EXECUTIVE PH.D. IN BIOCHEMISTRY AND MOLECULAR BIOLOGY

Overview

There are three different tracks in which students may enter and progress towards award of the PhD in Biochemistry and Molecular Biology. The first track involves admission through the Program in Biomedical Sciences (PIBS). Alternatively, students may apply and be directly admitted to the PhD program. Finally, the Executive PhD allows students to complete coursework and perform research at their place of work. In all cases, students are assisted in tailoring a program to match his or her interests. In general, students complete courses offered in a variety of formats, e.g., formal lectures, seminars, and workshops. Each BMB graduate program's curriculum is designed to provide broad knowledge in the various aspects of molecular biology and biochemistry in addition to intensive training in certain specialized areas of research according to the student's interests.

Curriculum

Code	Title	Credit Hours
Journal Club		**10-14**
BMB 701	Research Journal Club. [1]	
Required Courses		
BMB 709	Advanced Biochemistry and Molecular Biology	3
BMB 710	Advanced Topics in Biochemistry and Molecular Biology	3-5
BMB 714	Molecular Genetics	4
BMB 715	Structural Biology and Applications to Drug Discovery	2
BMB 719	Fundamentals of Epigenetics	3
Research Credits		**35**
BMB 830	Doctoral Dissertation	
BMB 840	Doctoral Dissertation- Post Candidacy	
Total Credit Hours		**60-66**

[1] Students in this degree program take BMB 701 multiple times, at 1 credit each for a total of 10 to 14 credits.

Suggested Plan of Study

Please note that the following is only a sample curriculum plan. Current students must discuss their plan with their program director to make adjustments as needed. It is the student's responsibility to contact the program to verify the information.

Year One		
Fall		**Credit Hours**
BMB 701	Research Journal Club.	1
BMB 714	Molecular Genetics	4
BMB 715	Structural Biology and Applications to Drug Discovery	2
BMB 830	Doctoral Dissertation	2
	Credit Hours	**9**
Spring		
BMB 701	Research Journal Club.	1
BMB 709	Advanced Biochemistry and Molecular Biology	3
BMB 719	Fundamentals of Epigenetics	3
BMB 830	Doctoral Dissertation	2
	Credit Hours	**9**
Summer		
BMB 840	Doctoral Dissertation- Post Candidacy	2
	Credit Hours	**2**
Year Two		
Fall		
BMB 701	Research Journal Club.	1
BMB 710	Advanced Topics in Biochemistry and Molecular Biology	3

BMB 840	Doctoral Dissertation- Post Candidacy	2
	Credit Hours	**6**
Spring		
BMB 701	Research Journal Club.	1
BMB 840	Doctoral Dissertation- Post Candidacy	2
	Credit Hours	**3**
Summer		
BMB 840	Doctoral Dissertation- Post Candidacy	2
	Credit Hours	**2**
Year Three		
Fall		
BMB 701	Research Journal Club.	1
BMB 840	Doctoral Dissertation- Post Candidacy	4
	Credit Hours	**5**
Spring		
BMB 701	Research Journal Club.	1
BMB 840	Doctoral Dissertation- Post Candidacy	4
	Credit Hours	**5**
Summer		
BMB 840	Doctoral Dissertation- Post Candidacy	4
	Credit Hours	**4**
Year Four		
Fall		
BMB 701	Research Journal Club.	1
BMB 840	Doctoral Dissertation- Post Candidacy	4
	Credit Hours	**5**
Spring		
BMB 701	Research Journal Club.	1
BMB 840	Doctoral Dissertation- Post Candidacy	4
	Credit Hours	**5**
Summer		
BMB 840	Doctoral Dissertation- Post Candidacy	4
	Credit Hours	**4**
Year Five		
Fall		
BMB 701	Research Journal Club.	1
BMB 840	Doctoral Dissertation- Post Candidacy	4
	Credit Hours	**5**
	Total Credit Hours	**64**

Mission

In agreement with the overall mission of both the University of Miami and the Miller School of Medicine, the BMB Executive PhD program strives to provide superior training in biochemical and molecular biological research and education to industrial and/or government laboratory professionals seeking a PhD degree. After the successful completion of this program, individuals will have a unique perspective on fundamental biochemical problems, resulting in more career options and increasing the likelihood that they will make important contributions to scientific progress and society.

Goals

Student Learning Outcomes

- Students will demonstrate an overall knowledge and understanding of the core concepts in biochemistry and molecular biology, including the essential skills to conduct research in biochemistry and molecular biology.

- Students will demonstrate critical thinking skills, the capability to develop hypotheses, and the ability to evaluate their hypotheses, paying attention to responsible conduct of research as appropriate.
- Students will demonstrate the ability to write effective scientific reports and to present scientific results orally.