



University Council

March 7, 2025

UNIVERSITY CURRICULUM COMMITTEE – 2024-2025

Susan Sanchez, Chair

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Medicine – Erica Brownfield

Pharmacy – Michelle McElhannon

Public and International Affairs – Ryan Powers

Public Health – Tamora Callands

Social Work – Jennifer Elkins

Veterinary Medicine – Paul Eubig

Graduate School – Rodney Mauricio

Ex-Officio – Provost S. Jack Hu

Undergraduate Student Representative – Ella Colker

Graduate Student Representative – William Walker

Dear Colleagues:

The attached proposal from the College of Pharmacy for a Minor in Cancer Biology will be an agenda item for the March 14, 2025, Full University Curriculum Committee meeting.

Sincerely,

Susan Sanchez, Chair

cc: Provost S. Jack Hu

Dr. Marisa Pagnattaro

## PROPOSAL FOR MINOR PROGRAM OF STUDY

1. **Date:** February 3, 2025
2. **School/College:** College of Pharmacy
3. **Department/Division:** Pharmaceutical and Biomedical Sciences
4. **Minor Name:** Cancer Biology
5. **CIP:** 26091100
6. **Proposed Effective Date:** Fall 2025
7. **Which campus(es) will offer this program?** Athens

8. **Program Description:**

*Provide a brief summary of the objective of the program.*

The proposed Minor in Cancer Biology provides students with a broad understanding of the fundamentals, therapeutics, and treatments of cancer, as well as personalized approaches to cancer treatment. This minor allows students to further their knowledge in the cancer field, particularly students interested in pursuing graduate or professional health education. Additionally, graduates from the program will learn about the latest techniques and technologies used in cancer research and therapeutics.

The Minor in Cancer Biology is proposed based on strong student interest and faculty research expertise at the College of Pharmacy. Currently, the University of Georgia does not offer a major or minor in Cancer Biology. The Department of Pharmaceutical and Biomedical Sciences is an interdisciplinary unit with research spanning broad areas, including biomedical sciences, molecular pharmacology and pharmaceutics, drug discovery and delivery, protein engineering, and medicinal chemistry. As of Spring 2024, there were 254 students enrolled in the Pharmaceutical and Biomedical Sciences (B.S.) degree program. Eleven pharmacy faculty members have active research programs related to cancer, including cancer epigenetics, angiogenesis, tumor growth, gene therapy, drug delivery, biomarkers, and therapeutics. Additionally, the University of Georgia Cancer Center is directed by a Pharmaceutical and Biomedical Sciences faculty member. Students enrolling in the minor will be learning from pharmacy faculty members specializing in cancer research, ranging from basic science research to drug discovery and translational research. The Department of Pharmaceutical and Biomedical Sciences is developing several introductory, intermediate, and advanced courses in cancer biology.

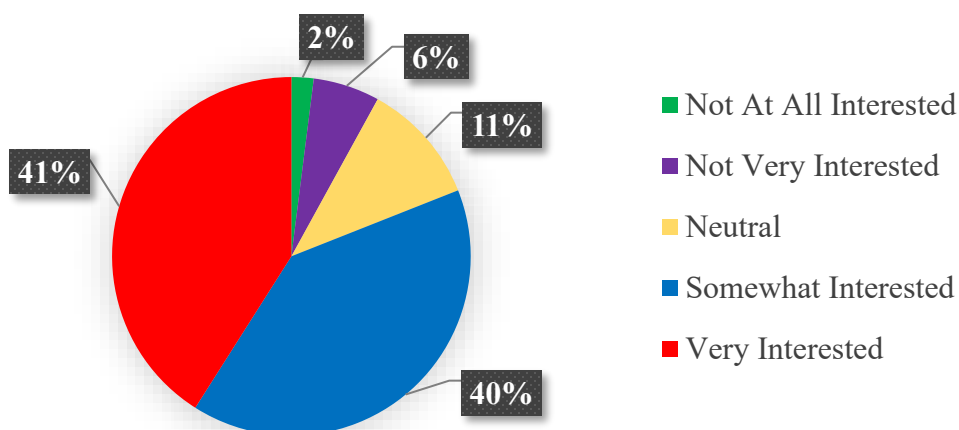
*Student Interest and Demand*

The department has offered PHRM(PMCY) 4000/6000, The War on Cancer, to undergraduate students for a number of years, and this course has been well received by students.

Student Enrollment PHRM(PMCY) 4000/6000, The War on Cancer (3 hours)	
<i>Semester</i>	<i>Number of Enrolled Students</i>
Fall 2024	24
Spring 2024	42
Spring 2023	N/A*
Spring 2022	N/A*
Spring 2021	43
Spring 2020	49

\*Due to the departure of the primary instructor, the course was not offered during the spring 2022 and spring 2023 terms. The College has resumed offering the course since spring 2024 and plans to offer the course at least once per year.

