



## TRANSFER PATHWAY GUIDE 2022-2023

Associate in Science to Bachelor of Science in Mining 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 Mining Engineering at the University of Kentucky.

### **Admission Requirements**

Engineering Standing upon transfer is available to students who maintain an overall and pre-major GPA of 2.5. Pre-major courses considered in the standing for Mining Engineering must be successfully completed with a C or higher and include the following or their equivalencies: CIS/WRD 110, CHE 105, MA 113, MA 114, MA 213 and PHY 231.

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 MINING 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	
CHE 170	General College Chemistry I (NS)	4	CHE 105	
PHY 231	University Physics I (NS)	4	PHY 231	
CHE 175/PHY 241	General College Chemistry I or University Physics I Laboratory (NS)	1	CHE 175/PHY 241	
MAT 174/175	Calculus I (NS)	4-5	MA 113	
MAT 184/185	Calculus II (NS)	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
GLY 101/111	Physical Geology	4	EES 220	
PHY 232	University Physics II	4	PHY 232	
	<b>Subtotal AS Requirement Courses</b>	<b>8</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 115U	Introduction to Computer Programming	3	CS 115	
MAT 275	Calculus III	4	MA 213	
MAT 285	Calculus IV	3	MA 214	
	<b>Subtotal Elective Courses</b>	<b>10-16</b>		
	<b>TOTAL Associate Degree Hours</b>	<b>60-64</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 Mining Engineering

UK Course	Course	Credits	KCTCS Course	Taken at KCTCS
MA 214	Calculus IV	3	MA 214	
EES 230	Fundamentals of Geology	3		
EM 221	Statics	3		
EM 302	Mechanics of Deformable Solids	3		
EM 313	Dynamics	3		
CE 341	Introduction to Fluid Mechanics	4		
PHY 232	General University Physics	4	PHY 232	
MNG 211	Mine Surveying	2		
MNG 291	Elements of Mine Design	3		
MNG 301	Minerals Processing	3		
MNG 303	Deformable Solids Laboratory	1		
MNG 311	Electrical Circuits and Mining Machinery	3		
MNG 322	Mine Safety and Health Management and Processes	2		
MNG 331	Explosives and Blasting	2		
MNG 332	Mine Plant Machinery	3		
MNG 335	Introduction to Mine Systems Analysis	3		
MNG 341	Mine Ventilation	3		
MNG 351	Underground Mine Design	3		
MNG 371	Professional Development of Mining Engineers	3		
MNG 435	Mine Systems Engineering & Economics	3		
MNG 463	Surface Mine Design	3		
BAE 435 OR MNG 535	Environmental Control System Design and Reclamation	3		
MNG 551	Rock Mechanics	4		
MNG 591	Mine Design Project I	1		
MNG 592	Mine Design Project II	3		
TBS XXX	Technical Elective*	3		
TBS XXX	Minerals Processing Technical Elective	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 2022

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

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

KCTCS Spring Semester 1	
ENG 102	3
PHY 231	4
MAT 184/185	4-5
Humanities	3
PHY 241/CHE 175	1
<b>Total</b>	<b>15-16</b>

KCTCS Summer Semester 1	

KCTCS Fall Semester 2	
GLY 101/111	4
MAT 275	4
Heritage	3
SBS	3
<b>Total</b>	<b>14</b>

KCTCS Spring Semester 2	
MAT 285	3
PHY 232	5
Oral Comm.	3
SBS	3
<b>Total</b>	<b>14</b>

KCTCS Summer Semester 2	

UK Fall Semester 3	
<b>Total</b>	

UK Spring Semester 3	
<b>Total</b>	

UK Fall Semester 4	
<b>Total</b>	

UK Spring Semester 4	
<b>Total</b>	

UK Fall Semester 5	
<b>Total</b>	

UK Spring Semester 5	
<b>Total</b>	

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