

# Highland Community College

## Transfer Program to University of Kansas

### B.S. Electrical Engineering & Computer Science

(Computer Engineering, Computer Science, Electrical Engineering, Information Technology (Edward Campus only) and Interdisciplinary Computing)

Number to call at KU for advising: (785) 864-4487

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

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

#### **Requirements (all students):**

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

#### **Computer Engineering:**

##### **KU Course Requirements**

##### **Highland Equivalents**

<b>MATHEMATICS</b>				<b>Core</b>	
MATH 125 Calculus	4	MAT 106 Calculus	5	GE12	
MATH 126 Calculus 2	4	MAT 110 Calculus 2	5		
MATH 127 Calculus 3	4	MAT 201 Calculus 3	3		
MATH 220 Differential Equations	3	No equivalent			
MATH 290 Elementary Linear Algebra	2	No equivalent			

<b>ECONOMICS &amp; electives</b>				<b>Core</b>	
<b>Choose One:</b>					
ECON 142 Princ of Microeconomics	3	BUS 204 Microeconomics	3	GE3S	
ECON 144 Princ of Macroeconomics	3	BUS 203 Macroeconomics	3	GE3S	
<b>Electives-12 hours total of Humanities &amp; Social Science (must be GE3H, AE41, AE42 + one extra GE3H or GE3S)</b>					

<b>NATURAL SCIENCES</b>				<b>Core</b>	
PHSX 211 & 216 Engineering Physics	5	PS 215 College Physics	5	GE3N, GE11, GE12	

#### **Computer Science:**

##### **KU Course Requirements**

##### **Highland Equivalents**

<b>MATHEMATICS</b>				<b>Core</b>	
MATH 125 Calculus	4	MAT 106 Calculus	5	GE12	
MATH 126 Calculus 2	4	MAT 110 Calculus 2	5		
MATH 127 Calculus 3	4	MAT 201 Calculus 3	3		
MATH 290 Elementary Linear Algebra	2	No equivalent			

<b>Humanities &amp; Social Science electives</b>				<b>Core</b>	
<b>Electives-12 hours total of Humanities &amp; Social Science (must include 2 GE3H and 2 GE3S)</b>					

<b>NATURAL SCIENCES</b>				<b>Core</b>	
PHSX 211 & 216 Engineering Physics	5	PS 215 College Physics	5	GE3N, GE11, GE12	
PHSX 212 & 236 Engineering Physics	4	PS 216 College Physics 2	5	GE3N	
<b>Choose One:</b>					
CHEM 130 Chemistry	5	PS 111 College Chemistry	5	GE12, GE3N	
CHEM 135 Chemistry 2	5	PS 112 College Chemistry 2	5	GE12, GE3N	
GEOG 104 & 105 Princ Physic Geography		No equivalent		GE3N	
GEOL 101 How the World Works	3	PS 104 General Geology (must take lab at KU)	4	GE3N	

#### **Electrical Engineering:**

**KU Course Requirements****Highland Equivalents**

<b>MATHEMATICS</b>				<u>Core</u>
MATH 125 Calculus	4	MAT 106 Calculus	5	GE12
MATH 126 Calculus 2	4	MAT 110 Calculus 2	5	
MATH 127 Calculus 3	4	MAT 201 Calculus 3	3	
MATH 220 Differential Equations	3	No equivalent		
MATH 290 Elementary Linear Algebra	2	No equivalent		

<b>ECONOMICS &amp; electives</b>				<u>Core</u>
<b>Choose One:</b>				
ECON 142 Princ of Microeconomics	3	BUS 204 Microeconomics	3	GE3S
ECON 144 Princ of Macroeconomics	3	BUS 203 Macroeconomics	3	GE3S
<b>Electives-12 hours total of Humanities &amp; Social Science (must be GE3H, AE41, AE42 + one extra GE3H or GE3S)</b>				

