## Biomathematics (PhD)

### Degree Requirements

Students may choose from the degree tracks below to complete coursework within a focus area.

Degrees earned will be distributed as: "Doctor of Philosophy in Biomathematics" without track specifications.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
<th>Counts towards</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Required Courses</strong></td>
<td></td>
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</tr>
<tr>
<td>BMA 771</td>
<td>Biomathematics I</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>BMA 772</td>
<td>Biomathematics II</td>
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<td></td>
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<tr>
<td>BMA 773</td>
<td>Stochastic Modeling</td>
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<tr>
<td>BMA 774</td>
<td>Partial Differential Equation Modeling in Biology</td>
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<tr>
<td>BMA 801</td>
<td>Seminar ¹</td>
<td></td>
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<tr>
<td></td>
<td><strong>Biological Sciences Courses</strong></td>
<td>9</td>
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<tr>
<td></td>
<td>&quot;Biological Science Courses&quot; will be approved in conjunction with the academic committee ²</td>
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<tr>
<td></td>
<td><strong>Statistics Courses</strong></td>
<td>3-6</td>
<td></td>
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<td>Required &quot;Statistics Courses&quot; will be approved in conjunction with the academic committee – see &quot;Statistic Course Options&quot; listed below</td>
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<td><strong>Mathematical Science Courses</strong></td>
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<td>&quot;Mathematical Science Courses&quot; will be approved in conjunction with the academic committee</td>
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<tr>
<td></td>
<td><strong>Focus Area Track</strong></td>
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<tr>
<td></td>
<td>See &quot;Focus Area Tracks&quot; ³</td>
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<td></td>
<td><strong>Total Hours</strong></td>
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</table>

¹ BMA 801 Seminar needs to be repeated three times to meet the three credit hour requirement.

² Must represent at least two different perspectives.

³ Must include at least one 700 level course.

### Statistic Course Options

#### Option 1

<table>
<thead>
<tr>
<th>Code</th>
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<th>Hours</th>
<th>Counts towards</th>
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</thead>
<tbody>
<tr>
<td>ST 511</td>
<td>Statistical Methods For Researchers I</td>
<td>3</td>
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<tr>
<td>ST 512</td>
<td>Statistical Methods For Researchers II</td>
<td>3</td>
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</table>

| **Total Hours** | 6 |

#### Option 2

<table>
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<th>Counts towards</th>
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<tbody>
<tr>
<td>ST 512</td>
<td>Statistical Methods For Researchers II (R)</td>
<td>3</td>
<td></td>
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</tbody>
</table>

| **Total Hours** | 3 |

### Focus Track Areas

#### Biological Sciences

Select five courses, minimum of one form each of the following:

- Cellular and Molecular Biology
- Genetics and Development
- Biophysical and Biomedical Sciences and Physiology
- Ecology and Evolution

| **Total Hours** | 15 |

### Mathematical Methods

Select five courses in the following or co-major:

- Mathematics
- Statistics
- Operations Research
- Computer Studies

| **Total Hours** | 15 |

### Faculty

#### Full Professors

- Kevin Gross
- Mansoor Abbas Haider
- Carol K. Hall
- Jason M. Haugh
- George R. Haugh
- Alun L. Lloyd
- Sharon R. Lubkin
- Spencer V. Muse
- Mette Olufsen
- Brian J. Reich
- Seth M. Sullivant
- Jeffrey L. Thorne
Hien Trong Tran  
Zhaobang Zeng  

**Associate Professors**  
Gavin Clay Conant  
Randall Brian Langerhans  
Cristina Lanzas  
Gustavo Machado  
Charles Eugene Smith  
Rosangela Sozzani  

**Assistant Professors**  
Belinda Sena Akpa  
Zixuan Cang  
Jie Cao  
Kevin Bryant Flores  
David Alan Rasmussen  

**Emeritus Faculty**  
William Reid Atchley  
John William Bishir  
Marlene L. Hauck  
Gail G. McRae  
Kenneth Hugh Pollock  
Jim E. Riviere  
Henry E. Schaffer  
James Francis Selgrade  
Ronald Edwin Stinner  

**Adjunct Faculty**  
John Edward Banks  
Georgiy Bobashev  
Brian Ernest Carlson  
James W. Gilliam  
Nicholas M. Haddad