

# DOCTOR OF PHILOSOPHY (PH.D.)

## \*IMPORTANT Note About the Doctor of Philosophy in Biochemistry Degree\*

*This program is no longer accepting students at this time as this field of study is now the Molecular Biophysics and Biochemistry discipline within the new Integrated Biomedical Sciences (IBMS) Program. All information in this section of the Catalog is for the current Biochemistry students only.*

The graduate program in Biochemistry offers students the training necessary for them to conduct independent biochemical research in an academic, industrial, or clinical environment. The Biochemistry curriculum is designed to provide a synergistic series of formal courses, seminars, teaching opportunities, and individualized biochemical research experiences in the laboratories of participating faculty. Students are encouraged to broaden their scientific experience by taking courses in other biomedical science tracks.

## Biochemistry Degree Requirements

A minimum of 72 credit hours and a minimum overall GPA of 3.0 is required for the Ph.D. degree. In addition, all doctoral candidates must register for the BIOC 7099 Dissertation for at least two semesters in order to graduate; only one of the terms may be a summer session. The student is required to demonstrate intellectual command of the subject area of the graduate program and capability to carry out independent and original investigation in the area. The student must successfully defend a dissertation and be recommended by their program COGS for approval of their degree to the Dean of the Graduate School of Biomedical Sciences.

## Biochemistry Plans of Study

### First Year

Fall		Credit Hours
IBMS 5000	Fundamentals Of Biomedical Sciences	8
IBMS 5008	Lab Rotations	2
Total Credit Hours:		10.0

### First Year

Spring		Credit Hours
IBMS 5008	Lab Rotations	2
INTD 6002	Ethics In Research	0.5
BIOC 6036	Macromolecular Structure & Mechanism	2
BIOC 5085	Biophysical Methods In Biology	2
Electives		2.5
Total Credit Hours:		9.0

### Second Year

Fall		Credit Hours
BIOC 6029	MBB Journal Club and Student Research Presentations	2
BIOC 6097	Research	1-12

Electives	4-6	
Total Credit Hours:		7.0-20.0

### Second Year

Spring		Credit Hours
BIOC 6037	Integration Of Metabolic Pathways	2
BIOC 6029	MBB Journal Club and Student Research Presentations	2
BIOC 6097	Research	1-12
BIOC 0003	Scientific Writing: Development and Defense of a Research Proposal	2
Electives		2-3
May: Oral Ph.D. Qualifying Exam		
Total Credit Hours:		9.0-21.0

### Third Year

Fall		Credit Hours
BIOC 6097	Research	1-12
BIOC 6029	MBB Journal Club and Student Research Presentations	2
Total Credit Hours:		3.0-14.0

### Third Year

Spring		Credit Hours
BIOC 6097	Research	1-12
BIOC 6029	MBB Journal Club and Student Research Presentations	2
Dissertation Research Proposal Seminar		
Total Credit Hours:		3.0-14.0

### Fourth Year

Fall		Credit Hours
BIOC 6097	Research	1-12
BIOC 6029	MBB Journal Club and Student Research Presentations	2
Review Presentation by 4th year students		
Total Credit Hours:		3.0-14.0

### Fourth Year

Spring		Credit Hours
BIOC 6097	Research	1-12
BIOC 6029	MBB Journal Club and Student Research Presentations	2
Total Credit Hours:		3.0-14.0

### Fifth Year

Fall		Credit Hours
BIOC 6097	Research	1-12

BIOC 6029	MBB Journal Club and Student Research Presentations	2
Total Credit Hours:		3.0-14.0

**Fifth Year**

<b>Spring</b>		<b>Credit Hours</b>
BIOC 6097	Research	1-12
BIOC 6029	MBB Journal Club and Student Research Presentations	2
Total Credit Hours:		3.0-14.0

<sup>1</sup> Journal club will include Contemporary Biochemistry

## **Biochemistry Objectives/Program Outcomes**

1. Review/interpret research literature
2. Communicate effectively in writing
3. Communicate effectively in verbal presentations
4. Display potential for conducting independent research