

# Ft Scott Kansas 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:

#### **KU Course Requirements**

#### **Ft Scott Equivalents**

| <b>MATHEMATICS</b>                 |   |  |   |   | <b>Core</b> |
|------------------------------------|---|--|---|---|-------------|
| MATH 125 Calculus                  | 4 |  | MAT 1015 Analytical Geometry & Calculus   | 5 | GE12        |
| MATH 126 Calculus 2                | 4 |  | MAT 1025 Analytical Geometry & Calculus 2 | 5 |             |
| MATH 127 Calculus 3                | 4 |  | MAT 2033 Analytical Geometry & 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>           |
|------------------------------------|---|--|------------------------------------|-----------------------|
| PHSX 211 & 216 Engineering Physics | 5 |  | PHS 2015 College Physics: w/Calc   | 5<br>GE3N, GE11, GE12 |
| PHSX 212 & 236 Engineering Physics | 4 |  | PHS 2025 College Physics 2 w/ Calc | 5<br>GE3N             |
| CHEM 130 Chemistry                 | 5 |  | CHE 1015 General Chemistry         | 5<br>GE12, GE3N       |

#### Chemical Systems:

#### **KU Course Requirements**

#### **Ft Scott Equivalents**

| <b>MATHEMATICS</b>                 |   |  |   |   | <b>Core</b> |
|------------------------------------|---|--|---|---|-------------|
| MATH 125 Calculus                  | 4 |  | MAT 1015 Analytical Geometry & Calculus   | 5 | GE12        |
| MATH 126 Calculus 2                | 4 |  | MAT 1025 Analytical Geometry & Calculus 2 | 5 |             |
| MATH 127 Calculus 3                | 4 |  | MAT 2033 Analytical Geometry & Calculus 3 | 3 |             |
| MATH 290 Elementary Linear Algebra | 2 |  | No equivalent                             |   |             |

| <b>NATURAL SCIENCES</b>            |   |  |                                    | <b>Core</b>           |
|------------------------------------|---|--|------------------------------------|-----------------------|
| PHSX 211 & 216 Engineering Physics | 5 |  | PHS 2015 College Physics: w/Calc   | 5<br>GE3N, GE11, GE12 |
| PHSX 212 & 236 Engineering Physics | 4 |  | PHS 2025 College Physics 2 w/ Calc | 5<br>GE3N             |
| CHEM 130 Chemistry                 | 5 |  | CHE 1015 General Chemistry         | 5<br>GE12, GE3N       |
| CHEM 135 Chemistry 2               | 5 |  | CHE 1025 General Chemistry 2       | 5<br>GE3N, GE12       |
| CHEM S330 & S331 Organic Chemistry | 5 |  | CHE 2035 Organic Chemistry         | 5                     |

#### Digital Electronic Systems:

#### **KU Course Requirements**

#### **Ft Scott Equivalents**

| <b>MATHEMATICS</b>                 |   |  |   |   | <b>Core</b> |
|------------------------------------|---|--|---|---|-------------|
| MATH 125 Calculus                  | 4 |  | MAT 1015 Analytical Geometry & Calculus   | 5 | GE12        |
| MATH 126 Calculus 2                | 4 |  | MAT 1025 Analytical Geometry & Calculus 2 | 5 |             |
| MATH 127 Calculus 3                | 4 |  | MAT 2033 Analytical Geometry & 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> |
|-------------------------|--|--|--|-------------|
|-------------------------|--|--|--|-------------|

|                                    |   |                                    |   |                  |
|------------------------------------|---|------------------------------------|---|------------------|
| PHSX 211 & 216 Engineering Physics | 5 | PHS 2015 College Physics: w/Calc   | 5 | GE3N, GE11, GE12 |
| PHSX 212 & 236 Engineering Physics | 4 | PHS 2025 College Physics 2 w/ Calc | 5 | GE3N             |
| CHEM 130 Chemistry                 | 5 | CHE 1015 General Chemistry         | 5 | GE12, GE3N       |

