TWO DEGREES, ONE PATH

TRANSFER PATHWAY GUIDE
2024-2025

Associate of Applied Science in Electro-Mechanical Engineering Technology (EMET) To Bachelor of Science in Mechatronics Engineering Technology

Overview

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

Applying to the CState2NKU 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 Cincinnati State, enrolled in an associate degree program, plan to transfer to NKU, and maintain a minimum 2.0 cumulative GPA at Cincinnati State.

Degree Requirements for Cincinnati State

1) Completion of minimum 60 credit hours, 2) minimum cumulative GPA 2.0, 3) completion of an FYE course as part of the first 12 credit hours taken at Cincinnati State, and 4) completion of Cooperative Education.

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.

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 requirements for the major.

Advising Note

Students in the CState2NKU program should work closely with their advisors when choosing courses. This document serves as a guide but does not replace academic advising. When choosing Cincinnati State courses, student may also consult the Associate of Arts advising brochure or the catalog for A and B list courses in Arts and Humanities or Social and Behavioral Sciences.

CINCINNATI STATE AAS IN ELECTRO-MECHANICAL ENGINEERING TECHNOLOGY (EMET) TO - NKU BS IN MECHATRONICS ENGINEERING TECHNOLOGY CHECKLIST

Cincinnati State

Category 1: Ohio Transfer 36 Requirements

CState Course	Course or Category	Credits	NKU Course	Completed
ENG 101	English Composition I	3	ENG 101	
ENG 102 or ENG 104	English Composition 2 Elective	3	ENG 102	
PHI 110	Ethics	3	PHI 200	
MAT 125&126 or MAT 251&252	Algebra and Trigonometry & Functions and Calculus or Calculus I & Calculus II	8-10	MAT 119/100T or MAT 129/229	
PHY 151 or PHY 201	Physics 1: Algebra and Trigonometry-Based or Physics: Calculus-Based	4	PHY 211 or PHY 220	
	Subtotal General Education Core	**21-23**		

Note: PHI 110 satisfies the NKU requirement for an ethics course.

Note: Students who take MAT 125 & MAT 126 will need to take Calculus (MAT 128 and MAT 227 or MAT 129) at NKU to satisfy the requirements for the BS in Mechatronics.

Category 2: CState Degree Requirements for the AAS in Electro-Mechanical Engineering Technology

CState Course	Course or Category	Credits	NKU Course	Completed
FYE 1XX	First Year Experience Elective	1	UNV 100T	
CIT 105	OSHA 10 General Industry Safety	1	EGT 100T	
EET 131	Circuit Analysis 1	4	EGT 161	
EET 132	Circuit Analysis 2	4	EGT 243	
EMET 110	Computer Aided Design for Electro-Mechanical Systems	3	EGT 212	
EMET 141	Programmable Logic Controllers	3	EGT 386	
EMET 150	Introduction to Controls and Robotics	2	EMET 150 + EMET 270 = EGT 320 + EGT 300T	
EMET 180	Process Instrumentation	3	EGT 200T	
EMET 245	Laser 1	3	EGT 293	
EMET 252	Motors, Motor Controls, and Variable Drives	3	EGT 330	
EMET 270	Robotics and Servomechanisms	3	EMET 150 + EMET 270 = EGT 320 + EGT 300T	

CState Course	Course or Category	Credits	NKU Course	Completed
EMET 275	Electric Drive Mechanisms	3	EGT 294	
MET 111	Manufacturing Processes 1	3	EGT 265	
MET 150	Statics and Strength of Materials for MET	3	EGT 300	
EMET 291	Full-time Cooperative Education 1: Electro-Mechanical Engineering Technology	2	CEP 300	
EMET 292	Full-time Cooperative Education 2: Electro-Mechanical Engineering Technology	2	CEP 300	
	Subtotal Additional Program Credit Hours	**43**		
	Total Associate Degree Credit Hours	**64-66**		

EMET 291 and EMET 292 can satisfy EGT 301 with permission of the NKU advisor.

