

**Southwestern Illinois College  
Pathway - Computer Engineering**

**Southwestern Illinois College  
Associate in Engineering Degree  
Fall Year 1**

| SWIC Course          |                            | Hours     |
|----------------------|----------------------------|-----------|
| ENG 101              | Rhetoric and Composition I | 3         |
| CHEM 105             | General Chemistry I        | 5         |
| HES 151 <sup>1</sup> | Personal Health & Wellness | 2         |
| MATH 203             | Analytic Geom & Calc I     | 5         |
| <b>Total</b>         |                            | <b>15</b> |

**Spring Year 1**

| SWIC Course         |                                    | Hours     |
|---------------------|------------------------------------|-----------|
| IAI Fine Arts       | ART 103 OR MUS 110                 | 3         |
| MATH 204            | Analytic Geom & Calc II            | 5         |
| PHYS 204            | Physics- Mechanics                 | 4         |
| IAI SS <sup>3</sup> | IAI Human Relations Social Science | 3         |
| ENG 102             | Rhetoric and Composition II        | 3         |
| <b>Total</b>        |                                    | <b>18</b> |

**Fall Year 2**

| SWIC Course          |                               | Hours     |
|----------------------|-------------------------------|-----------|
| PHYS 205             | Physics-Heat/EL/Mag           | 4         |
| MATH 205             | Analytic Geom & Calc III      | 4         |
| ELE XXX <sup>3</sup> | CIS 185 - recommended         | 3         |
| MATH 171             | Computer Science I- Java      | 4         |
| ECON 201             | Princ. Of Economics I (Macro) | 3         |
| <b>Total</b>         |                               | <b>18</b> |

**Spring Year 2**

| SWIC Course           |                                 | Hours     |
|-----------------------|---------------------------------|-----------|
| MATH 290              | Differential Equations          | 3         |
| BIOL 100/101          | General Biology/Prin. Of Biol I | 4         |
| ENGR 271              | Electrical Circuits             | 3         |
| COMM 155 <sup>2</sup> | Interpersonal Communication     | 3         |
| MATH 271              | Computer Science II- Java       | 4         |
| <b>Total</b>          |                                 | <b>17</b> |

**Associate in Engineering Total 68**

<sup>1</sup>Students may also take HES 152 or HES 130 and 131.

<sup>2</sup>Students may substitute with COMM 151.

<sup>3</sup>Students should follow Computer Engineering specialty curriculum at SWIC. ELE/Hum/SS are within the AES at SWIC but not the BS at SIUE.

<sup>4</sup>IE 106 may no longer be required if AES is earned. More details coming.

**Southern Illinois University Edwardsville  
Bachelor of Science Degree  
Summer Year 3**

| SIUE Course  |                     | Hours    |
|--------------|---------------------|----------|
| ECE 211      | Circuit Analysis II | 4        |
| <b>Total</b> |                     | <b>4</b> |

**Fall Year 3**

| SIUE Course  |                        | Hours     |
|--------------|------------------------|-----------|
| ECE 282      | Digital Systems Design | 4         |
| CS 240       | Intro to Computing III | 3         |
| ECE 351      | Signals and Systems    | 3         |
| ECE 352      | Stochastic Processes   | 3         |
| MATH 224     | Discrete Mathematics   | 3         |
| <b>Total</b> |                        | <b>16</b> |

**Spring Year 3**

| SIUE Course  |                           | Hours     |
|--------------|---------------------------|-----------|
| ECE 326      | Electronic Circuits I     | 4         |
| ECE 483      | Adv. Digital Systems Eng. | 3         |
| ECE 381      | Microcontrollers          | 3         |
| IS           | Interdisciplinary Studies | 3         |
| CS 286       | Intro to Computer Org.    | 3         |
| <b>Total</b> |                           | <b>16</b> |

**Fall Year 4**

| SIUE Course         |                             | Hours     |
|---------------------|-----------------------------|-----------|
| CS 314              | Operating Systems           | 3         |
| ECE 404             | ECE Design                  | 3         |
| IE 106 <sup>4</sup> | Engineering Problem Solving | 3         |
| ECE/CS XXX          | Elective I                  | 3         |
| IE 345              | Engineering Economics       | 3         |
| <b>Total</b>        |                             | <b>15</b> |

**Spring Year 4**

| SIUE Course  |                              | Hours     |
|--------------|------------------------------|-----------|
| ECE 405      | ECE Design Lab               | 3         |
| ECE/CS XXX   | Elective II                  | 3         |
| ECE/CS XXX   | Elective III                 | 3         |
| PHIL 323     | Engineering Ethics           | 3         |
| CS 340       | Algorithms & Data Structures | 3         |
| <b>Total</b> |                              | <b>15</b> |

**Bachelor of Science Total 134**

\* Students must complete 50% or more of SIUE degree requirements at SIUE (120 hours required for graduation).

**Southwestern Illinois College  
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Students must earn 60 hours from a senior institution for graduation requirements. If students take all SIUE junior and senior level courses, stated above, at SIUE, they will meet this requirement. Please note: deviating from the planned schedule above may jeopardize this requirement.

**School of Engineering Transfer Credit Advisory Note:** *The University may accept transfer "D" grades; however, in the School of Engineering, a grade of C or better is required in all chemistry, computer science, mathematics, physics, and engineering courses applied to major or minor requirements. A course that transfers in as 1xx, 2xx, 3xx or TRF 1xx; TRF 2xx; TRF 3xx may require a course description and/or syllabus for further evaluation.*