



NUI Galway
OÉ Gaillimh

College of Science and Engineering
2022/2023

Fullscreen

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BSc BIOMEDICAL SCIENCE



(V.1)

www.nuigalway.ie/science-engineering

Overview

Year 1	Year 2	Year 3	Year 4
[60 credits]	[60 credits]	[60 credits]	[60 credits]
There are 60 credits of Core modules.	<p>There are 20 credits of Core modules.</p> <p>Choose 2 pathways to a total value of 40 credits:</p> <ul style="list-style-type: none"> Anatomy Biochemistry Pharmacology Physiology 	<p>There are 15 credits of Core modules.</p> <p>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)</p> <p>one of:</p> <ul style="list-style-type: none"> Developmental Biology or Introduction to Toxicology or Endocrinology or Neurophysiology or Mathematical Molecular Biology I <p>and</p> <p>one of:</p> <ul style="list-style-type: none"> Introduction to Bioinformatics or Human Reproductive Anatomy or Neuropharmacology or Exercise Physiology or Renal Physiology or Mathematical Molecular Biology II <p>Choose one Pathway to a value of 35 credits:</p> <ul style="list-style-type: none"> Anatomy Biochemistry Pharmacology Physiology 	<p>Choose one module to a value of 5 Credits:</p> <ul style="list-style-type: none"> Modern Biotechnologies Advanced Technologies for Therapeutics Immunology Current Concepts in Anatomy 2 <p>Choose one Pathway to a value of 55 credits:</p> <ul style="list-style-type: none"> Anatomy Biochemistry Pharmacology Physiology
<p>Module Descriptors for Years 1 to 4 are available at: http://www.nuigalway.ie/science-engineering/undergraduateprogrammes/biomedical-science.html#course_outline</p>			

BSc Biomedical Science

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]</p> <p>BO101 Biology [15]</p> <p>CH120 Chemistry: Molecular Science [15]</p> <p>PH101 Physics [15]</p> <p><u>Semester 1</u></p> <p>BM110 Introduction to Science Communication [5]</p> <p>-----</p> <p><u>Semester 2</u></p> <p>BM112 Biomedical Debates [5]</p>	<p><u>Semester 1</u></p> <p>BO201 Molecular and Cellular Biology [5]</p> <p>BI208 Protein Structure and Function [5]</p> <p>-----</p> <p><u>Semester 2</u></p> <p>BM202 Biomedical Seminars [5]</p> <p>BM204 Community Knowledge Initiative Programme [5]</p>	<p><u>Semester 1</u></p> <p>ST314 Introduction to Biostatistics [5]</p> <p>BM3101 Research Methods in Biomedical Science [5]</p> <p>BO3101 Developmental Biology [5]*</p> <p>PM311 Introduction to Toxicology [5]*</p> <p>SI312 Endocrinology [5]*</p> <p>SI311 Neurophysiology [5]*</p> <p>MA215 Mathematical Molecular Biology I [5]*</p> <p>-----</p> <p><u>Semester 2</u></p> <p>BM406 Applications of Biomedical Science [5]</p> <p>SI328 Exercise Physiology [5]*</p> <p>AN3109 Human Reproductive Anatomy [5]*</p> <p>MA324 Introduction to Bioinformatics [5]*</p> <p>MA216 Mathematical Molecular Biology II [5]*</p> <p>PM3102 Neuropharmacology [5]*</p> <p>SI331 Renal Physiology [5]*</p>	<p><u>Semester 1</u></p> <p>SI408 Immunology [5]*</p> <p>BI448 Modern Biotechnologies [5]*</p> <p>-----</p> <p><u>Semester 2</u></p> <p>PM435 Advanced Technologies for Therapeutics [5]*</p> <p>AN4106 Current Concepts in Anatomy 2 [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>

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BSc Biomedical Science – Anatomy Pathway

Year 1	Year 2	Year 3	Year 4
	[Pathway: 20 credits]	[Pathway: 35 credits]	[Pathway: 55 credits]
	<p><u>Semester 1</u></p> <p>AN2101 Cells and Tissues [10]</p> <p>-----</p> <p><u>Semester 2</u></p> <p>AN223 Embryology & Development [5]</p> <p>AN226 Systems Histology [5]</p>	<p><u>Semester 1</u></p> <p>AN3105 Gross Anatomy I [10]</p> <p>AN326 Neuroanatomy [5]</p> <p>-----</p> <p><u>Semester 2</u></p> <p>AN325 Anatomy Research Mini Project [5]</p> <p>AN3106 Gross Anatomy II [10]</p> <p>AN3109 Human Reproductive Anatomy [5]</p>	<p><u>Semester 1</u></p> <p>AN4105 Current Concepts in Anatomy 1 [5]</p> <p>AN4101 Gross Anatomy III [10]</p> <p>AN4108 Head, Neck and Advanced Neuroanatomy [5]</p> <p>AN4103 Microscopy and Imaging [10]</p> <p>-----</p> <p><u>Semester 2</u></p> <p>AN441 Physical Anthropology [5]</p> <p>AN444 Research Project [20]</p>