Northern Kentucky University

Category 3: NKU Additional General Education Requirements Not in Mechatronics Major

NKU Course	Course	Credits	CState Course	Taken at CState
CMST 101	Public Speaking	3	COMM 110	
TBS XXX	Culture and Creativity	6		
TBS XXX	Cultural Pluralism	3		
TBS XXX	Individual and Society	3		
	Subtotal Additional General Education Credit Hours	**15**		

TBS XXX means to be selected.

Category 4: NKU Major Requirements for the BS in Mechatronics Engineering Technology

NKU Course	Course	Credits	CState Course	Taken at CState
CHE 130/130L	Chemistry: An Engineering Approach	4	Waived by CHE 121/131	
MAT 119	Precalculus Mathematics	3	MAT 125 & MAT 126 or MAT 251 & MAT 252	x
MAT 129	Calculus I	4	MAT 251	
PHY 211	General Physics with Laboratory I	4	PHY 151 or PHY 201	x
PHY 213	General Physics with Laboratory II	4	PHY 152 or PHY 202	
SOC 100	Introduction to Sociology	3	SOC 105	

NKU Course	Course	Credits	CState Course	Taken at CState
STA 205	Statistical Methods	3	MAT 131 + MAT 132	
EGT 161	D.C. Circuit Analysis	3	EET 131	x
EGT 212	Computer-Aided Drafting and Design	3	EMET 110	x
EGT 243	A.C. Circuit Analysis	3	EET 132	x
EGT 245	Digital Electronics	3	EET 121	
EGT 261	Engineering Materials	3	MET 140	
EGT 267	Programming for Engineering Applications	3	CIT 130	
EGT 280	Introduction to Microsystems	3		
EGT 300	Statics and Strength of Materials	3	MET 150	x
EGT 301	Cooperative Education in Engineering Technology	3	EMET 291 EMET 292	x
EGT 310	Project Management and Problem Solving	3		
EGT 340	Applied Dynamics	3		
EGT 361	Fluid Power	3	MET 240	
EGT 367	Microprocessors	3	EET 220	
EGT 386	Electro-Mechanical Instrumentation and Control	3	EMET 141	x
EGT 402	Control Systems	3		
EGT 408	Mechatronics Topics	3		
EGT 416	Capstone I	1		
EGT 417	Capstone II	3		
	Select 6 elective courses from the following totaling 18 credit hours			
EGT 116	Introduction to Manufacturing	3		
EGT 211	Quality Control	3	MET 230	
EGT 260	Industrial Standards, Safety, and Codes	3	EVT 115	
EGT 265	Manufacturing Processes and Metrology	3	MET 111	
EGT 318	Introduction to Nanotechnology	3		
EGT 320	Robotic Systems and Material Handling	3	EMET 150 + EMET 270 = EGT 320 + EGT 300T	x
EGT 321	Productivity Management, Scheduling, and Planning	3		
EGT 330	Electrical Machines	3	EMET 252	
EGT 344	Analog Electronics	3	EET 251	
EGT 362	Tool Design and Computer Aided Manufacturing	3		
EGT 365	CNC & Manufacturing Process Planning	3	MET 112 + MET 113	
EGT 377	Power Electronics	3		
EGT 394	Special Topics (1-3 credits)	1-3		
EGT 404	Signals and Systems	3		

NKU Course	Course	Credits	CState Course	Taken at CState
EGT 405	Metrology and Geometric Tolerancing	3		
EGT 411	Quality Assurance and Auditing	3		
EGT 412	Advanced CADD	3	MET 132	
EGT 423	Planning and Design of Industrial Facilities	3		
EGT 448	Network Hardware	3		
EGT 450	Thermodynamics and Heat Transfer	3		
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 250 + MET 270	
	Subtotal Major Credit Hours at NKU	**67**		
	Subtotal Major Credit Hours at CState	**28**		
	Total Major Credit Hours	**95**		
	Total Baccalaureate Degree Credit Hours	**146-148**		

EMET 291 and EMET 292 can be used to satisfy EGT 301 with permission of the advisor.

Updated April 2024