University of Georgia
Pharmaceutical and Biomedical Sciences

Gurvinder Singh Rekhi, Ph.D.
Director, B.S. Program in Pharmaceutical Sciences

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gsrekhi@uga.edu
Program

I. Welcome
II. How do you choose a major?
III. BS Pharm Sci Course Curriculum
IV. Faculty introductions
V. Questions
VI. Reception
Popular Majors at UGA

**MAJOR DECISIONS**

The top 10 most popular degree majors for UGA undergraduate, graduate and professional students in fall 2017:

1. **Biology** = 2,472
2. **Psychology** = 1,709
3. **Finance** = 1,499
4. **Computer Science** = 1,254
5. **International Affairs** = 893
6. **Marketing** = 770
7. **Accounting** = 649
8. **Management Information Systems** = 606
9. **Law** = 585

Source: 2017 UGA Fact Book

**MAJOR DECISIONS**

The top 10 most popular degree majors for UGA undergraduate, graduate and professional students in fall 2018:

1. **Biology** = 2,561
2. **Psychology** = 1,715
3. **Finance** = 1,487
4. **Computer Science** = 1,316
5. **International Affairs** = 864
6. **Political Science** = 872
7. **Marketing** = 752
8. **Accounting** = 722
9. **Management Information Systems** = 671
10. **Pharmacy** = 664

Source: 2018 UGA Fact Book
Academic Programs

- Undergraduate Degree
  - Bachelor of Science in Pharmaceutical Sciences
- Double Dawgs BS/MS Degree in 5 YR
- Professional Degree
  - What is the Difference Between a Pharmaceutical Scientist and a Pharmacist?
- Graduate Program in Pharmaceutical and Biomedical Sciences
  - Masters
  - PhD
Pharmacist vs Pharmaceutical Scientist

- Provide advice on the safe and effective USE of medicines
- Patient care, Pharmacies, Hospitals

- Design and develop new safe and effective medicines
- Drug discovery & Drug delivery
- Experts in chemistry and biology
Is a Career in the Pharmaceutical Sciences Right for Me?

How Do I Know If a Career in the Pharmaceutical Sciences is Right for Me?

- Do you enjoy science and want to pursue a science-based career?
- Do you like to work hands-on in a laboratory setting?
- Do you have a desire to contribute to the health and well-being of society through the development of medicines and therapies?

If so, a career in pharmaceutical sciences may be a good choice for you!
Background
✓ replace the old B.S. Pharmacy program as an entry level degree for industry
✓ provide a more appropriate and interdisciplinary background for advanced degree(s) focused on drug development

Objective
✓ prepare students with broad training in mathematics and basic sciences with a strong emphasis on the pharmaceutical sciences
✓ graduates will be able to integrate their knowledge with significant research experience to enhance career path development
Major in Pharmaceutical Sciences

- Started in 2013
- 1st BS PS 2015
- 1st BS/MS Class
  - Started 2018
  - Graduated 2019

Numbers represent – Pre-Pharmacy and Pharmaceutical Sciences major students
Structure of Program

- Two years of math and basic sciences
- Fulfill GA general education core requirements
- Final two years at the College of Pharmacy
  - Courses and labs in Pharmaceutical Sciences
  - Undergraduate Research
  - Major Electives

Admission Statistics

2022: A Competitive Class

99% took at least one course at an advanced level such as AP, IB, or Dual Enrollment.

3800 More than 3800 have a core high school GPA of 4.00 or higher.

285 More than 285 graduated first or second in their class.
## UGA General Education Core Curriculum

<table>
<thead>
<tr>
<th>Core Area</th>
<th>Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>ENGL 1101, ENGL 1102, MATH 2250</td>
</tr>
<tr>
<td>II</td>
<td>CHEM 1211+L, BIOL 1107+L</td>
</tr>
<tr>
<td>III</td>
<td>PHYS 1211 or PHYS 1211+L</td>
</tr>
<tr>
<td>IV</td>
<td>World Language and Culture, COMM 1110</td>
</tr>
<tr>
<td>V</td>
<td>History and 2 Social sciences</td>
</tr>
<tr>
<td>VI</td>
<td>CHEM 1212+L, CHEM 2211+L, CHEM 2212+L, STAT 2000</td>
</tr>
</tbody>
</table>
### Freshman Year

