Biomedical Science is concerned with understanding the causes, diagnosis and treatment of disease. It requires the integration of a wide range of subjects to understand the biology of disease; predominantly, anatomy, physiology, biochemistry, genetics, immunology, microbiology, pharmacology and molecular biology.

More specific knowledge of disease processes comes from studying specialised biology viz. cellular pathology, clinical biochemistry, clinical immunology, haematology, transfusion science and medical microbiology.

What can Biomedical Science Graduates offer employers?

Graduates of biomedical science will have developed the ability to:

- Demonstrate knowledge of human anatomy and physiology, biochemistry, molecular genetics, immunology and microbiology.
- Demonstrate an understanding of cellular pathology, clinical biochemistry, clinical immunology, haematology, immune-haematology and transfusion science, medical microbiology and the biology of disease.
- Understand the factors and processes which contribute to human health and disease.
- Apply their knowledge to analyse, interpret and critically evaluate biomedical data.
- Demonstrate laboratory skills and knowledge of planning and designing experiments.
- Execute independent research centred on data generation.
- Demonstrate critical analysis and application of results obtained.
- Take account of and act in accordance with health and safety policies, good laboratory practice, ethical considerations and risks in relation to the control of substances hazardous to health.
- Recognise the importance of quality control and quality analysis.
- Design research protocols and use statistical techniques to enable valid analysis and interpretations of experimental results.
- Apply transferable skills in communication, IT, numeracy and data analysis, team working, critical thinking, setting tasks, problem solving and self-management.
- Demonstrate strong computing and statistical skills - gained through use of spreadsheets, databases and presentation packages found in most workplaces.
- Demonstrate good organisational, time and project management skills, as well as team work skills, through extensive practical laboratory work and research assignments.
First destinations of Biomedical Science Graduates

Each year, UCC Career Services produce a First Destination Report based on an annual survey of graduates six months after graduation. According to the five year trend presented in the following table, the vast majority of graduates of the BSc in Biomedical Science progressed to employment within six months of graduation.

<table>
<thead>
<tr>
<th>Five year trend</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>In Employment</td>
<td>8%</td>
<td>78%</td>
<td>63%</td>
<td>60%</td>
<td>68%</td>
</tr>
<tr>
<td>In Further Study or Training</td>
<td>10%</td>
<td>5.5%</td>
<td>32%</td>
<td>36%</td>
<td>21%</td>
</tr>
<tr>
<td>Seeking Employment</td>
<td>5%</td>
<td>16.5%</td>
<td>5%</td>
<td>4%</td>
<td>7%</td>
</tr>
<tr>
<td>Not Available for Employment or Study</td>
<td>5%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>4%</td>
</tr>
</tbody>
</table>

Who employs Biomedical Graduates?

Graduates who progressed directly to employment have taken up wide variety of roles. The following table provides a sample of roles listed on FDR reports by graduates of Biomedical Science.

<table>
<thead>
<tr>
<th>Role</th>
<th>Employer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biomedical Scientist</td>
<td>Waterford Regional Hospital, GSTS Pathology UK, St Vincent’s University Hospital, Limerick Regional Hospital, The Coombe Hospital Dublin</td>
</tr>
<tr>
<td>Medical Scientist</td>
<td>Bon Secours Hospital Cork, CUH, St James's Hospital, Temple St Hospital, Mullingar Regional Hospital</td>
</tr>
<tr>
<td>Pathology Laboratory Scientist</td>
<td>Kerry General Hospital</td>
</tr>
<tr>
<td>Laboratory Scientist</td>
<td>Riverview Veterinary Clinic</td>
</tr>
<tr>
<td>Research Assistant</td>
<td>University College Cork</td>
</tr>
<tr>
<td>Laboratory Technician</td>
<td>Mercy Hospital Cork</td>
</tr>
</tbody>
</table>

As mentioned above, an increasing percentage of Biomedical Science graduates pursue postgraduate qualifications. The following table presents a sample of the postgraduate courses listed by graduates of Biomedical Science on FDR surveys returned to UCC Career Services.

Some graduates have chosen postgraduate courses that are closely related to biomedical science:

What postgraduate careers do our graduates choose?

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSc Biomedical Science (part time)</td>
<td>UCC &amp; CIT</td>
</tr>
<tr>
<td>MSc Toxicology – NUIG MSc/PhD Biomedical Science (Research)</td>
<td>RCSI</td>
</tr>
<tr>
<td>PhD Biological &amp; Biomedical Sciences</td>
<td>CIT</td>
</tr>
</tbody>
</table>
Other biomedical science graduates choose a postgraduate qualification that provides them with the skills and knowledge required to access a new field of work:

