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# TWO DEGREES, ONE PATH

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## TRANSFER PATHWAY GUIDE 2023-2024

Associate in Science to Bachelor of Science in Mechanical and Manufacturing Engineering Technology

### ***Overview***

Completion of the following curriculum will satisfy the requirements for the Associate in Science (AS) degree at Gateway Community and Technical College (GCTC) and leads to the Bachelor of Science (BS) in Mechanical and Manufacturing Engineering Technology degree at Northern Kentucky University (NKU).

### ***Applying to the Gateway2NKU 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 Gateway CTC, enrolled in an associate degree program, plan to transfer to NKU, and maintain a minimum 2.0 cumulative GPA at Gateway CTC.

### ***Degree Requirements for GCTC***

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 competence course, 5) demonstration of digital literacy, 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.

The accredited Bachelor of Science in mechanical and manufacturing engineering technology focuses on the design and development of parts, processes, and systems. Under this program graduates will acquire knowledge, problem-solving ability, and hands-on skills to enter careers in the design, installation, manufacturing, testing, evaluation, technical sales, or maintenance of mechanical systems. In addition, graduates will have strengths in the analysis, applied design, development, implementation, or oversight of more advanced mechanical systems and processes.

This bachelor's degree program is designed to provide students with the knowledge and skills needed to succeed as engineers in today's industry. Students are required to co-op in industry starting with their second year, which often continues and leads to full-time employment. Together with the study of engineering principles, design is the cornerstone of the mechanical and manufacturing engineering technology degree program.

The MMET program is accredited by the Engineering Technology Accreditation Commission of ABET (<http://www.abet.org>).

### ***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 GCTC.

**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.

**GCTC AS TO NKU BS IN MECHANICAL AND MANUFACTURING ENGINEERING TECHNOLOGY  
CHECKLIST**

**Gateway Community and Technical College**

**Category 1: GCTC General Education Core Requirements**

<b>GCTC Course</b>	<b>Course or Category</b>	<b>Credits</b>	<b>NKU Course</b>	<b>Completed</b>
ENG 101	Writing I (WC)	3	ENG 101	
ENG 102	Writing II (WC)	3	ENG 291	
TBS XXX	Oral Communication (OC)	3	TBD XXX	
MAT 171	Precalculus (QR)	5	MAT 103 + MAT 119	
STA 220	Statistics (QR)	3	STA 205	
CHE 170/ CHE 175	General College Chemistry I and General College Chemistry Laboratory I (SL)	5	CHE 120/ CHE 120L	
PHY 201/202	College Physics I/College Physics Laboratory I (SL)	5	PHY 211	
SOC 101	Introduction to Sociology (SB)	3	SOC 100	
TBS XXX	Social Behavioral Science Course (SB)	3	TBD XXX	
TBS XXX	Arts & Humanities (AH) – Heritage	3	TBD XXX	
TBS XXX	Arts & Humanities (AH) – Humanities	3	TBD XXX	
	<b>Subtotal General Education Core Courses</b>	<b>39</b>		

TBS XXX means to be selected by GCTC student.

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

For Social and Behavioral Sciences courses, two disciplines must be represented and different from those in the Arts and Humanities category.

**Category 2: GCTC AS Requirements**

<b>GCTC Course</b>	<b>Course or Category</b>	<b>Credits</b>	<b>NKU Course</b>	<b>Completed</b>
MAT 175	Calculus I (QR)	5	MAT 129	
	<b>Subtotal AS Requirement Courses</b>	<b>5</b>		

**Category 3: GCTC Electives**

<b>GCTC Course</b>	<b>Course or Category</b>	<b>Credits</b>	<b>NKU Course</b>	<b>Completed</b>
CAD 100	Computer Aided Design	3	EGT 212	
FYE 105	Achieving Academic Success	3	UNV100T	
ELT 201	Statics and Strengths of Materials	4	EGT 300	
PHY 203/204 or CMM 130	College Physics II/College Physics Laboratory II or Manual Programming	5 3	PHY 213 EGT 365	

GCTC Course	Course or Category	Credits	NKU Course	Completed
QMS 101	Introduction to Quality Management Systems	3	EGT 211	
	<b>Subtotal Elective Courses</b>	<b>16-18</b>		
	<b>Total Associate Degree Hours</b>	<b>60-62</b>		

Degree Requirement: One course must be selected from the KCTCS identified Cultural Competence course list in the KCTCS catalog.

Students may choose to take EGT 116 at NKU in place of PHY 203/204 or CMM 130.

### Northern Kentucky University

#### Category 4: NKU Major Requirements for BS in Mechanical and Manufacturing Engineering Technology

NKU Course	Course	Credits	GCTC Course	Taken at GCTC
CHE 130/130L	Chemistry: An Engineering Approach	4	Waived by CHE 170/175	x
MAT 119	Precalculus Mathematics	3	MAT 171	x
MAT 129	Calculus I	4	MAT 175	x
PHY 211	General Physics with Laboratory I	4	PHY 201/202	x
PHY 213	General Physics with Laboratory II	4	PHY 203/204	x
SOC 100	Introduction to Sociology	3	SOC 101	x
STA 205	Statistical Methods	3	STA 220	x
EGT 116	Introduction to Manufacturing	3	WLD 152	
EGT 162	Industrial Electricity	3		
EGT 211	Quality Control	3	QMS 101 + MAT 151 + STA 251	x
EGT 212	Computer-Aided Drafting and Design	3	CAD 100	x
EGT 260	Industrial Standards, Safety, and Codes	3		
EGT 261	Engineering Materials	3		
EGT 265	Manufacturing Processes and Metrology	3	CMM 110	
EGT 267	Programming for Engineering Applications	3		
EGT 300	Statics and Strength of Materials	3	ELT 201	x
EGT 301	Cooperative Education in Engineering Technology	3		
EGT 310	Project Management and Problem Solving	3		
EGT 320	Robotic Systems and Material Handling	3	ELT 260	
EGT 340	Applied Dynamics	3		
EGT 361	Fluid Power	3	FPX 100/101	
EGT 365	CNC & Manufacturing Process Planning	3	CMM 130	
EGT 386	Electro-Mechanical Instrumentation and Control	3		
EGT 405	Metrology and Geometric Tolerancing	3		

NKU Course	Course	Credits	GCTC Course	Taken at GCTC
EGT 416	Capstone I	1		
EGT 417	Capstone II	3		
EGT 450	Thermodynamics and Heat Transfer	3		
EGT 480	Machine Design	3		
Select 3: EGT 280 EGT 318 EGT 321  EGT 362  EGT 411 EGT 412 EGT 423 EGT 462 EGT 465	Select three courses from the following: Introduction to Microtechnology Introduction to Nanotechnology Productivity Management, Scheduling, and Planning Tool Design and Computer Aided Manufacturing Quality Assurance and Auditing Advanced CADD Planning and Design of Industrial Facilities Finite Element Modeling Automated Manufacturing Systems	9		
	<b>Subtotal Major Credit Hours at NKU</b>	<b>61</b>		
	<b>Subtotal Major Credit Hours at GCTC</b>	<b>34</b>		
	<b>Total Major Credit Hours</b>	<b>95</b>		
	<b>Total Baccalaureate Degree Credit Hours</b>	<b>124- 126</b>		

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