



OLLSCOIL NA GAILLIMHE  
UNIVERSITY OF GALWAY

Bachelor of Science Degree  
College of Science and Engineering  
2024/2025

# BSc BIOMEDICAL SCIENCE

[www.universityofgalway.ie/science-engineering/](http://www.universityofgalway.ie/science-engineering/)

Year 1	Year 2	Year 3	Year 4
<b>[60 Credits]</b>	<b>[60 Credits]</b>	<b>[60 Credits]</b>	<b>[60 Credits]</b>
There are 60 credits of Core modules.	There are 20 credits of Core modules.  Choose 2 pathways to a total value of 40 credits:  Anatomy Biochemistry Pharmacology Physiology	There are 15 credits of Core modules.  Choose two optional modules to a value of 10 ECTS: (Enrolment in an elective is subject to having the pre-requisites, space in the module and timetable compatibility)  one of:  Neuroanatomy or Developmental Biology or Introduction to Toxicology or Endocrine Control of Homeostasis and Reproduction Mathematical Molecular Biology I  and  one of:  Immunology Introduction to Bioinformatics or Human Reproductive Anatomy or Neuropharmacology or Mathematical Molecular Biology II  Choose one Pathway to a value of 35 credits:  Anatomy Biochemistry Pharmacology Physiology	Choose one module to a value of 5 Credits:  Modern Biotechnologies Advanced Technologies for Therapeutics Anatomy for Clinical Needs  Choose one Pathway to a value of 55 credits:  Anatomy Biochemistry Pharmacology Physiology

Year 1	Year 2	Year 3	Year 4
[Core: 60 credits]	[Core: 20 credits; Pathways: 40 credits]	[Core: 15 credits; Options: 10 credits; Pathway: 35 credits]	[Options: 5 credits; Pathway: 55 credits]
<p><i>Full Year – Semester 1 and Semester 2</i></p> <p>BM111 Introduction to Biomedical Research [5] BM112 Biomedical Debates [5] BO101 Biology [15] CH120 Chemistry: Molecular Science [15] PH101 Physics [15]</p> <p><i>Semester 1</i></p> <p>BM110 Introduction to Science Communication [5]</p>	<p><i>Semester 1</i></p> <p>BO201 Molecular and Cellular Biology [5] BI208 Protein Structure and Function [5]</p> <p><i>Semester 2</i></p> <p>BM202 Biomedical Seminars [5] BM204 Community Knowledge Initiative Programme [5]</p>	<p><i>Semester 1</i></p> <p>ST314 Introduction to Biostatistics [5] BM3101 Research Methods in Biomedical Science [5]</p> <p>AN326 Neuroanatomy [5]* BO3101 Developmental Biology [5]* PM311 Introduction to Toxicology [5]* SI3107 Endocrine Control of Homeostasis and Reproduction [5]* MA215 Mathematical Molecular Biology I [5]*</p> <p><i>Semester 2</i></p> <p>BM406 Applications of Biomedical Science [5] AN3109 Human Reproductive Anatomy [5]* MA324 Introduction to Bioinformatics [5]* MA216 Mathematical Molecular Biology II [5]* PM3102 Neuropharmacology [5]* SI3106 Immunology [5]*</p>	<p><i>Semester 1</i></p> <p>BI448 Modern Biotechnologies [5]*</p> <p><i>Semester 2</i></p> <p>PM435 Advanced Technologies for Therapeutics [5]* AN4110 Anatomy for Clinical Needs [5]*</p>
		<p>*Select one 5-credit optional module in Semester 1 and one 5-credit optional module in Semester 2. Enrolment in an elective is subject to having the pre-requisites, space in the module and timetable compatibility.</p>	<p>*Select one 5-credit optional module. Enrolment in an elective is subject to having the pre-requisites, space in the module and timetable compatibility.</p>

# BSc Biomedical Science – Anatomy Pathway

Year 1	Year 2	Year 3	Year 4
	<b>[Pathway: 20 credits]</b>	<b>[Pathway: 35 credits]</b>	<b>[Pathway: 55 credits]</b>
	<p><i>Semester 1</i></p> <p>AN2101 <b>Cells and Tissues [10]</b></p> <p><i>Semester 2</i></p> <p>AN223 <b>Embryology &amp; Development [5]</b> AN226 <b>Systems Histology [5]</b></p>	<p><i>Semester 1</i></p> <p>AN3105 <b>Gross Anatomy I [10]</b> AN326 <b>Neuroanatomy [5]</b></p> <p><i>Semester 2</i></p> <p>AN325 <b>Anatomy Research Mini Project [5]</b> AN3106 <b>Gross Anatomy II [10]</b> AN3109 <b>Human Reproductive Anatomy [5]</b></p>	<p><i>Semester 1</i></p> <p>AN4101 <b>Gross Anatomy III [10]</b> AN4103 <b>Microscopy and Imaging [10]</b> AN441 <b>Physical Anthropology [5]</b> AN4109 <b>Research and Communication Skills in Anatomy [5]</b></p> <p><i>Semester 2</i></p> <p>AN4107 <b>Anatomy of the Head and Neck [5]</b> AN444 <b>Research Project [20]</b></p>

