

| PROGRAM ARTICULATION DEGREE PLAN                      |                                    |                  |   |   |            |
|---|------------------------------------|------------------|---|---|------------|
| <b>McHenry County College</b>                         |                                    | <b>2019-2020</b> | <b>Southern Illinois University Carbondale</b>          |   |            |
| Associate in Engineering Science (AES) - 60 hrs       |                                    |                  | BS Electrical Engineering (EE) - 126 hrs                |   |            |
|   |                                    |                  | <b>University Core Curriculum (UCC) Capstone Option</b> |   |            |
|   |                                    | <b>Hrs</b>       |   |   | <b>Hrs</b> |
|   |                                    |                  | UNIV 101  | Saluki Success                                    | NA         |
| ENG 151   | Composition I                      | 3                | ENGL 101  | English Composition I                             | T          |
| ENG 152   | Composition II                     | 3                | ENGL 102  | English Composition II                            | T          |
|   |                                    |                  | CMST 101  | Intro to Oral Communication                       | 3          |
| MAT 175   | Calculus & Analytical Geometry I   | 5                | MATH 150 (Required for BS degree)                       | Calculus I  | T          |
| IAI SOCIAL/BEHAVIORAL SCIENCE                         | (See SIUC Equivalency Guide)       | 3                | SOCIAL SCIENCE  | (See SIUC Equivalency Guide)                      | T          |
|   |                                    |                  | SOCIAL SCIENCE  |   | 3          |
| IAI HUMANITIES  | (See SIUC Equivalency Guide)       | 3                | HUMANITIES  | (See SIUC Equivalency Guide)                      | T          |
|   |                                    |                  | HUMANITIES  |   | NA         |
| CHM 165   | General Chemistry I                | 5                | CHEM 200/201 (Fulfills BS degree requirement)           | Intro to Chemical Principles/Lab                  | T          |
|   |                                    |                  | LIFE SCIENCE, GRP II                                    | (Students take 2 Physics courses)                 | NA         |
| IAI FINE ARTS   | (See SIUC Equivalency Guide)       | 3                | FINE ARTS   |   | T          |
|   |                                    |                  | BIOL 202 (Required for BS degree)                       | Human Genetics and Human Health                   | 2          |
| Non-Western Cultures w/in the US                      | (See SIUC Equivalency Guide)       | 3                | MULTICULTURAL   | (See SIUC Equivalency Guide)                      | T          |
|   |                                    | <b>28</b>        |   |   | <b>8</b>   |
|   |                                    |                  |   |   |            |
| <b>Program Requirements</b>                           |                                    |                  | <b>Program Requirements</b>                             |   |            |
| CSC 121   | Computer Science I                 | 4                | CS 202 (not required for the BS degree)                 | Intro to Computer Science                         | T          |
| MAT 245   | Calculus & Analytical Geometry II  | 5                | MATH 250  | Calculus II                                       | T          |
| MAT 255   | Calculus & Analytical Geometry III | 4                | MATH 251  | Calculus III                                      | T          |
| MAT 260   | Differential Equations             | 3                | MATH 305  | Intro to Ordinary Differential Equations          | T          |
| PHY 291   | Principles of Physics I            | 4                | PHYS 205/255A   | University Physics/Lab                            | T          |
| PHY 292   | Principles of Physics II           | 4                | PHYS 205/255B   | University Physics/Lab                            | T          |
| PHY 293*  | Principle of Physics III           | 4                | PHYS 305/355  | Modern Physics/Lab                                | T          |
| EGR 260*  | Electrical Circuit Analysis        | 4                | ECE 235/253L  | Electric Circuits/Lab                             | T          |
|   |                                    | <b>32</b>        |   |   |            |
| <b>*Recommended to fulfill BS degree requirements</b> |                                    |                  |   |   |            |
|   |                                    |                  | ECE 222   | Introduction to Digital Computation               | 3          |
|   |                                    |                  | ECE 296/296L  | Software Tools for Engineers/Lab                  | 4          |
|   |                                    |                  | ECE 315   | Mathematical Methods in ECE                       | 4          |
|   |                                    |                  | ECE 327/327L  | Digital Circuit Design with HDL/Lab               | 4          |
|   |                                    |                  | ECE 336   | Electric Circuits II                              | 3          |
|   |                                    |                  | ECE 345/345L  | Electronics/Lab                                   | 4          |
|   |                                    |                  | ECE 355/355L  | Signals & Systems/Lab                             | 4          |
|   |                                    |                  | ECE 356/356L  | Linear Control Systems/Lab                        | 4          |
|   |                                    |                  | ECE 375/375L  | Intro to Electromagnetic Fields/Lab               | 4          |
|   |                                    |                  | ECE 385/385L  | Electromechanical Energy Conversion/Lab           | 4          |
|   |                                    |                  | ECE 495E  | EE Senior Design I                                | 3          |
|   |                                    |                  | ECE 495D  | ECE Senior Design II                              | 3          |
|   |                                    |                  | ECE Electives   | Select 300/400 level ECE courses                  | 16         |
|   |                                    |                  | Approved Technical Electives                            | Select 300/400 level CS or 400 level MATH courses | 6          |
|   |                                    |                  | Science Elective & Lab                                  | Satisfied by CHEM 200/201 or PHYS 305/355         | NA         |
|   |                                    |                  |   |   | <b>66</b>  |
| <b>Total semester hrs completed with AES degree:</b>  |                                    | <b>60</b>        | <b>Total semester hrs completed with BS degree:</b>     |   | <b>74</b>  |
| <i>Degree Plan created on 7/22/19 by MH</i>           |                                    |                  | <b>Total semester hrs to BS degree:</b>                 |   | <b>134</b> |