

## 2023-2024 Curriculum Guide

## BS Degree in Chemical Engineering

128 Credit Hours

Florida A&amp;M University

Chemical Engineering and ChE-Materials Engineering Majors

| FRESHMAN YEAR<br>(1ST)                           |           | SOPHOMORE YEAR<br>(2ND)            |           | JUNIOR YEAR<br>(3RD)                      |              | SENIOR YEAR<br>(4TH)                    |              |
|--|-----------|------------------------------------|-----------|---|--------------|---|--------------|
| <b>Fall Semester</b>                             | <b>15</b> | <b>Fall Semester</b>               | <b>16</b> | <b>Fall Semester</b>                      | <b>16</b>    | <b>Fall Semester</b>                    | <b>13</b>    |
| CHM 1045 - Gen Chemistry I                       | 3         | ECH 3023 - Mass & Energy Bal I     | 3         | ECH 3101 - Thermodynamics                 | 3            | ECH 4404L - Unit Ops Lab                | 3            |
| CHM 1045L - Gen Chem I Lab                       | 1         | CHM 2210 - Organic Chem I          | 3         | ECH 3266 - Transport Phenom I             | 3            | ECH 4504 - Kinetics & React Des         | 3            |
| MAC 2311 - Calculus I <sup>1</sup>               | 4         | MAC 2313 - Calculus III            | 5         | ECH 3854 - ChE Computations               | 4            | ECH 4604 - ChE Process Design I         | 4            |
| ENC 1101 - English I                             | 3         | PHY 2048 - Gen Physics I           | 4         | ECH 3844 - Chem Engr Statistics           | 3            | Chemical Engr Elective I <sup>4</sup>   | 3            |
| AMH 2091, AFA2000, AFA3104 <sup>2</sup>          | 3         | PHY 2048L - Gen Physics I Lab      | 1         | Social Sci. II (FAMU list) <sup>2</sup>   | 3            |   |              |
| EGN 1004L - 1st Yr Engr Lab                      | 1         |                                    |           |   |              |   |              |
|  |           |                                    |           |   |              |   |              |
| <b>Spring Semester</b>                           | <b>14</b> | <b>Spring Semester</b>             | <b>16</b> | <b>Spring Semester</b>                    | <b>16/15</b> | <b>Spring Semester</b>                  | <b>14/13</b> |
| CHM 1046 - Gen Chemistry II                      | 3         | ECH 3024 - Mass & Energy Bal II    | 4         | ECH 3274L - Transport Phen Lab            | 3            | ECH 4323 - Process Control              | 3            |
| CHM 1046L - Gen Chem II Lab                      | 1         | ECH 3301 - Process Anly & Des      | 4         | ECH 3418 - Separations Processes          | 3            | ECH 4323L - Process Control Lab         | 1            |
| MAC 2312 - Calculus II                           | 4         | CHM 2211 - Organic Chem II         | 3         | ECH 4267 - Transport Phenom II            | 3            | ECH 4615 - ChE Process Des. II          | 3            |
| ENC 1102 - English II                            | 3         | PHY 2049 - Gen Physics II          | 4         | General Engineering course <sup>5</sup>   | 4/3          | Chemical Engr Elective II <sup>4</sup>  | 3            |
| BSC 1010 – General Biology I                     | 3         | PHY 2049L - Gen Physics II Lab     | 1         | CHM/BCH/ECH XXXX – AdvChemEl <sup>4</sup> | 3            | General Engineering course <sup>5</sup> | 4/3          |
|  |           |                                    |           |   |              |   |              |
| <b>Summer Semester<sup>3</sup></b>               | <b>9</b>  | <b>Summer Semester<sup>3</sup></b> | <b>0</b>  | <b>Summer Semester</b>                    | <b>0</b>     | <b>Summer Semester</b>                  | <b>0</b>     |
| Humanities I (statewide list) <sup>2</sup>       | 3         | (see Note 3, below)                |           |   |              |   |              |
| Humanities II (statewide/FAMU list) <sup>2</sup> | 3         |                                    |           |   |              |   |              |
| Social Science I (statewide list) <sup>2</sup>   | 3         |                                    |           |   |              |   |              |
|  |           |                                    |           |   |              |   |              |

<sup>1</sup> Students taking MAC 1105, MAC 1114, and/or MAC 1140 as prerequisites to MAC 2311 should take a math course every term (including summers) until completing the math sequence.

<sup>2</sup> History, Social Science, and Humanities electives are to be selected to satisfy the FAMU General Education requirements. This information can be found here: <https://www.famu.edu/index.cfm?Registrar&GeneralEducationCompetenciesandCoreCourses>. Please note that students beginning college in Fall 2021 must also meet the Civic Literacy requirement by taking AMH 2020 (history) or POS 1041 (social science) AND pass the Florida Civic Literacy Exam; those before must take a civics course OR pass the U.S. Naturalization exam.

<sup>3</sup> Most courses shown in the Freshman and Sophomore years of this Guide are also taught during the Summer terms, during which students are encouraged to make up missed classes. Nine (9) hours of summer credit must be taken at one of the twelve state universities in Florida sometime during the college career.

<sup>4</sup> See approved Advanced Chemistry and Chemical Engineering electives on reverse side.

<sup>5</sup> General Engineering courses must include EGM3512 – Engr Mechanics (4 hours) and EEL3003 – Intro to Electrical Engr (3 hours)