# Biochemistry and Molecular Biology: Pre-Medical or Pre-Veterinary Science, BSAG

Requirements for Students Matriculating in or before Academic Year 2019-2020. Learn more about University Academic Regulation 3.1 (http://catalog.okstate.edu/university-academic-regulations/#matriculation).

**Minimum Overall Grade Point Average:** 2.00  
**Total Hours:** 120

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<th>Code</th>
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<td>ENGL 1313</td>
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<tr>
<td>Select at least one International Dimension (I) course</td>
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<td>PLNT 1213</td>
<td>Introduction to Plant and Soil Systems</td>
<td>ANSI 1124</td>
<td>Introduction to the Animal Sciences</td>
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<td>HORT 1013</td>
<td>Principles of Horticultural Science (LN)</td>
<td>FDSC 1133</td>
<td>Fundamentals of Food Science</td>
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<td>Elements of Forestry</td>
<td>ENTO 2993</td>
<td>Introduction to Entomology (LN)</td>
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<td>Land, Life and the Environment (N)</td>
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<td>Livestock Entomology</td>
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<td>Ecology of Natural Resources</td>
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<td>LA 1013</td>
<td>Introduction to Landscape Architecture and Landscape Management</td>
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<td>Written and Oral Communications</td>
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<td>AGCM 3103</td>
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<td>BCOM 3113</td>
<td>Written Communication</td>
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<td>Business Communication for International Students</td>
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<td>Oral Communications in Agricultural Sciences &amp; Natural Resources (S)</td>
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<td>Introduction to Speech Communication (S)</td>
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<td>Elements of Persuasion (S)</td>
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**Major Requirements**

**Core Courses**
- BIOC 3723 | Biochemistry and Molecular Biology Laboratory 3
- BIOC 3813 | Biochemistry II 3
- BIOL 1114 | Introductory Biology (LN) 4
- BIOL 1604 | Animal Biology 4
- or PBIO 1404 | Plant Biology (LN) |
- CHEM 1515 | Chemistry II (LN) 5
- CHEM 3053 | Organic Chemistry I 3
- CHEM 3112 | Organic Chemistry Laboratory 2
- CHEM 3153 | Organic Chemistry II 3

<p>| Select one of the following: | 3 |
| MATH 2153 | Calculus II (A) |
| STAT 2013 | Elementary Statistics (A) |
| STAT 4013 | Statistical Methods I (A) |
| MICR 2123 | Introduction to Microbiology 3 |</p>
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<tr>
<td>MICR 2132</td>
<td>Introduction to Microbiology Laboratory</td>
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<td>PHYS 1114</td>
<td>College Physics I (LN)</td>
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<td>University Physics I (LN)</td>
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<td>College Physics II (LN)</td>
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<td>University Physics II (LN)</td>
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**Related Courses**

**Option:**

Select an option (p. 2) 20

**Hours Subtotal** 63

**Electives**

Select 4 hours or hours to complete required total for degree. 4

**Hours Subtotal** 4

**Total Hours** 120

1. College & Departmental requirements that may be used to meet GE requirements.
2. If ENGL 3323 Technical Writing is substituted for ENGL 1213 Composition II above; hours in this block are reduced by 3.
3. If used as (S) course above, hours in this block reduced by 3.

### Options

#### Option 1

With the approval of the advisor, department head, and dean, hours of basic sciences from an accredited chiropractic, dental medial, optometry, osteopathic, pharmacy, podiatry, or veterinary medical school to total 57 hours.

#### Option 2

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<td>BIOC 3223</td>
<td>Physical Chemistry for Biologists</td>
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<tr>
<td>or CHEM 3433</td>
<td>Physical Chemistry I</td>
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<tr>
<td>BIOC 4883</td>
<td>Senior Seminar in Biochemistry</td>
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<td>PBIO 4463</td>
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Select a minimum of 6 hours of BIOC or courses related to BIOC, subject to Advisor approval, of the following: 7

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<tr>
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<td>ANSI 3443</td>
<td>Animal Reproduction</td>
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<td>ANSI 3543</td>
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<td>BIOC 2202</td>
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<td>BIOC 2352</td>
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<td>BIOC 3003</td>
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<td>BIOC 4113</td>
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<td>BIOC 4523</td>
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<td>BIOC 4723</td>
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<td>BIOC 4990</td>
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<td>MICR 4233</td>
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PLNT 4353  Plant Breeding
STAT 4013  Statistical Methods I (A) (if not used as (A) above)

Total Hours  20

1 Total hours of BIOC 1990 Freshman Research in Biochemistry and Molecular Biology and BIOC 4990 Undergraduate Research may not exceed 10 hours.

Other Requirements

- A minimum of 40 semester credit hours and 100 grade points must be earned in courses numbered 3000 or above.
- A 2.00 GPA or higher in upper-division hours.

Additional State/OSU Requirements

- At least: 60 hours at a four-year institution; 30 hours completed at OSU; 15 of the final 30 or 50% of the upper-division hours in the major field completed at OSU.
- Limit of: one-half of major course requirements as transfer work; one-fourth of hours earned by correspondence; 8 transfer correspondence hours.
- Students will be held responsible for degree requirements in effect at the time of matriculation and any changes that are made, so long as these changes do not result in semester credit hours being added or do not delay graduation.
- Degrees that follow this plan must be completed by the end of Summer 2025.