# 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>BMA 771</td>
<td>Biomathematics I</td>
<td>3</td>
<td></td>
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<tr>
<td>BMA 772</td>
<td>Biomathematics II</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>BMA 773</td>
<td>Stochastic Modeling</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>BMA 774</td>
<td>Partial Differential Equation Modeling in Biology</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>BMA 801</td>
<td>Seminar</td>
<td>3</td>
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</table>

**Biological Sciences Courses**

"Biological Science Courses" will be approved in conjunction with the academic committee.

- **Statistics Courses**
  
  Required "Statistics Courses" will be approved in conjunction with the academic committee – see "Statistic Course Options" listed below.

- **Mathematical Science Courses**
  
  "Mathematical Science Courses" will be approved in conjunction with the academic committee.

**Focus Area Track**

See "Focus Area Tracks".

- **Total Hours**

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

6

### Option 2

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

Alun L. Lloyd

Sharon R. Lubkin

Spencer V. Muse

Mette Olufsen

Brian J. Reich

Seth M. Sullivant

Jeffrey L. Thorne
Biomathematics (PhD)

Hien Trong Tran
Zhaobang Zeng

Associate Professors
Randall Brian Langerhans
Cristina Lanzas
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
Thomas D. Husmeier
Dustin Kapraun