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BSc Biomedical Science – Biochemistry Pathway

Year 1	Year 2	Year 3	Year 4
	[Pathway: 10 credits; Options: 10 credits]	[Pathway: 35 credits]	[Pathway: 55 credits]
	<p><u>Semester 1</u> Select 10 credits from another pathway:</p> <p>Anatomy</p> <p>AN2101 Cells and Tissues [10]*</p> <p>Pharmacology</p> <p>PM209 Applied Concepts in Pharmacology [5]*</p> <p>PM208 Fundamental Concepts in Pharmacology [5]*</p> <p>Physiology</p> <p>SI206 Introduction to Physiology and Gastrointestinal [5]*</p> <p>SI207 Nerve and Muscle [5]*</p> <p>-----</p> <p><u>Semester 2</u></p> <p>BI206 Gene Technologies and Molecular Medicine [5]</p> <p>BI207 Metabolism and Cell Signalling [5]</p>	<p><u>Semester 1</u></p> <p>BI309 Cell Biology [5]</p> <p>BO3101 Developmental Biology [5]</p> <p>BI319 Molecular Biology [5]</p> <p>-----</p> <p><u>Semester 2</u></p> <p>BI325 Biochemistry Research Mini Project [5]</p> <p>BI313 Cell Signalling [5]</p> <p>BI317 Human Molecular Genetics [5]</p> <p>BI321 Protein Biochemistry [5]</p>	<p><u>Full Year – Semester 1 and Semester 2</u></p> <p>BI453 Biochemistry Research Project [15]</p> <p>BI446 Current Topics in Bioscience [5]</p> <p>BI447 Literature Review and Presentation [10]</p> <p><u>Semester 1</u></p> <p>BI445 Biomolecules [5]</p> <p>BI452 Biochemistry Principles and Experimental Design [5]</p> <p>-----</p> <p><u>Semester 2</u></p> <p>BI429 Advanced Chromosome Biology [5]</p> <p>BI449 Molecular and Cellular Biology [5]</p> <p>BI451 Research Paper Analysis [5]</p>
	* Select modules to a value of 10 credits from another pathway		
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BSc Biomedical Science – Pharmacology Pathway

Year 1	Year 2	Year 3	Year 4
	[Pathway: 20 credits]	[Pathway: 35 credits]	[Pathway: 55 credits]
	<p><u>Semester 1</u></p> <p>PM209 Applied Concepts in Pharmacology [5]</p> <p>PM208 Fundamental Concepts in Pharmacology [5]</p> <p>-----</p> <p><u>Semester 2</u></p> <p>PM210 Molecular Pharmacology and Signalling [10]</p>	<p><u>Semester 1</u></p> <p>PM309 Drugs and Disease I [10]</p> <p>PM311 Introduction to Toxicology [5]</p> <p>-----</p> <p><u>Semester 2</u></p> <p>PM3103 Advanced Pharmacology [5]</p> <p>PM3102 Neuropharmacology [5]</p> <p>PM3101 Pharmacology in Practice [5]</p> <p>PM325 Pharmacology Research Mini Project [5]</p>	<p><u>Semester 1</u></p> <p>PM432 Experimental Pharmacology [10]</p> <p>PM431 Research Project [20]</p> <p>-----</p> <p><u>Semester 2</u></p> <p>PM436 Advanced Toxicology [5]</p> <p>PM433 Drug Development and Emerging Therapies [10]</p> <p>PM434 Molecular Pharmacology and Therapeutics [10]</p>

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BSc Biomedical Science – Physiology Pathway

Year 1	Year 2	Year 3	Year 4
	[Pathway: 20 credits]	[Pathway: 35 credits]	[Pathway: 55 credits]
	<p><u>Semester 1</u></p> <p>SI206 Introduction to Physiology and Gastrointestinal [5]</p> <p>SI207 Nerve and Muscle [5]</p> <p>-----</p> <p><u>Semester 2</u></p> <p>SI208 Cardiovascular Physiology [5]</p> <p>SI212 Respiratory Physiology [5]</p>	<p><u>Full Year – Semester 1 and Semester 2</u></p> <p>SI329 Laboratory Methods in Physiology [5]</p> <p><u>Semester 1</u></p> <p>SI326 Advanced Cardiovascular Physiology [5]</p> <p>SI312 Endocrinology [5]</p> <p>SI311 Neurophysiology [5]</p> <p>-----</p> <p><u>Semester 2</u></p> <p>SI328 Exercise Physiology [5]</p> <p>SI325 Physiology Research Mini Project [5]</p> <p>SI331 Renal Physiology [5]</p>	<p><u>Semester 1</u></p> <p>SI438 Advanced GIT [5]</p> <p>SI422 Advanced Neurophysiology [5]</p> <p>SI4102 Science Communication Skills [5]</p> <p>SI437 Reproduction and Aging [5]</p> <p>SI436 Therapeutics [5]</p> <p>-----</p> <p><u>Semester 2</u></p> <p>SI4101 Case Based Physiology [5]</p> <p>SI432 Pathophysiology [5]</p> <p>SI435 Research Project [20]</p>

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