<b>NATURAL SCIENCES</b>				<u>Core</u>
PHSX 211 & 216 Engineering Physics	5	PS 215 College Physics	5	GE3N, GE11, GE12
PHSX 212 & 236 Engineering Physics	4	PS 216 College Physics 2	5	GE3N
CHEM 130 Chemistry	5	PS 111 College Chemistry	5	GE12, GE3N

**Information Technology:****KU Course Requirements****Highland Equivalents**

<b>MATHEMATICS</b>				<u>Core</u>
MATH 101 College Algebra	3	MAT 104 College Algebra	3	GE12
<b>OR</b>				
MATH 104 Precalculus Mathematics	5	MAT 104 & 105 Precalculus Math	5	GE12
MATH S365 Elementary Statistics	3	MAT 203 Basic Statistics	3	GE12

<b>ECONOMICS &amp; electives</b>				<u>Core</u>
ECON 104 Intro to Economics	3	No equivalent		GE3S
ENGL 362 Technical Writing	3	No equivalent		

<b>NATURAL SCIENCES-Choose one</b>				<u>Core</u>
PHSX 211 & 216 Engineering Physics	5	PS 215 College Physics	5	GE3N, GE11, GE12
PHSX 114 College Physics	5	PS 215 College Physics	5	GE3N, GE11, GE12
CHEM 130 Chemistry	5	PS 111 College Chemistry	5	GE12, GE3N
BIOL 150 Pm Molecular/Cellular	5	No equivalent		GE3N

**Interdisciplinary Computing-Astronomy:****KU Course Requirements****Highland Equivalents**

<b>MATHEMATICS</b>				<u>Core</u>
MATH 125 Calculus	4	MAT 106 Calculus	5	GE12
MATH 126 Calculus 2	4	MAT 110 Calculus 2	5	
MATH 127 Calculus 3	4	MAT 201 Calculus 3	3	
MATH 290 Elementary Linear Algebra	2	No equivalent		
MATH 220 Differential Equations	3	No equivalent		

<b>NATURAL SCIENCES</b>				<u>Core</u>
PHSX 211 & 216 Engineering Physics	5	PS 215 College Physics	5	GE3N, GE11, GE12
PHSX 212 & 236 Engineering Physics	4	PS 216 College Physics 2	5	GE3N
ASTR 191 Contemporary Astronomy	3	PS 108 Astronomy	4	GE3N

**Interdisciplinary Computing-Biology:****KU Course Requirements****Highland Equivalents**

<b>MATHEMATICS</b>				<b>Core</b>
MATH 125 Calculus	4	MAT 106 Calculus	5	GE12
MATH 126 Calculus 2	4	MAT 110 Calculus 2	5	
MATH 127 Calculus 3	4	MAT 201 Calculus 3	3	
MATH 290 Elementary Linear Algebra	2	No equivalent		

<b>NATURAL SCIENCES</b>				<b>Core</b>
CHEM 130 Chemistry	5	PS 111 College Chemistry	5	GE3N, GE12
CHEM 135 Chemistry 2	5	PS 112 College Chemistry 2	5	GE3N, GE12
BIOL 150 Prn Molecular/Cellular	5	No equivalent		GE3N
BIOL 152 Princ of Organismal Biology	5	No equivalent		GE3N

<b>ETHICS</b>				<b>Core</b>
PHIL 160 Intro to Ethics	3	PHI 102 Intro to Ethics	3	AE51, GE11, GE3H

**Interdisciplinary Computing-Chemistry:****KU Course Requirements****Highland Equivalents**

<b>MATHEMATICS</b>				<b>Core</b>
MATH 125 Calculus	4	MAT 106 Calculus	5	GE12
MATH 126 Calculus 2	4	MAT 110 Calculus 2	5	
MATH 127 Calculus 3	4	MAT 201 Calculus 3	3	
MATH 290 Elementary Linear Algebra	2	No equivalent		
MATH 220 Differential Equations	3	No equivalent		

