

## Biosystems Engineering Plan of Work Checklist, Catalog Year 2018-2019

|   | Required              | Actual                 |  | Required              | Actual                 |
|---|-----------------------|------------------------|--|-----------------------|------------------------|
| Required Major GPA  | 2                     |                        | Total # of Units Required to Qualify for Advanced Standing                                     | 57                    | 0                      |
| Required Advanced Standing GPA  | 2                     |                        | Total # of Units Required in Advanced Standing   | 53                    | 0                      |
| <b>University: General Education</b>  | <b>Units Required</b> | <b>Units Completed</b> | Total # of Required Units for the Degree Program   | 128                   | 0                      |
| <b>Tier I and Tier II requirements (18 units)</b>   | <b>18</b>             | <b>0</b>               | <b>Courses Required After Obtaining Advanced Standing in Biosystems Engineering (53 units)</b> | <b>Units Required</b> | <b>Units Completed</b> |
| <b>General Education Tier I</b>   | <b>12</b>             |                        | <b>Mechanics of Fluids Requirement (3 units)</b>   | <b>3</b>              | <b>0</b>               |
| Tier I Individuals & Societies Complete 2 courses   |                       |                        | Option I: Complete Introduction to Fluid Mechanics: AME 331 (3 Units) (& pre-req AME 250)      | 3                     |                        |
| Tier I Traditions & Cultures Complete 2 Courses   |                       |                        | Or Option II: Complete Mechanics of Fluids: CE 218 (3 units)                                   |                       |                        |
| <b>General Education Tier II</b>  | <b>6</b>              |                        | <b>Advanced Standing: Lower Division Requirements (6 units)</b>                                | <b>6</b>              | <b>0</b>               |
| Option 1: Tier II Arts, Complete 1 course   |                       |                        | Option I: Engineering Graphics and Design with Auto Cad BE 220 (3 units) OR                    | 3                     |                        |
| Diversity Emphasis Course, Complete 1 course  |                       |                        | Option II: Introduction to Computer Aided Design- BE 221 (3 units)                             |                       |                        |
| Or Option 2: Complete 1 Tier II Humanities course and complete 1 Tier II Individual & Societies course. |                       |                        | Engineering Management I: SIE 265 (3 units)  | 3                     |                        |
| <b>Courses Required to Qualify for Advanced Standing in Biosystems Engineering (57 units)</b>           | <b>Units Required</b> | <b>Units Completed</b> | <b>Advanced Standing: Upper Division Requirements (17 units)</b>                               | <b>17</b>             | <b>0</b>               |
| <b>English Composition (12units)</b>  | <b>6</b>              | <b>0</b>               | Mechanics of Materials: AME 324A   | 3                     |                        |
| First Year Composition I: ENGL 101 OR 107 OR 109H (3 units)   | 3                     |                        | Biosystems Analysis and Design: BE 423   | 3                     |                        |
| First Year Composition II: ENGL 102 OR 108 OR 109H (3 units)  | 3                     |                        | Sensors and Controls: BE 447   | 3                     |                        |
| <b>Biosystems Engineering Core Lower-division Courses (11 units)</b>                                    | <b>14</b>             | <b>0</b>               | Internship: BE 493 (complete 1 to 3 units)   | 1                     |                        |
| Introduction to Engineering ENGR 102 or ENGR 102A & 102B  | 3                     |                        | Seminar in Engineering Careers and Professionalism: BE 496A                                    | 1                     |                        |
| Statics: CE 214   | 3                     |                        | Engineering Probability & Statistics: SIE 305  | 3                     |                        |
| Intro to Biosystems Engineering: BE 201   | 2                     |                        | Technical Writing Options: ACL 422 OR ENVS 408 OR ENGL 308                                     | 3                     |                        |
| Engineering Analytic Computer Skills: BE 205  | 3                     |                        | <b>Engineering Capstone Design Courses (6 units)</b>   | <b>6</b>              | <b>0</b>               |
| Biosystems Thermal Engineering: BE 284  | 3                     |                        | ENGR 498A  | 3                     |                        |
| <b>Math Core</b>  | <b>13</b>             | <b>0</b>               | ENGR 498B  | 3                     |                        |
| Calculus I: MATH 122A (2 Units) / and MATH 122B (3 units) OR MATH 125 (3 units)                         | 3                     |                        | <b>Biosystems Engineering Electives (21 units)</b>   | <b>Units Required</b> | <b>Units Completed</b> |
| Calculus II: MATH 129   | 3                     |                        | <b>BE Engineering Design Electives -Complete Three Courses (9 units)</b>                       | <b>9</b>              | <b>0</b>               |
| Vector Calculus: MATH 223   | 4                     |                        | Design 1   | 3                     |                        |
| Intro to Differential Equations: MATH 254   | 3                     |                        | Design 2   | 3                     |                        |
| <b>Science Core</b>   | <b>24</b>             | <b>0</b>               | Design 3   | 3                     |                        |
| General Chemistry I: CHEM 151 OR CHEM 105A/106A   | 4                     |                        | <b>Technical Electives - Complete Four Courses (12 units)</b>                                  | <b>12</b>             | <b>0</b>               |
| General Chemistry II: CHEM 152 OR CHEM 105B/106B  | 4                     |                        | Tech 1   | 3                     |                        |
| Introductory Mechanics: PHYS 141 or PHYS 161H   | 4                     |                        | Tech 2   | 3                     |                        |
| Intro to Electricity & Magnetism: PHYS 241 or PHYS 261H   | 4                     |                        | Tech 3   | 3                     |                        |
| Intro to Biology MCB 181R/L OR PLS 240  | 4                     |                        | Tech 4   | 3                     |                        |
| ECOL 182R/L OR MIC 205A/L OR PSIO 201   | 4                     |                        |  |                       |                        |