

# Coffeyville Community College

## Transfer Program to University of Kansas

### B.S. Engineering Physics

(Aerospace Systems, Chemical Systems, Digital Electronic Systems, Electromechanical Control Systems)

Number to call at KU for advising: (785) 864-4626

Website: [www.physics.engr.ku.edu](http://www.physics.engr.ku.edu)

Transfer students must have at least a 2.5 GPA and proof of competency in calculus.

### Requirements (all students):

#### Aerospace Systems:

### Requirements (all students):

The only classes listed are the ones that could be taken at a 2 year College.

#### Aerospace Systems:

The courses listed below are **REQUIRED**. These courses **MAY** be taken to complete the **KU CORE**, but if they are not, this additional coursework is necessary to complete degree requirements. 132 hours are required for a degree.

### **KU Course Requirements**

### **Coffeyville Equivalents**

<b>MATHEMATICS</b>				<b>Core</b>
MATH 121 Calculus I	5	MATH 120 Calculus with Analytic Geometry	5	GE12
MATH 122 Calculus 2	5	MATH 201 Calculus with Analytic Geometry (must take MATH 115, 120, and 201)	5	
MATH 223 Linear Algebra	3	No Equivalent		
MATH 290 Elementary Linear Algebra	2	No Equivalent		
MATH 220 Differential Equations	3	No Equivalent		

<b>NATURAL SCIENCES</b>				<b>Core</b>
PHSX 211 & 216 Engineering Physics	5	ENGR 210 Engineering Physics	5	GE3N, GE11, GE12
PHSX 212 & 236 Engineering Physics		ENGR 211 Engineering Physics 2	5	GE3N
CHEM 130 Chemistry	5	CHEM 103 Principles Of Chemistry	5	GE12, GE3N

#### Chemical Systems:

The courses listed below are **REQUIRED**. These courses **MAY** be taken to complete the **KU CORE**, but if they are not, this additional coursework is necessary to complete degree requirements. 132 hours are required for a degree.

### **KU Course Requirements**

### **Coffeyville Equivalents**

<b>MATHEMATICS</b>				<b>Core</b>
MATH 121 Calculus I	5	MATH 120 Calculus with Analytic Geometry	5	GE12
MATH 122 Calculus 2	5	MATH 201 Calculus with Analytic Geometry (must take MATH 115, 120, and 201)	5	
MATH 223 Linear Algebra	3	No Equivalent		
MATH 290 Elementary Linear Algebra	2	No Equivalent		

<b>NATURAL SCIENCES</b>				<b>Core</b>
PHSX 211 & 216 Engineering Physics	5	ENGR 210 Engineering Physics	5	GE3N, GE11, GE12
PHSX 212 & 236 Engineering Physics		ENGR 211 Engineering Physics 2	5	GE3N
CHEM 130 Chemistry	5	CHEM 103 Principles Of Chemistry	5	GE12, GE3N
CHEM 135 Chemistry 2	5	CHEM 104 Principles Of Chemistry 2	5	GE3N, GE12

CHEM 330 & 331 Organic Chemistry	5	CHEM 220 Organic Chemistry	5
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**Digital Electronic Systems:**

The courses listed below are **REQUIRED**. These courses **MAY** be taken to complete the **KU CORE**, but if they are not, this additional coursework is necessary to complete degree requirements. 132 hours are required for a degree.

**KU Course Requirements****Coffeyville Equivalents**

<b>MATHEMATICS</b>				<b>Core</b>
MATH 121 Calculus I	5	MATH 120 Calculus with Analytic Geometry	5	GE12
MATH 122 Calculus 2	5	MATH 201 Calculus with Analytic Geometry (must take MATH 115, 120, and 201)	5	
MATH 290 Elementary Linear Algebra	2	No Equivalent		
MATH 220 Differential Equations	3	No Equivalent		

<b>NATURAL SCIENCES</b>				<b>Core</b>
PHSX 211 & 216 Engineering Physics	5	ENGR 210 Engineering Physics	5	GE3N, GE11, GE12
PHSX 212 & 236 Engineering Physics		ENGR 211 Engineering Physics 2	5	GE3N
CHEM 130 Chemistry	5	CHEM 103 Principles Of Chemistry	5	GE12, GE3N

**Electromechanical Control Systems:**

The courses listed below are **REQUIRED**. These courses **MAY** be taken to complete the **KU CORE**, but if they are not, this additional coursework is necessary to complete degree requirements. 132 hours are required for a degree.