# BSc Biomedical Science – Biochemistry Pathway

Year 1	Year 2	Year 3	Year 4
	<b>[Pathway: 10 credits; Options: 10 credits]</b>	<b>[Pathway: 35 credits]</b>	<b>[Pathway: 55 credits]</b>
	<p><i>Semester 1</i></p> <p>Select 10 credits from another pathway:</p> <p><b>Anatomy</b></p> <p>AN2101 Cells and Tissues [10]*</p> <p><b>Pharmacology</b></p> <p>PM209 Applied Concepts in Pharmacology [5]* PM208 Fundamental Concepts in Pharmacology [5]*</p> <p><b>Physiology</b></p> <p>SI2101 Introductory Physiology [10]*</p> <p><i>Semester 2</i></p> <p>BI206 Gene Technologies and Molecular Medicine [5] BI207 Metabolism and Cell Signalling [5]</p>	<p><i>Semester 1</i></p> <p>BI309 Cell Biology [5] BO3101 Developmental Biology [5] BI319 Molecular Biology [5]</p> <p><i>Semester 2</i></p> <p>BI325 Biochemistry Research Mini Project [5] BI313 Cell Signalling [5] BI317 Human Molecular Genetics [5] BI321 Protein Biochemistry [5]</p>	<p><i>Full Year – Semester 1 and Semester 2</i></p> <p>BI453 Biochemistry Research Project [15] BI446 Current Topics in Bioscience [5] BI447 Literature Review and Presentation [10]</p> <p><i>Semester 1</i></p> <p>BI445 Biomolecules [5] BI452 Biochemistry Principles and Experimental Design [5]</p> <p><i>Semester 2</i></p> <p>BI429 Advanced Chromosome Biology [5] BI449 Molecular and Cellular Biology [5] BI451 Research Paper Analysis [5]</p>
	* Select modules to a value of 10 credits from another pathway		

# BSc Biomedical Science – Pharmacology Pathway

Year 1	Year 2	Year 3	Year 4
	<b>[Pathway: 20 credits]</b>	<b>[Pathway: 35 credits]</b>	<b>[Pathway: 55 credits]</b>
	<p><i>Semester 1</i></p> <p>PM209 <b>Applied Concepts in Pharmacology [5]</b> PM208 <b>Fundamental Concepts in Pharmacology [5]</b></p> <p><i>Semester 2</i></p> <p>PM210 <b>Molecular Pharmacology and Signalling [10]</b></p>	<p><i>Semester 1</i></p> <p>PM309 <b>Drugs and Disease I [10]</b> PM311 <b>Introduction to Toxicology [5]</b></p> <p><i>Semester 2</i></p> <p>PM3103 <b>Advanced Pharmacology [5]</b> PM3102 <b>Neuropharmacology [5]</b> PM3101 <b>Pharmacology in Practice [5]</b> PM325 <b>Pharmacology Research Mini Project [5]</b></p>	<p><i>Semester 1</i></p> <p>PM432 <b>Experimental Pharmacology [10]</b> PM431 <b>Research Project [20]</b></p> <p><i>Semester 2</i></p> <p>PM436 <b>Advanced Toxicology [5]</b> PM433 <b>Drug Development and Emerging Therapies [10]</b> PM434 <b>Molecular Pharmacology and Therapeutics [10]</b></p>
<p>Module Descriptors for Years 1 to 4 are available at: <a href="https://www.universityofgalway.ie/science-engineering/undergraduateprogrammes/bachelorofsciencebiomedicalscience/#course_outline">https://www.universityofgalway.ie/science-engineering/undergraduateprogrammes/bachelorofsciencebiomedicalscience/#course_outline</a></p>			

# BSc Biomedical Science – Physiology Pathway

Year 1	Year 2	Year 3	Year 4
	<b>[Pathway: 20 credits]</b>	<b>[Pathway: 35 credits]</b>	<b>[Pathway: 60 credits]</b>
	<p><i>Semester 1</i></p> <p>SI2101 <b>Introductory Physiology [10]</b></p> <p><i>Semester 2</i></p> <p>SI2102 <b>Systems Physiology [10]</b></p>	<p><i>Full Year – Semester 1 and Semester 2</i></p> <p>SI3104 <b>Experimental Physiology [10]</b></p> <p><i>Semester 1</i></p> <p>SI3103 <b>Endocrinology &amp; Reproduction [5]</b> SI311 <b>Neurophysiology [5]</b></p> <p><i>Semester 2</i></p> <p>SI3105 <b>Cardiorespiratory Physiology [5]</b> SI325 <b>Physiology Research Mini Project [5]</b> SI3106 <b>Immunology [5]</b></p>	<p><i>Semester 1</i></p> <p>SI4105 <b>Communication Skills [10]</b> SI4103 <b>Integrative Physiology [10]</b> SI4104 <b>Pathophysiology of Disease [10]</b></p> <p><i>Semester 2</i></p> <p>SI435 <b>Research Project [20]</b> SI4106 <b>Therapeutics of Disease [10]</b></p>
<p>Module Descriptors for Years 1 to 4 are available at: <a href="https://www.universityofgalway.ie/science-engineering/undergraduateprogrammes/bachelorofsciencebiomedicalscience/#course_outline">https://www.universityofgalway.ie/science-engineering/undergraduateprogrammes/bachelorofsciencebiomedicalscience/#course_outline</a></p>			