#### Fall

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 1101</td>
<td>Eng. Comp. I</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1211</td>
<td>Fresh. Chem. I</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1211L</td>
<td>Lab</td>
<td>1</td>
</tr>
<tr>
<td>MATH 2250</td>
<td>Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>Gen Elective</td>
<td>Area IV or V</td>
<td>3</td>
</tr>
<tr>
<td>FYOS 1001</td>
<td>Odyssey Sem.</td>
<td>1</td>
</tr>
</tbody>
</table>

**Semester**: 15

#### Spring

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 1102</td>
<td>Eng. Comp. II</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1212</td>
<td>Fresh. Chem. II</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1212L</td>
<td>Lab</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 1211/L</td>
<td>Prin. of Physics</td>
<td>4</td>
</tr>
<tr>
<td>COMM 1110</td>
<td>Intro. Pub. Sp.</td>
<td>3</td>
</tr>
</tbody>
</table>

**Semester**: 14

- For Full HOPE / Zell Miller Scholarships 15 credit hours is reqd per semester
## Sophomore Year

### Fall

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 2211</td>
<td>Org. Chem. I</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 2211L</td>
<td>Lab</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 1107</td>
<td>Prin. of Biology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 1107L</td>
<td>Lab</td>
<td>1</td>
</tr>
<tr>
<td>PE Elective</td>
<td>Phys. Education</td>
<td>1</td>
</tr>
<tr>
<td>Gen Elective</td>
<td>Area IV or V</td>
<td>3</td>
</tr>
<tr>
<td>Gen Elective</td>
<td>Area IV or V</td>
<td>3</td>
</tr>
<tr>
<td>Semester</td>
<td></td>
<td>15</td>
</tr>
</tbody>
</table>

### Spring

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 2212</td>
<td>Org. Chem. II</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 2212L</td>
<td>Lab</td>
<td>1</td>
</tr>
<tr>
<td>STAT 2000</td>
<td>Intro Stats</td>
<td>4</td>
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<tr>
<td>Elective</td>
<td>Area IV or V</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>Area IV or V</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>Area IV or V</td>
<td>3</td>
</tr>
<tr>
<td>Semester</td>
<td></td>
<td>17</td>
</tr>
</tbody>
</table>
Admission Requirements

- Cumulative GPA of 2.5 or higher (60 Hours)
- ENGL, MATH, BIOL, CHEM, PHYS, Courses
- Grade of “C” or better
- “Intended Pharmaceutical Sciences Major”
- STUDENT ADVISING
Student Advising / Questions

- Franklin College Advising Office (Years 1 & 2)
  - Ilya Winham or Dave Evans

- College of Pharmacy (Years 3 and 4)
  - Leslie Standridge

- Make appointments using SAGE

- Website www.rx.uga.edu
  - Program information
  - Scholarships / Internships information
## Junior Year

### Fall

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCMB 3100</td>
<td>Biochemistry</td>
<td>4</td>
</tr>
<tr>
<td>PMCY 3000</td>
<td>Human Physiology</td>
<td>4</td>
</tr>
<tr>
<td>PMCY 3500</td>
<td>Pharm. Analysis</td>
<td>3</td>
</tr>
<tr>
<td>MATH 2260</td>
<td>Calculus II</td>
<td>4</td>
</tr>
</tbody>
</table>

**Semester** 15

### Spring

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PMCY 3200</td>
<td>Pharm. Sci. I</td>
<td>3</td>
</tr>
<tr>
<td>PMCY 3300L</td>
<td>Pharm. Tech.</td>
<td>1</td>
</tr>
<tr>
<td>PMCY 3800</td>
<td>Pharmacology</td>
<td>3</td>
</tr>
<tr>
<td>PMCY 4300</td>
<td>Med. Chem.</td>
<td>3</td>
</tr>
<tr>
<td><strong>Major Elective</strong></td>
<td><strong>PMCY, BIOL,.</strong></td>
<td>3</td>
</tr>
<tr>
<td><strong>Gen. Elective</strong></td>
<td><strong>Area IV or V</strong></td>
<td>3</td>
</tr>
</tbody>
</table>

