 250 = EGT 386 + EGT 300T</td>
<td></td>
</tr>
<tr>
<td>EGT XXX</td>
<td>Select 6 elective credit hours of EGT courses</td>
<td>6</td>
<td>ELT 260 = EGT 320 ELT 244 + ELT 250 = EGT 386 + EGT 300T</td>
<td></td>
</tr>
</tbody>
</table>

**Additional Track Credit Hours 18**

**Category 7: NKU Requirements for the Laser Technology Track**

<table>
<thead>
<tr>
<th>NKU Course</th>
<th>Course or Category</th>
<th>Credits</th>
<th>KCTCS Course</th>
<th>Taken at KCTCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take at CState (equates to EGT 151)</td>
<td>Introduction to Controls and Robotics (EMET 150 at Cincinnati State)</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Take at CState (equates to EGT 293)</td>
<td>Laser Foundations and Safety (EMET 245 at Cincinnati State)</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Take at CState (equates to EGT 395)</td>
<td>Laser 2 (EMET 246 at Cincinnati State)</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Take at CState (equates to EGT 294)</td>
<td>Electric Drive Mechanisms (EMET 275 at Cincinnati State)</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EGT XXX</td>
<td>Select 9 additional credit hours of EGT/EMET courses</td>
<td>9</td>
<td>ELT 260 = EGT 320 ELT 244 + ELT 250 = EGT 386 + EGT 300T</td>
<td></td>
</tr>
</tbody>
</table>

**Additional Track Credit Hours 21**

**Category 8: NKU Requirements for the Computer Science Track**

<table>
<thead>
<tr>
<th>NKU Course</th>
<th>Course or Category</th>
<th>Credits</th>
<th>KCTCS Course</th>
<th>Taken at KCTCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC 260</td>
<td>Object Oriented Programming I</td>
<td>3</td>
<td>CIT 149 + CIT 249 =</td>
<td></td>
</tr>
<tr>
<td>NKU Course</td>
<td>Course or Category</td>
<td>Credits</td>
<td>KCTCS Course</td>
<td>Taken at KCTCS</td>
</tr>
<tr>
<td>-----------</td>
<td>----------------------------------</td>
<td>---------</td>
<td>--------------------------------------</td>
<td>----------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>CSC 260 + CSC 360</td>
<td></td>
</tr>
<tr>
<td>CSC 360</td>
<td>Object Oriented Programming II</td>
<td>3</td>
<td>CIT 149 + CIT 249 = CSC 260 + CSC 360</td>
<td></td>
</tr>
<tr>
<td>CSC 362</td>
<td>Computer Systems</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CSC 407</td>
<td>Concepts of Programming Languages</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CSC 462</td>
<td>Computer Architecture</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>INF 120</td>
<td>Elementary Programming</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Additional Track Credit Hours</td>
<td>18</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Updated May 2020