**KU Course Requirements****Coffeyville Equivalents**

<b>MATHEMATICS</b>				<b>Core</b>
MATH 121 Calculus I	5	MATH 120 Calculus with Analytic Geometry	5	GE12
MATH 122 Calculus 2	5	MATH 201 Calculus with Analytic Geometry (must take MATH 115, 120, and 201)	5	
MATH 290 Elementary Linear Algebra	2	No Equivalent		
MATH 220 Differential Equations	3	No Equivalent		

<b>NATURAL SCIENCES</b>				<b>Core</b>
PHSX 211 & 216 Engineering Physics	5	ENGR 210 Engineering Physics	5	GE3N, GE11, GE12
PHSX 212 & 236 Engineering Physics		ENGR 211 Engineering Physics 2	5	GE3N
CHEM 130 Chemistry	5	CHEM 103 Principles Of Chemistry	5	GE12, GE3N

**KU Core Curriculum (additional requirements not covered by degree requirements)**

Additional courses that satisfy the KU Core are continuously updated and available at <http://kucore.ku.edu/courses>.

**KU Course Requirements****Coffeyville Equivalents**

<b>Goal 1: Critical Thinking and Quantitative Literacy (1 Unit from each outcome)</b>				
<b>Outcome 1</b>		<b>GE11</b>		
ENGL 209 Intro to Fiction	3	ENGL 210 Fiction & Prose		3
PHIL 140 Intro to Philosophy	3	HUMN 104 Intro To Philosophy		3
PHIL 148 Reason and Argument	3	HUMN 218 Logic and Critical Thinking		3
PHIL 160 Ethics	3	HUMN 180 Intro to Ethics		3
SOC 104 Elements of Sociology	3	SOCI 101 Intro to Sociology		3
SOC 160 Social Problems/American Values	3	SOCI 201 American Social Problems		3
PHSX 114 College Physics	4	PHYS 203 College Physics I		5
PHSX 211/216 General Physics I	4	ENGR 210 Engineering Physics I		5
<b>Outcome 2</b>		<b>GE12</b>		

MATH 101 College Algebra	3	MATH 105 College Algebra	3
MATH 115 Calculus	3	MATH 117 Intro To Analytic Processes	3
MATH 125 Calculus	5	MATH 115 Calc W/Anal Geom	5
MATH S365 Statistics	3	MATH 250 Elementary Statistics	3
CHEM 130 Chemistry	5	CHEM 103 Principles Of Chemistry	5
CHEM 135 Chemistry 2	5	CHEM 104 Principles Of Chemistry 2	5
PHSX 114 College Physics	5	PHYS 203 College Physics	5
PHSX 211 General Physics	5	ENGR 210 Engineering Physics	5

### Goal 2: Communication (3 Units) -two from outcome 1 and one from outcome 2

Outcome 1		GE21	
ENGL 101 Composition	3	ENGL 101 English Composition	3
ENGL 102 Critical Reading and Writing	3	ENGL 102 English Composition 2	3
ENGL 209 Intro to Fiction	3	ENGL 210 Fiction & Prose	3
Outcome 2		GE22	
COMS 130 Speaker-Audience Communication	3	SPCH 111 Public Speaking	3
COMS 131 Speaker-Audience Communication	3	SPCH 121 Public Speaking: Honors	3

