

# Map for Bachelor of Science in Mechanical Engineering Technology

TOTAL: 120 hours  
(Not including SGSC 1000, support courses or PE)

## First Year

| Fall Semester   |  | Hrs       | Spring Semester                             |  | Hrs       |
|---|--|-----------|---|--|-----------|
| ENGL 1101 - Composition I                                       |  | 3         | ENGL 1102 - Composition II                  |  | 3         |
| MATH 1113 - Pre-calculus  |  | 4         | MATH 2253 - Calculus I                      |  | 4         |
| CHEM 1211K - Principles of Chemistry I                          |  | 4         | ENGR 2500 - Engineering Graphics for Design |  | 2         |
| ENGR 2010 - Introduction to Engineering                         |  | 2         | POLS 1101 - American Government             |  | 3         |
| SGSC 1000 - South Georgia State College Orientation and Success |  | 1         | Area E Course                               |  | 3         |
| Area C Course   |  | 3         |   |  |           |
| <b>TOTAL</b>  |  | <b>17</b> | <b>TOTAL</b>                                |  | <b>15</b> |

### Milestones:

Math and English courses require a grade of "C" or better and must be finished within the first 30 hours. First-year overall GPA should be 2.0 or higher.

Milestone Classes MATH 2253 and ENGR 2010 (need a C or higher to do well in the program).

Focus courses are taken within the first 30 hours to give a feel of the chosen pathway

MATH 1113 is a prerequisite for MATH 2253

Required for all First Time, Full Time Students

## Second Year

| Fall Semester   |  | Hrs       | Spring Semester                       |  | Hrs       |
|---|--|-----------|---------------------------------------|--|-----------|
| PHYS 2211K - Principles of Physics I                                    |  | 4         | PHYS 2212K - Principles of Physics II |  | 4         |
| MATH 2254 - Calculus II   |  | 4         | MATH 2255 - Calculus III              |  | 4         |
| ENGR 1121 - Computing Applications in Mechanical Engineering Technology |  | 2         | ENGR 2231 - Engineering Mechanics I   |  | 2         |
| HIST 2112 - American Civilization II                                    |  | 3         | MATH 2150 - Linear Algebra            |  | 3         |
| CSCI 1301 - Computer Science I  |  | 4         | COMM 1110 - Public Speaking           |  | 3         |
| <b>TOTAL</b>  |  | <b>17</b> | <b>TOTAL</b>                          |  | <b>16</b> |

### Milestones:

GPA should be 2.5 or higher, if less, consult an academic advisor for other major options.

If GPA is less than 2.75, a student is no longer competitive for graduate programs consult an academic advisor for options.

Milestone Classes PHYS 2211K/2212K (need a C or higher to do well in the program).

Sequence Alert!! PHYS 2211K is only offered in Fall, and PHYS 2212K is only offered in Spring.

MATH 1113 is a prerequisite for CSCI 1301 and ENGR 1121

MATH 2253 is a prerequisite for PHYS 2211K/PHYS 2212K and MATH 2254/MATH 2255 and ENGR 2231

MATH 2254 is a prerequisite for MATH 2150

PHYS 2211K is a prerequisite for ENGR 2231

### Third Year

| Fall Semester   | Hrs       | Spring Semester                | Hrs       |
|---|-----------|--------------------------------|-----------|
| ENGR 3233 - Mechanics of Materials  | 3         | ENGL 2111 - World Literature I | 3         |
| MATH 3100 - Differential Equations  | 3         | ENGR 3235 - Fluid Mechanics    | 3         |
| ENGR 2131 - Electronics and Circuit Analysis  | 3         | ENGR 3431 - Thermodynamics     | 3         |
| ENGR 2232 - Dynamics of Rigid Bodies  | 3         | MENT 3130 - Mechanism Design   | 3         |
| ENGR 2139 - Numerical Methods in Engineering  | 3         | MENT 3331 - Materials Science  | 3         |
| MENT 2110 - Mechanical Engineering<br>Technology Case Studies in<br>Design & Analysis | 1         |                                |           |
| <b>TOTAL</b>  | <b>16</b> | <b>TOTAL</b>                   | <b>15</b> |

**Milestones:**

GPA should be 3.0 minimum.

Look into graduate programs and work with an advisor to develop a timeline. Schedule and take GRE.

Explore internship options and find a mentor.

PHYS 2211K is a prerequisite for ENGR 2231 and ENGR 3431

ENGR 2139 is a co-requisite for ENGR 2131

MATH 2253 is a prerequisite for ENGR 2231, ENGR 2139 and ENGR 3431

MATH 2150 is prerequisite for ENGR 2139

ENGR 2232 is prerequisite for MENT 3130

CHEM 1211K is prerequisite for MENT 3331

PHYS 2212K is a prerequisite for ENGR 2131 and ENGR 3235

ENGR 2231 is a prerequisite for ENGR 2232 and ENGR 3233 and ENGR 3235

MATH 2254 is a prerequisite for MATH 3100

ENGR 2500 is prerequisite for MENT 2110

ENGR 3233 is prerequisite for MENT 3331

### Fourth Year

| Fall Semester                            | Hrs       | Spring Semester   | Hrs       |
|--|-----------|---|-----------|
| DVRS 1101 - Topics in Diversity          | 1         | POLS 2401 - Global Issues   | 3         |
| MENT 3135 - Machine Design               | 3         | MENT 4202 - Senior Design II                                      | 1         |
| MENT 3233 - Heat Transfer                | 2         | ME Elective   | 3         |
| MENT 3531 - Introduction to Mechatronics | 3         | MENT 4403 - Heat Transfer and<br>Thermodynamics Lab               | 1         |
| MENT 3333 - Materials Processing         | 3         | MENT 4430 - Engineering Quality Control<br>and Project Management | 3         |
| <i>PHED</i>                              | 1         | HLTH 1103 - Contemporary Health Issues                            | 2         |
| MENT 4201 - Senior Design I              | 1         | PHED  | 1         |
| <b>TOTAL</b>                             | <b>14</b> | <b>TOTAL</b>  | <b>14</b> |

**Milestones:**

GPA should be 3.0 minimum to remain competitive for graduate schools.

Submit applications to graduate schools in November/December.

ENGR 2131 is a prerequisite for MENT 3531

ENGR 3235 is prerequisite for MENT 3233

ENGR 3431 is prerequisite for MENT 3233 MENT 4403

MENT 2139 is a prerequisite for MENT 3531

MENT 3135 is prerequisite for MENT 4430

MENT 3331 is a prerequisite for MENT 3333

MENT 2110 is prerequisite for MENT 3135 MENT 4430

MENT 3333 is a prerequisite for MENT 4430

ENGR 3233 is prerequisite for MENT 3135 MENT 3531

| Available Electives |   |           |                    |
|---------------------|---|-----------|--------------------|
| MENT 3398           | Internship  | ENGR 4402 | Engineering Ethics |
| MENT 4490           | Special Topics in Mechanical Engineering Technology |           |                    |