**Semester** 16

- Other courses may be selected depending on total credit requirements
- For Transfer Credits [www1.admissions.uga.edu/transfer](http://www1.admissions.uga.edu/transfer)
# Senior Year

## Fall

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PMCY 4200</td>
<td>Pkinetic &amp; P’dynam</td>
<td>3</td>
</tr>
<tr>
<td>PMCY 4500/L</td>
<td>Pharm Drug Dev.</td>
<td>4</td>
</tr>
<tr>
<td>PMCY 4960</td>
<td>Pharm Research I</td>
<td>2</td>
</tr>
<tr>
<td>ENGL 3590W</td>
<td>Tech Writing</td>
<td>3</td>
</tr>
<tr>
<td>Major Elective</td>
<td>PMCY, BIOL,….</td>
<td>3</td>
</tr>
<tr>
<td><strong>Semester</strong></td>
<td></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

## Spring

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCMB 3600</td>
<td>Genomics</td>
<td>3</td>
</tr>
<tr>
<td>PMCY 4510/L</td>
<td>Adv Drug Dev</td>
<td>4</td>
</tr>
<tr>
<td>PMCY 4970</td>
<td>Pharm Researc II</td>
<td>2</td>
</tr>
<tr>
<td>Major Elective</td>
<td>PMCY, BIOL …</td>
<td>4</td>
</tr>
<tr>
<td><strong>Semester</strong></td>
<td></td>
<td><strong>13</strong></td>
</tr>
</tbody>
</table>
PMCY 4960 Pharmaceutical Sciences Research I
PMCY 4960 / 4970 (2 Credits each)
Approved Research Courses – BIOL 3110L, GENE 4210L / 4220L / 4230L / 4240L
CURO Res Assistantship / Summer Fellowship $$$

INTERNSHIPS ($$$)
- Pharmaceutical Companies, UGA I-Corps
- Study Abroad

‘Learning by doing’
April 2015
UGA to become one of largest public universities in US to require experiential learning for undergraduates
Total of 9-10 credit hours required

Electives can be chosen to meet professional school admissions requirements
- Pharmacy School (PharmD), Medical School
- Physician Assistant, Nursing, Public Health
- Sales/Marketing

BIOL, CHEM, PHYS, STAT, PMCY Courses

At least 2 courses must be at 3000 / 4000 level
All Major electives must be completed with a “C” or better
Total of 15 credit hours required
9 hours of PMCY courses (3000 or above)
6 hours from the major electives list
Area VI courses can be counted for your minor
MAJORS - Biology, Chemistry, Marketing
MAJORS - BioChemical Engineering
- Ambitious and Motivated Students
- AP Credits ~ 30 credits
- Competitive Advantage
- Career Placement – jobs
- Graduate / Medical Programs
- Interdisciplinary Education
- MS Tracks
  - Pharmaceutical Sciences
  - Regulatory Sciences
- New Tracks – Proposed
  - Public Health, Engineering, Management, Pharmacy, Law
  - Bio fermentation (Biotechnology)
UNIVERSITY OF GEORGIA

DOUBLE DAWGS
PROGRAM

QUALITY & RIGOR

GRADUATE LEVEL COURSES taken while earning an undergraduate degree benefit the student and the quality of the degree program.

A-Year Undergraduate Program

Increased academic rigor through

GRADUATE LEVEL COURSES

Because graduate-level courses taken during an undergraduate degree program count toward a master's degree, students can finish both degrees in 5 years rather than the traditional 6 years.

1-Year Master's Program

provides a strong foundation for graduate student success.

THE UGA ADVANTAGE: Double Dawgs
Excellent Gateway for

- Professional Schools
  - Pharmacy, Medical, Nursing,
  - Dental, Veterinary, Physician Assistant

- Graduate Studies
  - MS, PhD Pharmaceutical & Biomedical Sciences
  - Regulatory and Clinical Programs

- Career & Job Opportunities
  - Pharmaceutical, Biopharmaceutical
  - Government, Research Universities
  - Medical Devices, Nutraceuticals, Cosmetics
“I could have gone into medicine and become a doctor and maybe helped thousands of people in my lifetime, but if you develop a drug, you can help millions.”
—Rick Shimkets
THANK YOU!

Questions