**Electromechanical Control Systems:**

**KU Course Requirements**

**Ft Scott Equivalents**

| MATHEMATICS                        |   |   |   | Core |
|------------------------------------|---|---|---|------|
| MATH 125 Calculus                  | 4 | MAT 1015 Analytical Geometry & Calculus   | 5 | GE12 |
| MATH 126 Calculus 2                | 4 | MAT 1025 Analytical Geometry & Calculus 2 | 5 |      |
| MATH 127 Calculus 3                | 4 | MAT 2033 Analytical Geometry & Calculus 3 | 3 |      |
| MATH 290 Elementary Linear Algebra | 2 | No equivalent                             |   |      |
| MATH 220 Differential Equations    | 3 | No equivalent                             |   |      |

| NATURAL SCIENCES                   |   |                                    |   | Core             |
|------------------------------------|---|------------------------------------|---|------------------|
| PHSX 211 & 216 Engineering Physics | 5 | PHS 2015 College Physics: w/Calc   | 5 | GE3N, GE11, GE12 |
| PHSX 212 & 236 Engineering Physics |   | PHS 2025 College Physics 2 w/ Calc |   | GE3N             |
| CHEM 130 Chemistry                 | 5 | CHE 1015 General 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**

**Ft Scott Equivalents**

| Goal 1: Critical Thinking and Quantitative Literacy (1 Unit from each outcome) |   |                                      |      |   |
|--|---|--------------------------------------|------|---|
| Outcome 1  |   |                                      | GE11 |   |
| ENGL 210 Intro to Poetry   | 3 | ENG 2223 Intro To Literature: Poetry |      | 3 |
| ENGL 211 Intro to Drama  | 3 | ENG 2213 Intro To Literature: Drama  |      | 3 |
| COMS 230 Fundamentals of Debate  | 3 | SPE 1133 Discussion & Debate         |      | 3 |
| PHIL 140 Intro to Philosophy   | 3 | PHI 1113 Philosophy Of Life          |      | 3 |
| PHIL 148 Reason and Argument   | 3 | PHI 1133 Classical Formal Logic      |      | 3 |
| PHSX 114 College Physics I   | 4 | PHS 2065 College Physics             |      | 5 |
| PHSX 211/216 General Physics I   | 4 | PHS 2015 College Physics w/Calculus  |      | 5 |
| SOC 104 Elements of Sociology  | 3 | SOC 1013 Sociology                   |      | 3 |
| SOC 160 Social Problems/American Values  | 3 | SOC 1023 Social Problems             |      | 3 |
| Outcome 2  |   |                                      | GE12 |   |
| MATH 101 College Algebra   | 3 | MAT 1083 College Algebra             |      | 3 |
| MATH 115 Calculus  | 3 | MAT 1233 Basic Calculus              |      | 3 |
| MATH 125 Calculus  | 5 | MAT 1015 Calc w/A Geometry           |      | 5 |
| CHEM 130 Chemistry   | 5 | CHE 1015 General Chemistry           |      | 5 |
| CHEM 135 Chemistry 2   | 5 | CHE 1025 General Chemistry 2         |      | 5 |
| PHSX 114 College Physics   | 4 | PHS 2065 College Physics: Non-Calc   |      | 5 |
| PHSX 211 General Physics   | 4 | PHS 2015 College Physics: W/Calc     |      | 5 |
| MATH S365 Elementary Stats   | 3 | MAT 2253 Elementary Statistics       |      | 3 |

| Goal 3: Breadth of Knowledge (3 Units)-one from each category |   |   |      |   |
|---|---|---|------|---|
| Arts & Humanities   |   |   | GE3H |   |
| ART 101 Drawing I   | 3 | ART 1013 Drawing & Composition          |      | 3 |
|   |   | ENG 2013 American Literature            |      | 3 |
|   |   | ENG 2023 American Literature 2          |      | 3 |
| ENGL 211 Intro to Drama                                       |   | ENG 2213 Intro To Literature: Drama     |      | 3 |
| ENGL 210 Intro to Poetry                                      |   | ENG 2223 Intro To Literature: Poetry    |      | 3 |
|   |   | ENG 2233 Intro To Lit: American Fiction |      | 3 |
|   |   | ENG 2253 Intro To Lit: Short Story      |      | 3 |
|   |   | HIS 2703 Native American History        |      | 3 |
|   |   | REL 1043 Life & Thought of Paul         |      | 3 |
| REL 104 Intro to Religious Studies                            | 3 | REL 1093 Religions of Mankind           |      | 3 |

