Studying UCD Engineering

**Year 1**
- Physics
- Chemistry
- Mathematics
- Energy Engineering
- Mechanics
- Electrical/Electronic
- Creativity in Design
- Energy Challenges
- Robotics Design Project
- Biosystems Design Challenge
- Concepts in Engineering

**Year 2 & 3**
- Chemical & Bioprocess
- Civil
- Electrical/Electronic
- Mechanical
- Biomedical
- Optional Study Abroad

**Year 4 & 5**
- Bachelor of Engineering
  - Biomedical
  - Chemical & Bioprocess
  - Electrical
  - Electronic
  - Energy Systems
  - Mechanical
- Master of Engineering
  - Biosystems & Food Engineering
  - Biomedical
  - Materials Science
  - Electrical Engineering
  - Mechanical
- Biomedical Work Experience

**Conversion/Complementary Courses**
- Graduate Medicine
- MIS Business

Why is this course for me?
Biomedical Engineering involves the application of traditional engineering principles to healthcare and medicine. We can think of the brain and nervous system as a large communication system which co-ordinates and transmits signals around the body, and the organs and limbs as sophisticated engineering systems that central functions such as movement, respiration and blood flow. Biomedical engineers are educated with a strong foundation in electrical/ electronic and mechanical engineering, which is complemented by an understanding of physiology and anatomy. This foundation is applied to problems in medicine and healthcare in specialised modules such as Biomechanics, Medical Device Design, Neural Engineering, Rehabilitation Engineering and Cell Culture & Tissue Engineering. If you are interested in developing new medical techniques, systems and devices, and you want to be involved in the breakthroughs that are improving the healthcare system for doctors and patients every day, then this is the course for you.

What will I study?
First Year
All DN150 students follow a common first year which includes modules in:
- Introduction to Physiology
- Bioengineering of Cells
- Mathematics (Min HD3 in LC or equivalent)
- One laboratory science subject (Min HD3 in LC or equivalent)
- English, Irish, Mathematics (Min HC3 in LC)
- Chemistry, Physics or Biology (recommended)
- Two other recognised subjects

Second to Fifth Year
Sample modules for Biomedical Engineering students include:
- Biostatistics
- Biomechanics
- Biomaterials

A student’s week includes attending lectures and tutorials as well as participating in laboratory-based workshops and undertaking independent study. A combination of end-of-semester written examinations and continuous assessment is used. In your final year, you’ll also submit a report of your research project.

Career and Graduate Study Opportunities
Graduates can find employment in:
- The Medical Technologies Industries
- Pharmaceutical Industries
- Medical Device Design - Rehabilitation Engineering - Device Manufacturing - Regulation - Engineering Consultancy

Graduates can also pursue a taught or research master’s degree in Biomedical Engineering. You can study for a PhD and work with some of the world’s leading experts on groundbreaking research.

International Study Opportunities
Opportunities have included:
- Beijing University of Technology, China
- University of New South Wales, Australia

UCD Engineering offers the best possible stepping stone towards a vibrant career in the biotechnology sector. As a student you will experience first-hand medical device engineering with companies in Ireland and abroad and the subjects you will study range from mechanical engineering to anatomy to electronic engineering. My degree in Biomedical Engineering has offered me the springboard to a career with a medical device multinational in Silicon Valley, California - the heart of innovation and technology.”
Marc Feely Graduate

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**Biomedical Engineering**

BSc [Engineering Science] (NFQ Level 8) leading to ME (NFQ Level 9) or BE (Hons) [NFQ Level 8]

**CAO Code DN150**

**Entry Requirements**
- English: Irish, Mathematics (Min HC3 in LC or equivalent)
- Chemistry, Physics or Biology (recommended)
- Two other recognised subjects
- Minimum HD3 in LC or equivalent

**A-Level/GCSE**
- Mathematics, Physics or Chemistry (Min A/A* in A-Level or equivalent)
- Chemistry, Physics or Biology (recommended)
- Two other recognised subjects

**Other Courses of Interest**
- Chemical Engineering
- Electrical/Electronic Engineering
- Mechanical Engineering
- Medicine

**Contact**
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