<b>NATURAL SCIENCES</b>				<b>Core</b>
CHEM 130 Chemistry	5	PS 111 College Chemistry	5	GE3N, GE12
CHEM 135 Chemistry 2	5	PS 112 College Chemistry 2	5	GE3N, GE12
PHSX 211 & 216 Engineering Physics	5	PS 215 College Physics	5	GE3N, GE11, GE12
PHSX 212 & 236 Engineering Physics	4	PS 216 College Physics 2	5	GE3N
CHEM 330 & 331 Organic Chemistry	5	PS 210 Organic Chemistry 1	5	

**Interdisciplinary Computing-Geography:****KU Course Requirements****Highland Equivalents**

<b>MATHEMATICS</b>				<b>Core</b>
MATH 125 Calculus	4	MAT 106 Calculus	5	GE12
MATH 126 Calculus 2	4	MAT 110 Calculus 2	5	
MATH 127 Calculus 3	4	MAT 201 Calculus 3	3	
MATH 290 Elementary Linear Algebra	2	No equivalent		

<b>NATURAL SCIENCES</b>				<b>Core</b>
PHSX 211 & 216 Engineering Physics	5	PS 215 College Physics	5	GE3N, GE11, GE12

**Interdisciplinary Computing-Physics:****KU Course Requirements****Highland Equivalents**

<b>MATHEMATICS</b>				<b>Core</b>
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MATH 125 Calculus	4		MAT 106 Calculus	5	GE12
MATH 126 Calculus 2	4		MAT 110 Calculus 2	5	
MATH 127 Calculus 3	4		MAT 201 Calculus 3	3	
MATH 220 Differential Equations	3		No equivalent		
MATH 290 Elementary Linear Algebra	2		No equivalent		

NATURAL SCIENCES					Core
PHSX 211 & 216 Engineering Physics	5		PS 215 College Physics	5	GE3N, GE11, GE12
PHSX 212 & 236 Engineering Physics	4		PS 216 College Physics 2	5	GE3N

### Interdisciplinary Computing-Journalism:

### KU Course Requirements

### Highland Equivalents

MATHEMATICS					Core
MATH 125 Calculus	4		MAT 106 Calculus	5	GE12
MATH 126 Calculus 2	4		MAT 110 Calculus 2	5	
MATH 127 Calculus 3	4		MAT 201 Calculus 3	3	
MATH 290 Elementary Linear Algebra	2		No equivalent		

### 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

### Highland Equivalents

Goal 1: Critical Thinking and Quantitative Literacy (1 Unit from each outcome)					
Only Interdisciplinary Computing (Geography and Journalism needs to take one of these courses)					
Outcome 1			GE11		
ENGL 211 Intro to Drama	3		ENG 207 Narrative Film		3
PHIL 140 Intro to Philosophy	3		PHI 101 Introduction To Philosophy		3
PHIL 160 Intro to Ethics	3		PHI 102 Intro to Ethics		3
PHSX 111 Introductory Physics	3		PS 102 Concepts of Physics		3
PHSX 114 College Physics I	4		PS 203 General College Physics		5
PHSX 211/216 General Physics I	4		PS 215 College Physics I		5
HWC 204 Western Civilization	3		HIS 204 Reading Western Civ		3
HWC 205 Western Civilization 2	3		HIS 205 Reading Western Civ 2		3
SOC 104 Elements of Sociology	3		SOC 101 General Sociology		3
SOC 160 Social Problems/ American Values	3		SOC 210 Social Problems		3

Goal 2: Communication (3 Units) -two from outcome 1 and one from outcome 2					
Outcome 1			GE21		
ENGL 101 Composition	3		ENG 101 College English I		3
ENGL 102 Critical Reading and Writing	3		ENG 102 College English II		3
ENGL 211 Intro to Drama	3		ENG 207 Narrative Film		3
HWC 204 Western Civilization	3		HIS 204 Readings Western Civ		3
Outcome 2			GE22		
COMS 130 Speaker-Audience Communication	3		SP 106 Public Speaking		3

Goal 3: Breadth of Knowledge (3 Units) -one from each category					
Arts & Humanities			GE3H		
HA 150 History of Western Art	3		A 201 Art History		3
			A 101 Art Appreciation		3
ART 101 Drawing I	3		A 107 Drawing I		3
ANTH 110 Intro to Archaeology	3		ANT 100 Intro to Archaeology		3
			ENG 202 American Literature I		3
			ENG 207 Narrative Film		3
			ENG 208 Intro To The Short Story		3

