

Doctoral Degree in Integrative Biology-Biomedical Science

Completion of the Biomedical Science concentration within the Integrative Biology program provides students with advanced knowledge and research experience in the biomedical science field. The IBBS curriculum focuses strongly on both knowledge-based and experimental-based biomedical science courses and teaches the student appropriate scientific methodology. Students who complete the IBBS concentration develop the skills and expertise they need to succeed both within and outside academia. IBBS faculty are active experts in their respective biomedical science fields and support development of the students' research in the areas of Human Genetics and Genomics; Cancer Biology and Prevention; Microbiology, Immunology and Infectious Disease; HIV/AIDS Mechanisms and Treatments; Respiratory Physiology and Biophysics; Age-Related Eye Diseases including Cataract and Age-Related Macular Degeneration; Breast Cancer Mechanisms and Therapy; Cardiometabolic Risk in Psychiatry; Huntington's Disease Mechanisms; Alzheimer's Disease Mechanisms and Therapy; Vaccine Development; Osteoarthritis Prevention and Treatment; Prostate Cancer Mechanisms; Reducing Premature Death and Disability from Heart Attacks and Stroke; Restrictive Cardiomyopathy Mechanisms; Childhood Malaria Mechanisms and Therapy Development in Children and others.

The Biomedical Science concentration falls under the umbrella of the Integrative Biology major and students accepted to the concentration are subject to all Integrative Biology policies and regulations as well as additional regulations that are specific to the concentration.

Integrative Biology-Biomedical Science Ph.D. Program Degree Requirements

The Biomedical Science concentration falls under the umbrella of the Integrative Biology major and students accepted to the concentration are subject to all Integrative Biology policies and regulations as well as additional regulations that are specific to each concentration. Below are degree requirements specific to the Biomedical Science Concentration:

Biomedical Science Concentration (IBBS) Core Courses

Students who enter the IBBS concentration without a core course or equivalent must complete one of the core courses listed below. When this course is completed, it may be used toward fulfillment of the 9-credit Integrative Biology elective requirement.

Biomedical Data and Informatics	BSC 6459	3
Scientific Writing	BSC 6846	3
Advanced Molecular and Cell Biology	PCB 5532	3
Human Genetics	PCB 6665	3

Biomedical Science Concentration (IBBS) Approved Electives

Students may choose from the following approved IB-BS electives toward fulfillment of the 9-credit Integrative Biology elective requirement. Students may elect to complete up to 6 credits designated Special Topics with the approval of their Ph.D. supervisor.

Integrated Morphology 1	BMS 6102C	4
Integrated Morphology 2	BMS 6104C	4
Autonomic Function and Disease	BMS 6523	3
Fundamentals of General Pathology	BMS 6601	3
Brain Diseases: Mechanism and Therapy	BMS 6736	3
Macromolecules and Human Disease	GMS 6301	3
Molecular Basis of Disease and Therapy	GMS 6302	3
Host Defense and Inflammation	MCB 6208	3
Neurobiology of Addiction	PCB 5844	3
Advanced Cell Physiology	PCB 6207	3
Molecular Basis of Human Cancer	PCB 6235	3
Problem-Based Immunology	PCB 6238	3
Tumor Immunology	PCB 6239	3
Biomedical Data and Informatics	PCB 6459	3
Molecular Biology of the Cardiovascular System and Cardiac Disease	PCB 6705	3
Adult Neurogenesis	PCB 6848	3
Physiology of the Heart	PCB 6885	3
Developmental Neurobiology	PSB 6515	3

For More information for the admission requirements Click [Here](#)

Integrative Biology and Neuroscience (IBAN), [click here](#).