### Goal 3: Breadth of Knowledge (3 Units) -one from each category

Arts & Humanities		GE3H	
ENGL 209 Intro to Fiction	3	ENGL 210 Fiction & Prose	3
		ENGL 203 Major English Writers	3
		ENGL 204 American Literature	3
		ENGL 205 Old Testament Literature	3
		ENGL 206 New Testament Literature	3
REL 104 Intro to Religious Studies	3	HUMN 208 Comparative Religions	3
		ENGL 209 Poetry & Drama	3
		ENGL 200 Native American Literature	3
		ENGL 220 African American Literature	3
HA 150 Western Art History I	3	ARTS 140 Art History & Appreciation	3
HA 151 Western Art History II	3	ARTS 141 Art History & Appreciation 2	3
ART 101 Drawing I	3	ARTS 147 Drawing I	3
THR 100 Introduction to the Theater	3	THTR 160 Theater Appreciation	3
THR 100 Introduction to the Theater	3	THTR 175 Intro To Theatre: Honors	3
PHIL 140 Intro to Philosophy	3	HUMN 104 Intro To Philosophy	3
PHIL 148 Reason and Argument	3	HUMN 218 Logic and Critical Thinking	3
PHIL 160 Ethics	3	HUMN 180 Intro To Ethics	3
THR 106 Intro to Acting	3	THTR 164 Fundamentals of Acting	3
HIST 128 Hist US thrgh Civil War	3	HIST 102 Early United States History	3
HIST 129 Hist of US After Civil War	3	HIST 103 Recent United States History	3
HSES 244 Intro to Physical Ed	3	HPER 103 Intro to Health/PE/Recreation	3
Natural Sciences		GE3N	
ASTR 191 Contemporary Astronomy	3	PHYS 111 Intro To Astronomy	3
BIOL 100 Principals of Biology	3	BIOL 101 General Biology	5
BIOL 150 Pm Molecular/Cellular	5	BIOL 206 Biology I	5
BIOL 152 Princ of Organismal Biology	5	BIOL 208 Biology II	5
CHEM 110 College Chemistry	4	CHEM 101 Fundamentals Of Chemistry	5
CHEM 130 Chemistry	5	CHEM 103 Principles Of Chemistry	5
CHEM 135 Chemistry 2	5	CHEM 104 Principles Of Chemistry 2	5
EVRN 148 Scientic Princ Envrn Study	3	BIOL 103 Environmental Science	5
EVRN 149 Scientic Princ Envrn Study	3	BIOL 113 Environmental Science: Hnrs	5
BIOL 200/203 Microbiology	3	BIOL 204 Microbiology	5
PHSX 114 College Physics	4	PHYS 203 College Physics	5
PHSX 211 General Physics	4	ENGR 210 Engineering Physics	5
PHSX 212 General Physics II	4	ENGR 211 Engineering Physics 2	5
GEOL 101/103 Intro to Geology	3	PHYS 120 Physical Geology	5
GEOL 105/103 History of the Earth	3	PHYS 121 Historical Geology	5
		PHYS 205 Physical Science	5
Social Sciences		GE3S	

ECON 142 Princ of Microeconomics	3	ECON 206 Prin Of Economics (Micro)	3
ECON 144 Princ of Macroeconomics	3	ECON 205 Prin Of Economics (Macro)	3
POLS 110 Intro to US Politics	3	GOVN 104 United States Government	3
POLS 170 International Politics	3	GOVN 107 International Relations	3
PSYC 104 General Psychology	3	PSYC 101 General Psychology	3
SOC 104 Elements of Sociology	3	SOCI 101 Intro To Sociology	3
		PSYC 102 Developmental Psychology	3
EPSY S305 Dev and Learning of Early Childhood	3	FACS 117 Early Childhood Development	3
COMS 244 Interpersonal Communication	3	SPCH 211 Interpersonal and Group Communication	3

#### Goal 4: Culture and Diversity (One Unit from each outcome)

<b>Outcome 1</b>		<b>AE41</b>	
SOC 104 Elements of Sociology	3	SOCI 101 Intro To Sociology	3
SOC 160 social Problems and American Values	3	SOCI 201 American Social Problems	3
<b>Outcome 2</b>		<b>AE42</b>	
GEOG 100 World Regional Geography	3	GEOG 120 World Geography	3
REL 104 Intro to Religious Studies	3	HUMN 208 Comparative Religions	3
		ENGL 200 Native American Literature	3
		ENGL 220 African-American Literature	3
POLS 170 International Politics	3	GOVN 107 International Relations	3
SPAN 212 Intermediate Spanish	3	FLNG 203 Spanish 3	3
SPAN 216 Intermediate Spanish 2	3	FLNG 204 Spanish 4	3

#### Goal 5: Social Responsibility and Ethics (1 Unit from either outcome)

<b>Outcome 1</b>		<b>AE51</b>	
PHIL 160 Intro to Ethics	3	HUMN 180 Intro To Ethics	3
SOC 160 Intro to Social Problems	3	SOCI 201 American Social Problems	3
<b>Outcome 2</b>		<b>AE52</b>	
No Equivalencies Established			

#### Goal 6: Integration and Creativity (1 Unit)

<b>Outcome 1</b>		<b>AE61</b>	
No Equivalencies Established			