<script>dataLayer.push({'course_title':' Biochemistry & Molecular Biology (BBS1)'});</script>

<h1 class="pageTitle"> Biochemistry & Molecular Biology (BBS1) </h1>
<h2> </h2>

In this degree students will explore life at the molecular level. This will enable them to pursue a career in biomedical and biomolecular science. <h3></h3>

Curricular information is subject to change

Show/hide content

Vision and Values

In Biochemistry and Molecular Biology you will study life at the molecular level. The programme is aimed at students who wish to understand the building blocks of living things and how they assemble together to generate life. It is a highly research driven subject and so you will acquire the knowledge and practical skills required to examine and quantify a wide range of biological systems. The subject is ideal for those who want to work at the molecular level of biology and have not yet decided in which area they wish to specialize. Our graduates have strong problem solving and analytical skills, and are highly valued employees in a wide range of occupations. They make important contributions to biomedicine and biotechnology. In your degree a research based learning environment is achieved through a combination of individual and group work, formal lectures, and hands-on lab based practical classes. Assessment is by a combination of end of term examinations and continuous assessment. We provide students with a flexible learning environment that students can adjust to satisfy their personal learning objectives. There are core programme modules as well as optional modules which allow you to select modules which fulfill your training needs and help you achieve your personal career objectives. In second year, general laboratory skills are acquired while in 3rd year each module has a practical component. In 4th year students can undertake a research project under the guidance of an experienced research scientist. These research scientists are experts in a wide range of biochemical areas including drug development, protein structure and function, as well as diseases such as cancer, diabetes, depression and cardiovascular disease. They will help familiarize students with current/modern biochemical research. Graduates will be able to communicate research findings through written and oral presentation. Our graduates will also be familiar with a range of powerful technologies that are highly valued in research and industry.

Subject Description

Programme Outcomes

1 - Biochemistry & Molecular Biology graduates should have a deep understanding of the fundamental biochemical processes in all living organisms and the ability to undertake biochemical research.

2 - Graduates will have the ability to undertake biochemical research in drug discovery, microbiology, neuroscience, medicine, pharmacology, veterinary medicine, sports medicine, nutrition and agriculture.

3 - Be proficient in a wide range experimental techniques used for studying living organisms at the molecular level.

4 - Have the ability to read, understand and critically assess state of the art biomolecular research and apply it to current research questions.

5 - Have the Biochemical skills required to function as a key resource for the biotechnology and biotherapeutic industries, hospital laboratories, the pharmaceutical industry and modern research laboratories.

6 - Develop a clear understanding of metabolism and also how changes in the transcriptome, metabolome and proteome affect health and disease.

7 - Have the knowledge required to understand and develop new treatment strategies for diseases such as arthritis, cancer, diabetes and Alzheimer's disease.

8 - Acquire many transferable skills: Analytical, communication, research, problem solving, numerical, written, observational, planning, organizational, computational. All good preparation for any career.

9 - The ability to communicate their research findings in written format, as well as by informal and formal oral presentations.

10 - Development of interpersonal and teamwork skills required for collaborative research.

11 - Statistical analysis and generation of data sets, graphical presentations and data interpretation. Utilisation of online resources.

12 - Students will be inquisitive, enthusiastic, questioning and have acquired ethical awareness and an appreciation of scientific integrity.

Non-standard Progression Requirements

Additional Standards for Continuation

Approved Additional Standards for Continuation in undergraduate degree programmes in Science (all majors):

Students who return failing grades in a Trimester amounting to 15 credits, or more, will be identified under the UCD Continuation and Readmission Policy. Students whose rate of progression and performance over two academic sessions (2 years) is deemed unacceptable will be referred to the Academic Council Committee on Student Conduct and Capacity for exclusion from the programme.

Understanding your Degree

In this degree, you will explore life at the molecular level. This will enable you to pursue a career in biomedical and biomolecular science.

The Biochemistry & Molecular Biology programme aims to explore and understand every aspect of the structure and function of all living things at the molecular level. The combination of these subjects into one degree programme unites the molecular approach of Chemistry with the breadth and diversity of Biology. Both use varied and powerful experimental techniques to examine living organisms, their component parts and molecules that play a role in the function of the cell.

Biochemistry & Molecular Biology occupy a central position in modern biological research. The degree programme covers a wide range of topics including the structural biology of proteins and enzymes, biotechnology, bioinformatics and proteomics, structure-based drug design, molecular endocrinology, cell signalling, the molecular basis of disease and genetic information processing.

Mapping your Degree

International Study Opportunities

You may apply to study abroad for either a semester or a year through the Erasmus programme or on a non-EU exchange. UCD has over 200 Erasmus partners in Europe and an increasing number of non-EU exchange agreements with universities in the USA, Canada, Australia, Japan and elsewhere.

Please visit the Erasmus section by clicking on the International Office link at the top of this page.

Career Opportunities

You will graduate with a degree in Biochemistry & Molecular Biology that will have equipped you with the skills required to pursue a career in any avenue of modern biomolecular research. You will be expected to be able to obtain positions in a wide range of industrial and academic facilities including the pharmaceutical and biotechnological industries, forensic science and clinical laboratories.

