

# TRANSFER PATHWAY GUIDE

## 2024-2025

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 MAT 1570 or MAT 1580	College Algebra and Analytic Geometry & Trigonometry or Precalculus	5-6	(MAT 102 or MAT 103) + MAT 100T + MAT 119 or MAT 119	
MET 1111	Preparatory Math for Engineering Technology	3	MAT 100T	
MET 1161	Software Tools for Engineering Technology	1	EGT 100T	
MET 1231	Introduction to Engineering Design Using 3D CAD	4	EGT 310	
MET 2101	Thermodynamics	3	EGT 450	
MET 2151	Material Science	4	EGT 261	
MET 2201	Statics	3	MET 2201 + MET 2251 = EGT 300 + EGT 300T	
MET 2251	Strength of Materials	3	MET 2201 + MET 2251 = EGT 300 + EGT 300T	
MET 2281	Engineering Technology Professional 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 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 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 + MET 2251	x
EGT 301	Cooperative Education in Engineering Technology	3		
EGT 310	Project Management and Problem Solving	3	MET 1231	x
EGT 340	Applied Dynamics	3	MET 2351	x
EGT 361	Fluid Power	3	MET 2301 or EGR 1217	x
EGT 367	Microprocessors	3	EET 2261	
EGT 386	Electromechanical Instrumentation and Control	3	EET 2281 + EET 2282	
EGT 402	Control Systems	3		
EGT 408	Mechatronics Topics	3		
EGT 416	Capstone I	1		
EGT 417	Capstone II	3		
CHE 130/130L	Chemistry: An Engineering Approach	4	Waived by CHE 1211	
MAT 119	Precalculus Mathematics	3	MAT 1570	x

NKU Course	Course	Credits	Sinclair Course	Taken at Sinclair
			MAT 1580	
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 6 elective courses from the following totaling 18 credit hours</b>			
EGT 116	Introduction to Manufacturing	3		
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 320	Robotic Systems and Material Handling	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 377	Power Electronics	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 448	Network Hardware	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>		

Updated April 2024