|   |   |                                      |   |
|---|---|--------------------------------------|---|
|   |   | REL 1073 Old Testament Life Heritage | 3 |
| PHIL 140 Intro to Philosophy                  | 3 | PHI 1113 Philosophy Of Life          | 3 |
| PHIL 148 Reason and Argument                  | 3 | PHI 1113 Classical Formal Logic      | 3 |
| THR 100 Intro to Theatre                      | 3 | DRA 1313 Theater Appreciation        | 3 |
| THR 106 Intro to Acting                       | 3 | DRA 1013 Acting                      | 3 |
| HA 150 Western Art History                    | 3 | ART 1743 Art History                 | 3 |
| HIST 128 Hist US thrgh Civil War              | 3 | HIS 1013 United States History       | 3 |
| HIST 129 Hist of US After Civil War           | 3 | HIS 1023 United States History 2     | 3 |
|   |   | HIS 2013 History of Civilization     | 3 |
|   |   | HIST 2023 History of Civilization 2  | 3 |
| HSES 244 Foundations of Physical Education    | 3 | PHE 1013 Intro to Physical Education | 3 |
| <b>Social Sciences</b>                        |   | <b>GE3S</b>                          |   |
| COMS 244 Intr Personal Comm                   | 3 | SPE 2013 Interpersonal Communication | 3 |
| ECON 142 Princ of Microeconomics              | 3 | ECO 1013 Microeconomics              | 3 |
| ECON 144 Princ of Macroeconomics              | 3 | ECO 2023 Macroeconomics              | 3 |
| POLS 110 Intro to US Politics                 | 3 | POL 1013 American Government         | 3 |
| PSYC 104 General Psychology                   | 3 | PSY 1013 General Psychology          | 3 |
|   |   | PSY 1023 Developmental Psychology    | 3 |
| SOC 104 Elements of Sociology                 | 3 | SOC 1013 Sociology                   | 3 |
| SOC 220 Sociology of Families                 | 3 | SOC 2223 Marriage & The Family       | 3 |
| ANTH 108 Cultural Anthropology                | 3 | SOC 1113 Cultural Anthropology       | 3 |
| EPSY S305 Dev and Learning of the Young Child | 3 | PSY 2243 Child Psychology            | 3 |
| WGSS 101 Women, Gender and Sexuality Studies  | 3 | SOC 2253 Women in Society            | 3 |

|  |   |                                      |   |
|--|---|--------------------------------------|---|
| <b>Goal 4: Culture and Diversity (2 Units)</b> |   |                                      |   |
| <b>Outcome 1</b>                               |   | <b>AE41</b>                          |   |
| SOC 104 Elements of Sociology                  | 3 | SOC 1013 Sociology                   | 3 |
| SOC 160 Social Problems and American Values    | 3 | SOC 1023 Social Problems             | 3 |
| SOC 220 Sociology of Families                  | 3 | SOC 2223 Marriage and Family         | 3 |
| WGSS 101 Women, Gender, and Sexuality Studies  | 3 | SOC 2253 Women in Society            | 3 |
| AAAS 106 The Black Experience in America       | 3 | HIS 2033 History African American    | 3 |
| <b>Outcome 2</b>                               |   | <b>AE42</b>                          |   |
| REL 104 Intro to Religious Studies             | 3 | REL 1093 Religions of Mankind        | 3 |
| GEOG 100 World Regional Geography              | 3 | GEO 1023 World Regional Geography    | 3 |
| HA 150 Western Art History                     | 3 | ART 1743 Art History                 | 3 |
|  |   | HIS 2703 History of Native Americans | 3 |
|  |   | REL 1093 Religions of Mankind        | 3 |
| ANTH 108 Cultural Anthropology                 | 3 | SOC 1113 Cultural Anthropology       | 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