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSc in Applied Science (Bioinformatics with Systems Biology)</td>
<td>UCC</td>
</tr>
<tr>
<td>MSc Public Health</td>
<td>UCC</td>
</tr>
<tr>
<td>MSc Immunology &amp; Global Health Graduate Medicine</td>
<td>NUIM</td>
</tr>
<tr>
<td>MBA Health Care Management</td>
<td>UCC, NUIG, RCSI, and numerous universities in the UK</td>
</tr>
<tr>
<td>Veterinary Medicine, Graduate Entry</td>
<td>Academy of Healthcare Education &amp; under the auspices of the Academy of Medical Laboratory Science. HETAC Level 9</td>
</tr>
<tr>
<td>MBS Management &amp; Marketing</td>
<td>UCD</td>
</tr>
<tr>
<td>MSc Biomedical Engineering</td>
<td>UCC</td>
</tr>
<tr>
<td></td>
<td>UL</td>
</tr>
</tbody>
</table>

Graduate career paths 3-5 years after graduation

Traditional Career Path

- BSc Biomedical Science 2007 - 2011
- Medical Scientist Waterford Regional 2010 - 2011
- Bons Secours, Cork Medical Scientist

Non Traditional Career Path

- BSc Biomedical Science 2007 - 2010
- MBS Management & Marketing 2010 - 2011
- Viviomed Medical Sales Representative

Long term prospects for Biomedical Science Graduates

As mentioned above, graduates of biomedical science are qualified to apply for biomedical scientist roles in the health service. Similar roles are also available in academic departments at universities, the Irish Blood Transfusion Board (IBTS), charity or government-funded laboratories and private pathology laboratories. The degree in biomedical science can also be a useful foundation for a career in the food and drink and pharmaceutical industries, in a range of roles such as research and development and quality assurance. Pharmaceutical and healthcare companies also recruit graduates as medical sales representatives.

The following table provides a sample of just some of the job roles related to biomedical science and some for which the degree can provide a useful foundation.

Jobs Related to Biomedical Science:
- Biomedical Scientist
- Immunologist
- Microbiologist
- Clinical Biochemist
- Haematologist
- Clinical Cytogeneticist
- Toxicologist

Jobs where Biomedical Science is useful:
- Science Writer
- Medical Sales Rep
- Research Scientist
- Higher Education Lecturer

Find out more about these roles and many others at the following recommended careers websites:

- www.prospects.ac.uk/
- http://gradireland.com/
- http://www.careersportal.ie/
While this resource provides you with an overview of the career options available with your degree, each person carves their own career path based on their personal values and interests. Your college years are an ideal time to explore career options while gaining new experience and learning new skills. Why not speak to a careers adviser to help you get started?

As a student of UCC, you are entitled to book a free personal consultation with a careers adviser at UCC Career Services. You can return as many times as needed because we understand that it makes sense to begin planning your career from first year onwards – don’t wait until final year! We look forward to meeting you, no matter what year of study. For your convenience, we now have a web-based booking system. Book your appointment online via our website – www.ucc.ie/careers - in the Meet an Advisor section.

**Contact Us**

**Where can I find out more?**

<table>
<thead>
<tr>
<th>Association</th>
<th>Website</th>
</tr>
</thead>
</table>

**8 ways to put your degree to work**

Employers want graduates with a healthy balance between study, work and extra-curricular interests. A three-dimensional CV is evidence of maturity, life skills and active citizenship, indicating that you will be a sociable, committed and reliable colleague. You can boost your job prospects greatly by taking the following steps throughout your degree years:

- Get involved in running the Students’ Union or a club/society that interests you.
- Gain relevant paid/voluntary work experience during holidays or free days.
- Sign up for training courses that will strengthen your skillset, e.g. languages, ECDL.
- Set up a LinkedIn profile and start building your network.
- Go to the UCC Careers Service for careers advice and assistance with regard to CV and interview preparation, job search strategies, and postgraduate options.
- Attend careers events organised on campus and advertised on www.ucc.ie/careers
- Use careers events to initiate relationships with potential employers.
- Check job vacancies regularly on www.ucc.ie/careers and www.gradireland.com

**Did you know?**

The BSc (Hons) Biomedical Science in UCC (which is delivered in joint partnership with CIT) is one of only three existing qualifications which are recognised by the Academy of Medical Laboratory Science in Ireland as an approved qualification for appointment to the post of biomedical scientist. Membership of the Academy of Medical Laboratory Science (AMLS) is a requirement to practice in the profession in Ireland. In addition to academic qualifications, candidates also need at least one year’s structured training in a suitable medical laboratory in order to get eligibility for membership of the AMLS. This can be achieved through undertaking accredited work experience either after graduation or during a sandwich placement year.

**Contact Us**

While this resource provides you with an overview of the career options available with your degree, each person carves their own career path based on their personal values and interests. Your college years are an ideal time to explore career options while gaining new experience and learning new skills. Why not speak to a careers adviser to help you get started?

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**Location**

3-4 Brighton Villas, Western Road, Cork.
Open 9.30am - 5 pm Monday to Thursday, 9.30am - 4 pm on Fridays

**Keep in Touch**

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www.twitter.com/careersUCC
www.facebook.com/ucc.careers