To gauge student interest in a potential Minor in Cancer Biology, a Qualtrics survey was administered to all students in the undergraduate major in Pharmaceutical and Biomedical Sciences (B.S.) as well as students enrolling in the Spring 2024 semester section of PHRM(PMCY) 4000. One hundred and forty-four (144) completed surveys were received. Of these, 81% of respondents indicated they would be somewhat or very interested in a new minor in Cancer Biology with the College of Pharmacy if one were offered.



#### 9. Program of Study/Requirements:

*Include prefixes, numbers, and titles of required courses, as well as total credit hours (must be 15-18 hours). Include any residency requirements or grade requirements.*

A Minor in Cancer Biology requires six (6) hours of required coursework and nine (9) hours of major electives for a total of fifteen (15) hours. All chosen courses used to satisfy the minor requirement must be completed with a grade of “C” (2.0) or higher.

*Required Courses (6 hours)*

PMCY 2020, Pills, Potions, and Drugs in Modern Medicine (3 hours)

PHRM(PMCY) 4000/6000, The War on Cancer (3 hours)

*Elective Courses (9 hours)*

Nine (9) hours of elective coursework are required. Of which, six (6) hours must be upper division (3000-level or above). Additionally, students must take at least one elective course within the College of Pharmacy.

*College of Pharmacy*

Choose a minimum of one course from the list below.  
Any PMCY prefix courses at the 3000-level or above  
PMCY 4110/6110, Human Immunology (3 hours)  
PMCY 4150/6150, Human Pathophysiology (3 hours)

*Other Courses*

BCMB 3100, Introductory Biochemistry and Molecular Biology (4 hours)  
BCMB 3433, Biology for Medicine (4 hours)  
BCMB 3600, Genomics and Bioinformatics (3 hours)  
BCMB 4030L, Bioprocess Technology (4 hours)  
BCMB 4120/6120, Human Biochemistry and Disease (4 hours)  
BCMB(ENTO)(BTEC) 4200/6200, Biotechnology (3 hours)  
BIOL 2900, Clinical Applications of Biological Sciences (1 hour)  
BIOS 2010, Elementary Biostatistics (4 hours)  
BIOS 3000, Intermediate Biostatistics for Public Health Sciences (3 hours)  
CBIO 3400, Cell Biology (4 hours)  
CBIO 3600, Developmental Biology (4 hours)  
CHEM 4120, Chemistry of Drug Design and Drug Action (3 hours)  
ECOL 3820, Evolutionary Medicine (3 hours)  
GENE 3200-3200D, Genetics (4 hours)  
GENE 4400/6400, Epigenetics (3 hours)  
GENE 4500/6500, Human Genetics (3 hours)  
GENE 4540/6540, Cancer Genetics (3 hours)  
INFO 2000, Experiential Data Science Specialization – Foundations (3 hours)  
NUTR 4800/6800, Nutrition and Pharmacotherapy for Disease Management (3 hours)\*  
STAT 4210, Statistical Methods (3 hours)  
VPAT 4000/6000, On the Origins of Disease (3 hours)  
VPHY 3100, Elements of Physiology (3 hours)  
VPHY 4200/6200, Physiologic Basis of Diseases (3 hours)  
*\*Inclusion pending approval from the College of Family and Consumer Sciences.*

Total = 15 hours

## Documentation of Approval and Notification

**Proposal:** Minor in Cancer Biology

**College:** College of Pharmacy

**Departments:** Pharmaceutical and Biomedical Sciences

**Proposed Effective Term:** Fall 2025

### School/College:

- College of Pharmacy Associate Dean, Dr. Duc Do, 2/3/2025
- Head of the Department of Pharmaceutical and Biomedical Sciences, Dr. Yaguang Xi, 3/7/2025

### Use of Course Approvals:

- College of Veterinary Medicine Interim Associate Dean for Undergraduate Affairs, Dr. Gaylen Edwards, 3/10/2025
- Biomedical Physiology Program Director, Dr. Paul Eubig, 3/10/2025
- College of Engineering Assistant Dean, Dr. Mable Fok, 3/12/2025
- Interim Head of the Department of Statistics, Dr. Daniel Hall, 3/11/2025
- Associate Head of the Department of Epidemiology and Biostatistics, Dr. Andreas Handel, 3/7/2025
- Head of the Department of Chemistry, Dr. Jason Locklin, 3/11/2025
- Director of the Division of Biological Sciences, Dr. Kristen Miller, 6/13/24
- Odum School of Ecology Associate Dean, Dr. Pejman Rohani, 3/7/2025
- Head of the Department of Epidemiology and Biostatistics, Dr. Ye Shen, 3/7/2025
- Instructor, Department of Pathology, Dr. Elizabeth Uhl, 3/7/2025