

BSC (HONS) SCIENCE EDUCATION (FOR STUDENTS WHO ENTERED PRIOR TO 2023/24)

Overview

NFQ Level 8, Major Award

Eligibility

Students who enter First Science through the Biological and Chemical Sciences (CK402 (<https://ucc-ie-public.courseleaf.com/programmes/bscbf/>)) or Biological, Earth and Environmental Sciences (CK404) (<https://ucc-ie-public.courseleaf.com/programmes/bscr/>) or the Chemical Sciences (CK406) (<https://ucc-ie-public.courseleaf.com/programmes/bsccm/>) or Physics and Astrophysics (CK408) (<https://ucc-ie-public.courseleaf.com/programmes/bscpy/>) Areas of Study, and who pass First Science, will be eligible for entry to the BSc (Hons) (Science Education) programme.

Students follow one of three routes, as outlined below. In each case, students take two 15 credit Education modules in both Second and Third Science and the full range of additional Education modules required for recognition by the Teaching Council in Fourth Science.

Note: Students who enter the Biological and Chemical Sciences (CK402) (<https://ucc-ie-public.courseleaf.com/programmes/bscbf/>) area of study may choose Route I (Chemistry) or Route III (Biology) as specified below. Students who enter the Chemical Sciences (CK406) area of study must choose Route I (Chemistry) as specified below. Students who enter the Physics and Astrophysics (CK408) (<https://ucc-ie-public.courseleaf.com/programmes/bscpy/>) area of study must choose Route II (Physics) as specified below. Students who enter the Biological, Earth and Environmental Science (CK404) (<https://ucc-ie-public.courseleaf.com/programmes/bscr/>) area of study must choose Route III (Biology) as specified in the table below.

Second Year Entry Routes to BSc (Science Education)

CAO Code (First Year Entry Route): Route Available in Second Year

- CK402 (Biological and Chemical Sciences): Route I (Chemistry) or Route III (Biology)
- CK404 (Biological, Earth and Environmental Sciences): Route III (Biology)
- CK406 (Chemical Sciences): Route I (Chemistry)
- CK408 (Physics and Astrophysics): Route II (Physics)

Students must pass ED2102 in order to be eligible to progress to Third Year of the programme. Students must pass ED3102 before proceeding to Fourth Year. There is no Autumn Supplemental Examination in either Second Year or Third Year for students failing ED2101 and ED2102, and ED3101 and ED3102.

Direct Entry into Third Year

This entry route is designed for graduates of Physics or Chemistry or Biology or Agricultural Science or Computer Studies who wish to teach their specialist subject(s) to the highest standard at secondary school level. Applicants who hold a degree (at least NFQ Level 7) in Physics or Chemistry or Biology or Agricultural Science or Computer Studies

which satisfies the requirements of the Teaching Council for recognition to teach the subject to the highest level in secondary school or an equivalent qualification may enter this programme in Third Year and take ED2101, ED2102, ED3101 and ED3102 in Third Year before proceeding to Fourth Year. Students who enter the programme via this route must pass ED2101, ED2102, ED3101 and ED3102 in Third Year before proceeding to Fourth Year. To facilitate Direct Entry applications, all Education lectures are delivered in the evening.

Applications must be submitted to the Undergraduate Admissions Office, West Wing, UCC. All applications must be accompanied with written certification from the Teaching Council indicating that the degree held by the applicant satisfies the requirements of the Teaching Council for recognition to teach that subject. In cases where large numbers of applications are received, interviews may be used as part of the selection process.

Garda Vetting

Students, or applicants in receipt of an offer, on this programme will be subject to Garda Vetting as relevant. Students will be prohibited from engaging in a relevant work placement unless the vetting process has been cleared. Click here to view UCC's Student Garda Vetting Policy.

Fitness to Practise

Commencing with the 2013/2014 intake of first year students (including repeats), this programme will be subject to the University's Fitness to Practise Policy - full details may be found here.

Second Year - Science Education

In Second Science, students take the prescribed modules to the value of **60** credits from one of following routes:

- Route 1 - Chemistry and Education
- Route 2 - Physics and Education
- Route 3 - Biology and Education

Third Year - Science Education

In Second Science, students take the prescribed modules to the value of **60** credits from one of following routes:

- Route 1 - Chemistry and Education
- Route 2 - Physics and Education
- Route 3 - Biology and Education

Fourth Year - Science Education

Students take modules to the value of **60** credits.

Tutorials and Microteaching

Students will be required to attend tutorials and microteaching sessions.

Programme Requirements

For information about modules, module choice, options and credit weightings, please go to Programme Requirements (p. 1).

