



TWO DEGREES, ONE PATH

TRANSFER PATHWAY GUIDE 2024-2025

Associate in Science to
Bachelor of Science in Engineering Physics

Overview

Completion of the following curriculum will satisfy the requirements for the Associate in Science (AS) at a Kentucky Community and Technical College System (KCTCS) institution and leads to the Bachelor of Science (BS) in Engineering Physics 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 a 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 competence 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.

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.

KCTCS AS TO NKU BS IN ENGINEERING PHYSICS CHECKLIST
Kentucky Community and Technical College System Institution

Category 1: KCTCS General Education Core Requirements

KCTCS Course	Course or Category	Credits	NKU Course	Completed
ENG 101	Writing I (WC)	3	ENG 101	
ENG 102	Writing II (WC)	3	ENG 102	
TBS XXX	Oral Communication (OC)	3	TBD XXX	
TBS XXX	Arts & Humanities Course (AH) – Heritage	3	TBD XXX	
TBS XXX	Arts & Humanities Course (AH) – Humanities	3	TBD XXX	
TBS XXX	Social & Behavioral Sciences Course (SB)	3	TBD XXX	
TBS XXX	Social & Behavioral Sciences Course (SB)	3	TBD XXX	
CHE 170/175	General College Chemistry I with Lab (NS)	5	CHE 120/120L	
CHE 180/185	General College Chemistry II with Lab II (SL)	5	CHE 121/121L	
MAT 175	Calculus I (QR)	5	MAT 129	
MAT 185	Calculus II (QR)	5	MAT 229	
	Subtotal General Education Core Courses	41		

TBS XXX means to be selected by KCTCS 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.

Students who do not meet the prerequisite for MAT 175 Calculus will need to take MAT 150 College Algebra and MAT 155 Trigonometry.

Category 2: KCTCS AS Requirements

KCTCS Course	Course or Category	Credits	NKU Course	Completed
PHY 231/241	General University Physics I with Lab (SL)	5	PHY 220	
PHY 232/242	General University Physics II with Lab (SL)	5	PHY 222	
	Subtotal AS Requirement Courses	10		

Category 3: KCTCS Electives

KCTCS Course	Course or Category	Credits	NKU Course	Completed
	Digital Literacy (Choose CAD 100 if available)	0-3	EGT 212	
	First-Year College Success Course/Experience	0-3		
MAT 275	Calculus III	4	MAT 329	
TBS XXX	Electives (if needed)	0-5	TBD XXX	

KCTCS Course	Course or Category	Credits	NKU Course	Completed
	Subtotal Elective Courses	10		
	Total Associate Degree Hours	60		

A course carrying the Cultural Competence status must also be completed as part of the AA and AS requirements. Approved Cultural Competence courses are listed in the catalog under Academic Services - Cultural Competence Requirement.

Northern Kentucky University

Category 4: NKU Major Requirements for the BS in Engineering Physics

NKU Course	Course	Credits	KCTCS Course	Taken at KCTCS
CHE 120/120L	General Chemistry I with Lab	4	CHE 170/175	x
CHE 121/121L	General Chemistry II with Lab	4	CHE 180/185	x
EGT 212	Computer-Aided Drafting and Design	3	CAD 100	x
EGT 267	Programming for Engineering Applications	3		
EGT 301	Cooperative Education in Engineering Technology	3		
EGT 310	Project Management and Problem Solving	3		
EGT 416	Capstone I	1		
EGT 417	Capstone II	3		
MAT 129	Calculus I - QR	4	MAT 175	x
MAT 229	Calculus II	5	MAT 185	x
MAT 325	Differential Equations	3		
MAT 329	Calculus III	4	MAT 275	x
PHY 100	Science, Engineering, and Design	1		
PHY 220	University Physics I with Lab	4	PHY 231/241	x
PHY 222	University Physics II with Lab	4	PHY 232/242	x
PHY 224	University Physics III with Lab	4		
PHY 300	Intermediate Physics Lab	2		
PHY 305	Statics	3		
PHY 310	Dynamics	3		
PHY 360	Thermodynamics	3		
PHY 361	Modern Physics I	3		
STA 205	Statistical Methods	3	STA 220	
	Choose one track: Electronics Engineering Technology Track Mechanical Engineering Technology Track Mechatronics Engineering Technology Track (Required courses for each track are listed in Categories 7-9 tables below.)	12		
	Subtotal Major Credit Hours at NKU	50		
	Subtotal Major Credit Hours at KCTCS	32		

NKU Course	Course	Credits	KCTCS Course	Taken at KCTCS
	Total Major Credit Hours	82		

Category 6: Additional Requirements at NKU

NKU Course	Course	Credits	KCTCS Course	Taken at KCTCS
	Subtotal Elective Hours	10		
	Total Baccalaureate Degree Credit Hours	120		

Category 7: NKU Requirements for the Electronics Engineering Technology Track

NKU Course	Course or Category	Credits	KCTCS Course	Taken at KCTCS
EGT 243	AC Circuit Analysis	3	ELT 114	
EGT 245	Digital Electronics	3	ELT 120 + ELT 220	
EGT 367	Microprocessors	3	ELT 256	
EGT 467	Advanced Microprocessors	3		
	Additional Track Credit Hours	12		

Category 8: NKU Requirements for the Mechanical Engineering Technology Track

NKU Course	Course or Category	Credits	KCTCS Course	Taken at KCTCS
EGT 261	Engineering Materials	3	DFT 210	
EGT 361	Fluid Power	3	ELT 265 or FPX 100/101	
EGT 386	Electro-Mechanical Instrumentation and Control	3	ELT 244 + ELT 250	
EGT 480	Machine Design	3		
	Additional Track Credit Hours	12		

Category 9: NKU Requirements for the Mechatronics Engineering Technology Track

NKU Course	Course or Category	Credits	KCTCS Course	Taken at KCTCS
EGT 320	Robotic Systems and Material Handling	3	ELT 260	
EGT 386	Electro-Mechanical Instrumentation and Control	3	ELT 244 + ELT 250	
EGT 402	Control Systems	3		
EGT 408	Mechatronic Systems	3		
	Additional Track Credit Hours	12		

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