



OLLSCOIL NA GAILLIMHE  
UNIVERSITY OF GALWAY

Bachelor of Science Degree  
College of Science and Engineering  
2023/2024

# BSc BIOTECHNOLOGY

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

# Overview

Year 1	Year 2	Year 3	Year 4
<b>[60 Credits]</b>	<b>[60 Credits]</b>	<b>[60 Credits]</b>	<b>[60 Credits]</b>
<p>There are 55 credits of Core modules.</p> <p>Choose one module to a value of 5 credits:</p> <ul style="list-style-type: none"> <li>French for Biotechnology I</li> <li>German for Biotechnology I</li> </ul>	<p>There are 55 credits of Core modules.</p> <p>Choose one module to a value of 5 Credits:</p> <ul style="list-style-type: none"> <li>French for Biotechnology II</li> <li>German for Biotechnology II</li> </ul>	<p>There are 25 credits of Core modules.</p> <p>Choose one module to a value of 5 credits:</p> <ul style="list-style-type: none"> <li>French for Biotechnology III</li> <li>German for Biotechnology III</li> </ul> <p>Placement Option: 30 credits. Students assigned to the Placement Option must take:</p> <ul style="list-style-type: none"> <li>Biotechnology Placement Experience</li> <li>Biotechnology Skills for Placement</li> </ul> <p>On-Campus Option: 30 credits. Students assigned to the On-Campus Option must take:</p> <ul style="list-style-type: none"> <li>Biotechnology Skills with French/ German III</li> <li>Human Molecular Genetics</li> <li>Plant and Agricultural Genetics</li> <li>Immunology and Recombinant Techniques</li> <li>Protein Biochemistry</li> <li>Plus one of:                             <ul style="list-style-type: none"> <li>Cell Signalling</li> <li>Environmental Microbiology</li> </ul> </li> </ul>	<p>There are 40 Credits of core modules.</p> <p>Choose one module to a value of 5 credits:</p> <ul style="list-style-type: none"> <li>Bioprocessors &amp; Recombinant Protein Production</li> <li>Plant and Agri-Biotechnologies</li> </ul> <p>Assigned one 15 credit module:</p> <ul style="list-style-type: none"> <li>Advanced Skills and Employability for Biotechnologists</li> <li>Biochemistry Research Project</li> </ul>

Module Descriptors for Years 1 to 4 are available at: [https://www.universityofgalway.ie/science-engineering/undergraduateprogrammes/biotechnology.html#course\\_outline](https://www.universityofgalway.ie/science-engineering/undergraduateprogrammes/biotechnology.html#course_outline)

Year 1	Year 2	Year 3	Year 4
<b>[Core: 55 credits; Options: 5 credits]</b>	<b>[Core: 55 credits; Options: 5 credits]</b>	<b>[Core: 25 Credits; Options: 35 credits]</b>	<b>[Core: 40 credits; Options: 20 credits]</b>
<p><i>Full Year – Semester 1 and Semester 2</i></p> <p>BO101 <b>Biology [15]</b> BG110 <b>Biotechnology I [5]</b> BG111 <b>Biotechnology Skills with French/ German [5]</b></p> <p>BG1101 <b>Employability for Biotechnology [5]</b> CH130 <b>Chemistry: The World of the Molecule [15]</b></p> <p>FR137 <b>French for Biotechnology I [5]*</b> GR150 <b>German for Biotechnology I [5]*</b></p> <p><i>Semester 1</i> ST2001 <b>Statistics for Data Science I [5]</b></p> <p><i>Semester 2</i> ST2002 <b>Statistics in Data Science II [5]</b></p>	<p><i>Full Year – Semester 1 and Semester 2</i></p> <p>FR216 <b>French for Biotechnology II [5]*</b> GR241 <b>German for Biotechnology II [5]*</b></p> <p><i>Semester 1</i> BG204 <b>Biotechnology Skills with French/ German II[5]</b> MI202 <b>Laboratory Skills in Microbiology I [5]</b> BO201 <b>Molecular and Cellular Biology [5]</b> CH203 <b>Physical Chemistry [5]</b> BI208 <b>Protein Structure and Function [5]</b></p> <p><i>Semester 2</i> CH205 <b>Analytical &amp; Environmental Chemistry [5]</b> BI206 <b>Gene Technologies and Molecular Medicine [5]</b> MI203 <b>Laboratory Skills in Microbiology II [5]</b> BI207 <b>Metabolism and Cell Signalling [5]</b> MI204 <b>Microbes and the Environment [5]</b> CH202 <b>Organic Chemistry [5]</b></p>	<p><i>Semester 1</i> BI309 <b>Cell Biology [5]</b> MI323 <b>Food and Industrial Microbiology [5]</b> FR364 <b>French for Biotechnology III [5]*</b> PM208 <b>Fundamental Concepts in Pharmacology [5]</b> GR358 <b>German for Biotechnology III [5]*</b> MI326 <b>Microbial Metabolic and Molecular Systems [5]</b> BI319 <b>Molecular Biology [5]</b></p> <p><i>Semester 2</i> <b>Placement option</b> BG3101 <b>Biotechnology Placement Experience [25]</b> BG304 <b>Biotechnology Skills for Placement [5]</b></p> <p><b>On-Campus option</b> BG305 <b>Biotechnology Skills with French/ German III [5]</b> BI313 <b>Cell Signalling [5]*</b> MI322 <b>Environmental Microbiology [5]*</b> BI317 <b>Human Molecular Genetics [5]</b> MI324 <b>Immunology and Recombinant Techniques [5]</b> PAB3103 <b>Plant and Agricultural Genetics [5]</b> BI321 <b>Protein Biochemistry [5].</b></p>	<p><i>Full Year – Semester 1 and Semester 2</i></p> <p>BG4101 <b>Advanced Skills and Employability for Biotechnologists [15]*</b> BI452 <b>Biochemistry Principles and Experimental Design [5]</b> BI453 <b>Biochemistry Research Project [15]*</b> BI447 <b>Literature Review and Presentation [10]</b></p> <p><i>Semester 1</i> BI445 <b>Biomolecules [5]</b> MG529 <b>Introduction To Business [10]</b> BI448 <b>Modern Biotechnologies [5]</b></p> <p><i>Semester 2</i> MI442 <b>Bioprocessors and Recombinant Protein Production [5]*</b> PAB4104 <b>Plant and Agri-Biotechnologies [5]*</b> BI449 <b>Molecular and Cellular Biology [5]</b></p>
* Select one 5-credit module	* Select one 5-credit module	*Select one 5-credit language module. *Select one 5-credit modules in the On-Campus option.	*Select one 5-credit module. *Assigned one 15-credit module