## Biological and Agricultural Engineering - BS

### Program Requirements

#### First Year

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tr>
<td>Fall</td>
<td>CHEM 107</td>
<td>General Chemistry for Engineering Students</td>
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<td>CHEM 117</td>
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<td>ENGL 104</td>
<td>Composition and Rhetoric</td>
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<td>Engineering Lab I - Computation</td>
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<td>MATH 151</td>
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<td>ENGL 210</td>
<td>Technical and Business Writing</td>
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<td>PHYS 216</td>
<td>II - Mechanics</td>
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<tr>
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<td>BAEN 201</td>
<td>Analysis of Biological and Agricultural Engineering Problems</td>
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<td>BIOL 111</td>
<td>Introductory Biology I</td>
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<td>ENGR 217/</td>
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<td>III - Electricity and Magnetism</td>
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<td>MATH 251</td>
<td>Engineering Mathematics III</td>
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<td>MEEN 221</td>
<td>Statics and Particle Dynamics</td>
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<td>BAEN 301</td>
<td>Biological and Agricultural Engineering Fundamentals I</td>
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<td>BAEN 320</td>
<td>Engineering Thermodynamics</td>
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<td>CHEM 222</td>
<td>Elements of Organic and Biological Chemistry</td>
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<td>CVEN 305</td>
<td>Mechanics of Materials</td>
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<td>Differential Equations</td>
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<td>Biological and Agricultural Engineering Fundamentals II</td>
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<td>BAEN 340</td>
<td>Fluid Mechanics</td>
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<td>BAEN 354</td>
<td>Engineering Properties of Biological Materials</td>
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<td>BAEN 375</td>
<td>Design Fundamentals for Agricultural Machines and Structures</td>
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<td>ECEN 215</td>
<td>Principles of Electrical Engineering</td>
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<td>BAEN 365</td>
<td>Unit Operations for Biological and Agricultural Engineering</td>
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<td>BAEN 366</td>
<td>Transport Processes in Biological Systems</td>
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<td>BAEN 370</td>
<td>Measurement and Control of Biological Systems and Agricultural Processes</td>
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<td>State and Local Government</td>
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<td>BAEN 399</td>
<td>Professional Development</td>
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<td>BAEN 479</td>
<td>Biological and Agricultural Engineering Design I</td>
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<td>Creative arts (<a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#creative-arts">http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#creative-arts</a>)</td>
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**Total Semester Credit Hours**: 127

1. Entering students will normally be given a placement test in mathematics. Test results will be used in selecting the appropriate starting course which may be at a higher or lower level.
The three hours of international and cultural diversity (http://catalog.tamu.edu/undergraduate/general-information/degree-information/international-cultural-diversity-requirements/) and three hours of cultural discourse (http://catalog.tamu.edu/undergraduate/general-information/degree-information/cultural-discourse-requirements/) courses, as required for graduation, may be met by courses that also satisfy a core curriculum course.

All undergraduate students must take at least two (2) specific courses in their major designated as writing intensive.

Select from CHEN 320; CVEN 302; MATH 304, MATH 417; MEEN 357; STAT 211.

All engineering students are required to complete a high-impact experience in order to graduate. The list of possible high-impact experiences is available in the BAEN advising office.

Select from BAEN 400-478 (http://catalog.tamu.edu/undergraduate/course-descriptions/baen/), BAEN 485, BAEN 489.

Select from BAEN 400-478 (http://catalog.tamu.edu/undergraduate/course-descriptions/baen/), BAEN 485, BAEN 489; CHEN 451, CHEN 455/SENG 455, CHEN 460/SENG 460; CVEN 301/EVEN 301, CVEN 303, CVEN 336, CVEN 339/EVEN 339, CVEN 402/EVEN 402, CVEN 450, CVEN 455, CVEN 458/EVEN 458, CVEN 462/EVEN 462; ENGR 333; ISEN 303; MEEN 363, MEEN 364, MEEN 441, MEEN 442, MEEN 444, MEEN 460; SENG 310, SENG 312, SENG 321; Other courses may be approved by request to the advising office.

Select from AGSM 473, ANSC 312, ANSC 320; BESC 320, BESC 357, BESC 367, BESC 401, BESC 402, BESC 403; BIOL 351, BIOL 451; ESSM 351/RENR 405, ESSM 444, ESSM 459; GEOG 390; GEOL 410; MMET 307; NFSC 305, NFSC 307/ANSC 307, NFSC 312, NFSC 313, NFSC 326/ANSC 326, NFSC 327/ANSC 327, NFSC 406/POSC 406, NFSC 410, NFSC 457/ANSC 457, NFSC 470/ANSC 470, NFSC 487/ANSC 487; POSC 309, POSC 326, POSC 427; RENR 405/ESSM 351; SCSC 301, SCSC 311, SCSC 405. Other courses may be approved by request to the advising office.

A grade of C or better is required for all math, science, and engineering courses.