

# BIOMEDICAL SCIENCES, CERTIFICATE (1801)

## Program Coordinator

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The Department of Biological Sciences at Western Kentucky University offers an 18-hour Graduate Certificate in Biomedical Sciences with highly flexible start dates, completion timelines, and the ability to complete all coursework asynchronously online. The certificate provides graduate-level preparation for professional school applications, career advancement, professional accreditation, or future graduate study.

Certificate coursework strengthens students' critical thinking and scientific reasoning skills while providing foundational knowledge relevant to professional programs or other advanced degrees in biology. Up to 12 credit hours accrued in the certificate program are eligible to count towards the 30-hour M.S. in Biology, and both credentials may be earned with a minimum of 36 credit hours. The certificate includes coursework in cell biology, molecular genetics, virology, cancer biology, immunology, microbiology, biochemistry and neurobiology, with elective courses available in statistics, evolution, plant therapeutics, and toxicology. Students may enter the certificate program during any of WKU's four academic terms, with start dates in January, May, August, and December. Students may choose accelerated or relaxed timelines based on their needs.

## Graduate Studies Admission

Please refer to the admission section (<http://catalog.wku.edu/graduate/admission/>) of this catalog for Graduate Studies admission requirements.

## Program Requirements (18 hours)

Code	Title	Hours
<b>Required Core Courses</b>		
Select 6-12 hours of the following:		
BIOL 403G	Molecular Basis of Cancer	
BIOL 407G	Virology	
BIOL 411G	Cell Biology	
BIOL 495G	Molecular Genetics	
CHEM 446G	Biochemistry	
<b>Required Advanced Courses</b>		
Select 6-12 hours of the following:		
BIOL 536	Advanced Neurobiology	
BIOL 560	Advanced Cell Biology	
BIOL 566	Advanced Molecular Genetics	
BIOL 568	Advanced Microbiology	
BIOL 570	Advanced Immunology	
CHEM 562	Advanced Biochemistry	
<b>Electives</b>		
Select 0 to 6 hours of the following:		
BIOL 490G	Plants as Alternative Therapeutics	
BIOL 522	Biological Systematics	
BIOL 524	Evolution and Ecological Genetics	
BIOL 543	Environmental Science Concepts	
BIOL 545	Animal Communication	

BIOL 579	Mechanistic Toxicology	
BIOL 582	Biometry	
CHEM 535	Analytical Biochemistry	
<b>Total Hours</b>		<b>18</b>
<b>Completion of Certificate Assessment Exam</b>		