



## TRANSFER PATHWAY GUIDE 2020-2021

Associate in Science to Bachelor of Science in Mechanical Engineering

### **Overview**

Completion of the following curriculum will satisfy the requirements for an Associate in Science at the Kentucky Community and Technical College System and leads to the Bachelor of Science in Mechanical Engineering at the University of Kentucky.

### **Admission Requirements**

Engineering Standing upon transfer is available to students who maintain an overall and premajor GPA of 2.5. Premajor courses considered in the standing for Mechanical Engineering must be successfully completed with a C or higher and include the following or their equivalencies: CHE 105, CIS/WRD 111, EGR 101, EGR 102, EGR 103 (or EGR 215), EM 221, MA 113, MA 114, MA 213, PHY 231, PHY 241, PHY 232 and PHY 242.

KCTCS students planning to transfer to the University of Kentucky should work closely with a UK Transfer Advisor each semester to ensure that both KCTCS and UK degree requirements are met.

### **Degree Requirements**

Students can transfer a total of 67 credit hours from a two-year institution. Additionally, 30 of the final 36 credit hours earned toward a UK degree must be completed at UK. To graduate, students must maintain a 2.0 cumulative GPA and complete 120 total credit hours.

### **General Transfer Requirements**

All prospective transfer students are encouraged to receive advising from the University of Kentucky Transfer Center. Appointments are offered online and in-person, and can be scheduled online at <https://www.uky.edu/admission/transfer-advising>.

Additionally, we recommend reviewing the transfer admission requirements (<https://www.uky.edu/admission/transfer-requirements>) and the Frequently Asked Questions (<https://www.uky.edu/admission/transfer/frequently-asked-questions>) on our website: <https://www.uky.edu/admission/transfer>.

For more information, please contact the UK Transfer Center by email at [UKTransfer@uky.edu](mailto:UKTransfer@uky.edu), by phone at 859-257-2000, or in-person in Room 100 of the Funkhouser Building on UK's campus.

# KCTCS ASSOCIATE IN SCIENCE TO UNIVERSITY OF KENTUCKY BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING CHECKLIST

## Kentucky Community and Technical College System

### Category 1: KCTCS General Education Core Requirements (33 hours)

KCTCS Course	Course or Category	Credits	UK 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	Heritage (AH)	3	TBD XXX	
TBS XXX	Humanities (AH)	3	TBD XXX	
TBS XXX	Social and Behavioral Science (SB)	3	TBD XXX	
TBS XXX	Social and Behavioral Science (SB)	3	TBD XXX	
PHY 231 & 241	University Physics I	5	PHY 231 & 241	
CHE 170	General College Chemistry I	4	CHE 105	
MAT 174/175	Calculus I	4-5	MA 113	
MAT 184/185	Calculus II	4-5	MA 114	
	<b>Subtotal General Education Core</b>	<b>38-40</b>		

TBS XXX means to be selected by KCTCS student.

TBD XXX means to be determined by University of Kentucky based on course selected.

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 (6 hours)

KCTCS Course	Course or Category	Credits	UK Course	Completed
CHE 180	General College Chemistry II	4	CHE 107	
	Additional hours completed by other coursework			
	<b>Subtotal AA/AS Requirement Courses</b>	<b>4</b>		

### Category 3: KCTCS Electives (21 hours)\*

KCTCS Course	Course or Category	Credits	UK Course	Completed
	Digital Literacy**	0-3		
	First-Year Experience	0-3		
CS 115	Introduction to Computer Programming	3	CS 115	
MAT 275	Calculus III	4	MA 213	
MAT 285	Calculus IV	3	MA 214	
PHY 232 & 242	University Physics II	5	PHY 232 & 242	
	<b>Subtotal Elective Courses</b>	<b>15-21</b>		
	<b>TOTAL Associate Degree Hours</b>	<b>60-65</b>		

\*Students should work with their KCTCS academic advisors to ensure they earn a total of 60 credit hours from KCTCS to graduate with their AS.

\*\*It's recommended that students take the IC3 exam to bypass the Digital Literacy exam.

## University of Kentucky

### Major Requirements for Bachelor of Science in Mechanical Engineering

UK Course	Course	Credits	KCTCS Course	Taken at KCTCS
EE 305	Electrical Circuits and Electronics	3		
EGR 215	Introduction to the Practice of Engineering for Transfer Students	3		
EM 221	Statics	3		
EM 302	Mechanics of Deformable Solids	3		
EM 313	Dynamics	3		
ME 205	Computer Aided Engineering Graphics	3		
ME 220	Engineering Thermodynamics I	3		
ME 251	Introduction to Materials and Manufacturing Processes	3		
ME 310	Engineering Experimentation I	3		
ME 311	Engineering Experimentation II	3		
ME 321	Engineering Thermodynamics II	3		
ME 325	Elements of Heat Transfer	3		
ME 330	Fluid Mechanics	3		
ME 340	Introduction to Mechanical Systems	3		
ME 344	Mechanical Design	3		
ME 411	ME Capstone Design I	3		
ME 412	ME Capstone Design II	3		
ME 440	Design of Control Systems	3		
ME 501	Mechanical Design with Finite Element Methods	3		
TBS XXX	Mathematics Elective*	3		
TBS XXX	Technical Elective*	3		
TBS XXX	Technical Elective*	3		
TBS XXX	Technical Elective*	3		
WRD 204	Technical Writing	3		
<b>Subtotal UK Credit Hours</b>		<b>72</b>		
<b>Total Baccalaureate Degree Credit Hours</b>		<b>132-137</b>		

\*These courses will be selected in conjunction with a UK academic advisor.

Updated: Fall 2020

## Sample Course Sequence: KCTCS Associate in Science to UK Bachelor of Science in Mechanical Engineering

KCTCS Fall Semester 1	
ENG 101	3
First-Year Course	3
CHE 170	4
MAT 174/175	4-5
CS 115	3
<b>Total</b>	<b>17-18</b>

KCTCS Spring Semester 1	
ENG 102	3
CHE 180	4
MAT 184/185	4-5
SBS	3
<b>Total</b>	<b>14-15</b>

KCTCS Summer Semester 1	

KCTCS Fall Semester 2	
PHY 231 & 241	5
MAT 275	3
Humanities	3
Heritage	3
<b>Total</b>	<b>12</b>

KCTCS Spring Semester 2	
MAT 285	3
PHY 232 & 242	5
Oral Comm.	3
SBS	3
<b>Total</b>	<b>12</b>

UK Summer Semester 2	
ME 220 or EM 221	3
EM 313	3
<b>Total</b>	<b>6</b>

UK Fall Semester 3	
EGR 215	3
ME 220 or EM 221	3
ME 205 or ME 251	3
WRD 204	3
EE 305	3
<b>Total</b>	<b>15</b>

UK Spring Semester 3	
EM 302	3
EM 313	3
ME 330	3
ME 205 or ME 251	3
ME 340	3
<b>Total</b>	<b>15</b>

UK Summer Semester 3	

UK Fall Semester 4	
ME 310	3
Math Elective*	3
ME 325	3
ME 501	3
ME 344	3
<b>Total</b>	<b>15</b>

UK Spring Semester 4	
ME 411	3
ME 440	3
Technical Elective*	3
Technical Elective*	3
ME 321	3
<b>Total</b>	<b>15</b>

UK Fall Semester 5	
ME 412	3
ME 311	3
Technical Elective*	3
Support Elective*	3
<b>Total</b>	<b>12</b>

\*These courses will be selected in conjunction with a UK academic advisor.