Programme Requirements

Code	Title	Credits
Year 1		60
CK402 (https://ucc-ie-public.courseleaf.com/programmes/bscbf/)		
or		
CK404 (https://ucc-ie-public.courseleaf.com/programmes/bscr/)		

or

CK406 (<https://ucc-ie-public.courseleaf.com/programmes/bsccm/>)

or

CK408 (<https://ucc-ie-public.courseleaf.com/programmes/bscsp/>)**Year 2**Students take modules to the value of **60** credits in one of the following routes: 60*Route I*Students take **60** credits as follows:*Core Modules*

Chemistry

CM2001 Main Group and Transition Element Chemistry ()

CM2002 Fundamentals of Organic Chemistry ()

CM2003 Energetics and Kinetics ()

CM2006 Aromatics, Carbonyls and Alkenes ()

CM2007 Spectroscopy ()

CM2008 Structure, Bonding and Quantum Mechanics ()

Education

ED2101 Science Education I ()

ED2102 Teaching Practice Placement Science Education I ()

*Route II*Students take **60** credits as follows:*Core Modules*

Physics

PY2101 Classical Mechanics ()

PY2102 Introduction to Quantum Physics ()

PY2103 Electrostatics and Magnetostatics ()

PY2104 Introduction to Thermodynamics and Statistical Physics ()

PY2106 Introduction to Astrophysics and Special Relativity ()

PY2107 Experimental Physics I ()

Education

ED2101 Science Education I ()

ED2102 Teaching Practice Placement Science Education I ()

*Route III*Students take **60** credits as follows:*Core Modules*

Biology

AE2001 Fundamentals of Ecology ()

BC2001 Biomolecules ()

MB2905 Fundamentals of Microbiology ()

MB2906 Principles of Microbiology ()

ML2901 Introductory Molecular Biology ()

PY2009 Physics for the Environmental Sciences II ()¹

or PS2001 Introduction to Plant Biotechnology ()

Education

ED2101 Science Education I ()

ED2102 Teaching Practice Placement Science Education I ()

Year 3Students take modules to the value of **60** credits in one of the following routes: 60*Route I*Students take **60** credits as follows:*Core Modules*

Chemistry

CM3001 Organic Synthesis, Intermediates and Heterocycles ()

CM3004 Structure and Reactivity of Organic Compounds ()

CM3016 Molecules and Radiation ()

CM3017 Reaction Kinetics and Electrochemistry ()

CM3021 Inorganic Chemistry ()

Education

ED3101 Science Education II ()

ED3102 Teaching Practice Placement Science Education II ()

*Route II*Students take **60** credits as follows:*Core Modules*

Physics

PY3101 Optics ()

PY3102 Quantum Mechanics ()

PY3103 Electromagnetism ()

PY3105 Introduction to Condensed Matter Physics ()

PY3106 Nuclear and Particle Physics ()

PY3107 Experimental Physics II ()

Education

ED3101 Science Education II ()

ED3102 Teaching Practice Placement Science Education II ()

*Route III*Students take **60** credits as follows:*Core Modules*

Biology

BL2001 Plant and Animal Genetics ()

BL3003 Conservation Biology ()

MB3001 Medical Microbiology ()

MB3005 The role and ecology of microbes in the environment ()

PS3008 Physiology of Plants in extreme Environments ()

ZY3019 Adaptations to Extreme Environments ()

Education

ED3101 Science Education II ()

ED3102 Teaching Practice Placement Science Education II ()

Year 4Students take **60** credits as follows:²*Core Modules*

ED4101 Science Education III 10

ED4102 Teaching Practice Placement Science Education III 20

ED4103 Conceptual Foundations in School Placement Research Portfolio A 5

ED4104	Conceptual Foundations in the Philosophy and History of Education	5
ED4105	Conceptual Foundations in the Psychology and Sociology of Education	5
ED4106	Conceptual Foundations in Curriculum and Assessment	5
ED4107	Conceptual Foundations in Inclusive Education	5
ED4108	Conceptual Foundations in School Placement Research Portfolio B	5
Total Credits		240

¹ Students who enter through CK404 (<https://ucc-ie-public.courseleaf.com/programmes/bscr/>) must take PY2009. Students who enter through CK402 (<https://ucc-ie-public.courseleaf.com/programmes/bscbf/>) must take PS2001.

² Students will be required to attend tutorials and microteaching sessions.

Examinations

Full details and regulations governing Examinations for each programme will be contained in the *Marks and Standards Book* and for each module in the *Book of Modules*.

Programme Learning Outcomes

Programme Learning Outcomes for BSc in Science Education (NFQ Level 8, Major Award)

On successful completion of this programme, students should be able to:

- Recognise and apply the basic principles of classroom management and discipline;
- Identify the key characteristics of excellent teaching in science;
- Develop comprehensive portfolios of lesson plans that are relevant to the science curricula in schools;
- Evaluate the various theories of Teaching and Learning and apply these theories to assist in the creation of effective and inspiring science lessons;
- Critically evaluate the effectiveness of their teaching of science in the second-level school system;
- Display a willingness to co-operate with members of the teaching staff in their assigned school;
- Foster an interest in science and a sense of enthusiasm for science subjects in their pupils;
- Synthesise the key components of laboratory organisation and management and perform laboratory work in a safe and efficient manner;
- Communicate effectively with the school community and with society at large in the area of science education.