In addition, you may pursue careers in teaching, publishing and management. A degree in Biochemistry & Molecular Biology is also good preparation for entry into professions such as medicine.

Further Information & Contact Details

** Professor J.P.G. Malthouse,**
UCD Conway Institute of Biomolecular and Biomedical Research
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Dublin 4
Tel: +353 1 716 6872
Email:
Web:www.ucd.ie/horizons

Major Information by Stage

Stage 3
Students take eight core modules and at least two options. Students must take a minimum of 50 credits of modules (core and options) from within the BSc programme. Additional modules may be selected from the BSc programme or alternatively, 10 credits may be selected from elective modules.

Stage 4
Students must take a minimum of 60 credits of modules (core and options) from within the BSc programme. Students take 5 core modules and one module from Set A.

View All Modules

Module ID	Module Title	Trimester	Credits

Stage 3 Core Modules			
		Autumn	5
		Autumn	5
		Autumn	5
		Autumn	5
		Spring	5
		Spring	5
		Spring	5
		Spring	5
Stage 3 Options - A)2 OF: Students should select 2 modules this from list:			
		Autumn	5
		Autumn	5
		Autumn	5
		Autumn	5
		Spring	5
		Spring	5
		Spring	5
		Spring	5
		Spring	5
Stage 4 Core Modules			
		Autumn	5
		Autumn	5
		Spring	5
		Spring	5
		Spring	5
Stage 4 Options - A)1 OF: Students taking BMOL 40090 (Research Project Erasmus, Copenhagen) OR BMOL40200 (Industry Research Project) are exempt from Autumn core modules in their respective disciplines.			
		2 Trimester duration (Aut-Spr)	20
		2 Trimester duration (Aut-Spr)	25
		2 Trimester duration (Aut-Spr)	25
		Autumn	15

View All Modules (continued)

Module ID	Module Title	Trimester	Credits
Stage 4 Options - B)MIN3OF: Students who selected BIOC40090 select 3 option modules from Set B; students who selected BMOL40100 select 4 option modules from Set B; students who selected BMOL40090 or BMOL40200 select 4 option modules from Set B in Summer.			
		Autumn	5
		Autumn	5
		Autumn	5
		Spring	5
		Spring	5
		Spring	5
		Spring	5
		Spring	5
		Spring	5
		Spring	5
		Spring	5
		Spring	5
		Spring	5
		Spring	5

Degree GPA and Award Calculation Rules

See the UCD Assessment for further details<hr>
Module Weighting Info <a data-toggle="modal" data-target="#hubModal" href="W_HU_REPORTING.P_DISPLAY_QUERY?p_query=CB-MODAL&p_parameters=1CF76AE4799C0C1ACB48799F5B73AA94C83FA8D96C08A5653F9F33B642F12044500C3B72403AE75A6EE8A96D8D621E5198C10172EBD2727EB58D8C65D834A615A59453DCF9385ACDFADE27F9680CBC16A3968482CDDF5440864FBE786381067A71837C5C332C8A6A27225A054476920F295CADDB7710D1F902B1FAABC5DF5377A07DE9672FB7A9A38109C7AA9866C36A3B7383BAA525DA3A44B39ECB4752C6D2007ADB64C62A4581284D7579A25DB0D336169F397CD403F0D2D6EEC1B215AF5F45156E0D2458ADBC0899332F39A81DE4F253443B0D4FAAEF839CE522EAACC31A"><i class="fa fa-info-circle las la-info-circle" style="font-size:20px;color:#007eb5">

		Award		GPA	
Programme	**Module Weightings**	**Rule Description**	**Description**	**>=**	**<=**
BHSCI001	Stage 4 - 70.00% Stage 3 - 30.00%	Standard Honours Award	First Class Honours	3.68	4.20
			Second Class Honours, Grade 1	3.08	3.67
			Second Class Honours, Grade 2	2.48	3.07
			Pass	2.00	2.47

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Biochemistry & Molecular Biology (BBS1) </h1><h3 class="printOnly">Academic Year 2019/2020</h3> The information contained in this document is, to the best of our knowledge, true and accurate at the time of publication, and is solely for informational purposes. University College Dublin accepts no liability for any loss or damage howsoever arising as a result of use or reliance on this information.
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<dl>
<dt>School:</dt>
<dd>Biomolecular & Biomed Science</dd>
<dt>Attendance:</dt>
<dd>Full Time</dd>
<dt>Level:</dt>
<dd>Undergraduate</dd>
<dt>NFQ Level:</dt>
<dd>8</dd>

<dt>Programme Credits:</dt>
<dd>Stage 1
Core/Option: 55
Electives: 5
Stage 2
Core/Option: 50
Electives: 10
Stage 3
Core/Option: 50
Electives: 10
Stage 4
Core/Option: 60
Electives: 0
</dd>
<dt>Major/Minor Core & Option Credits:</dt>
<dd>Stage 3: 50
Stage 4: 60
</dd>
<dt>Mode of Delivery:</dt>
<dd>Face-to-Face</dd>
<dt>Programme Director:</dt>
<dd>Assoc Professor Siobhán McClean</dd>
</dl>
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