		ENG 209 American Literature II	3
		ENG 210 World Literature I	3
		ENG 211 World Literature II	3
		ENG 212 English Literature I	3
		ENG 213 English Literature II	3
		ENG 205 Old Testament Literature	3
		M 103 Music History and Appreciation	3
		M 223 History of Jazz	3
HSES 244 Physical Ed and Sport Studies	3	PE 123 Principles of Education	3
HSES 244 Physical Ed and Sport Studies	3	PE 111 History/Principles of Physical Education	3
		PHI 105 Religions Of The World	3
PHIL 140 Intro to Philosophy	3	PHI 101 Introduction To Philosophy	3
PHIL 160 Intro to Ethics	3	PHI 102 Intro to Ethics	3
PHMD 101 Fundamentals of Photography	3	PHO 101 Basic Photography	3
THR 100 Intro to Theatre	3	TH 105 Intro To Dramatics	3
		TH 108 History & App Of Theatre Arts	3
THR 106 Intro to Acting	3	TH 110 Acting I	3
HIST 128 Hist US thrgh Civil War	3	HIS 101 United States History I	3
HIST 129 Hist of US After Civil War	3	HIS 102 United States History II	3
<b>Social Sciences</b>		<b>GE3S</b>	
COMS 244 Intr Personal Comm	3	SP 105 Interpersonal Communication	3
ECON 142 Princ of Microeconomics	3	BUS 204 Microeconomics	3
SOC 110 American Identities	3	SOC 106 Diversity and Inclusiveness	3
ECON 144 Princ of Macroeconomics	3	BUS 203 Macroeconomics	3
POLS 110 Intro to US Politics	3	POL 100 United States Government	3
EPSY S305 Dev and Learning of Young Child	3	PSY 202 Child Psychology	3
	3	PSY 205 Human Growth & Development	3
PSYC 104 General Psychology	3	PSY 101 General Psychology	3
SOC 104 Elements of Sociology	3	SOC 101 General Sociology	3
	3	POL 101 Intro To Political Science	3
ANTH 100 General Anthropology	3	ANT 112 General Anthropology	3
SOC 220 Sociology of Families	3	SOC 102 Marriage and the Family	3
SW Social Work, Soc Welfare in US Society	3	SOC 104 Intro to Social Work	3

<b>Goal 4: Culture and Diversity (1 Unit from each outcome)</b>			
<b>Outcome 1</b>		<b>AE41</b>	
SOC 160 Intro to Social Problems	3	SOC 210 Social Problems	3
SOC 110 American Identities	3	SOC 106 Diversity and Inclusiveness	3
SOC 104 Elements of Sociology	3	SOC 101 General Sociology	3
<b>Outcome 2</b>		<b>AE42</b>	
HA 150 History of Western Art	3	A 201 Art History	3
ANTH 100 General Anthropology	3	ANTH 112 General Anthropology	3
GEOG 100 World Regional Geography	3	GEO 212 World Regional Geography	3
		M 162 World Music	3
		PHI 105 Religions Of The World	3
HWC 204 Western Civilization	3	HIS 204 or 103 Readings in Western Civ	3
HWC 205 Western Civilization 2	3	HIS 205 Readings in Western Civ 2	3

- In order to graduate in four years, a student must transfer to KU after one year
- Pass/Fail Policy. Only courses used to fulfill English, Humanities, and Social Science requirements will be accepted with a "P" grade
- \*PHSX 211 satisfies the PHSX 210 requirement for Engineering at KU
- "S" before a number (Ex. MATH S365) indicates the course will be satisfied but will not count toward the number of Junior/Senior (upper-level) hours required for graduation
- The requirements listed above are subject to annual change
- A maximum of 64 hours of community college course work can be applied toward a KU degree
- Courses with a grade of D or below do not transfer