BED (HONS) SCIENCE EDUCATION - CK413

Code	Title Cree	dits
Year 1		60
Students take n	nodules to the value of 60 credits in one of the s:	
Route 1 (Biology	and Chemistry)	
Students take 6	60 credits as follows:	
Core Modules		
Biology		
BC1001	Introduction to Biochemistry and the Biological Basis of Disease (5)	
BL1002	Cells, Biomolecules, Genetics and Evolution (5)	
BL1004	Physiology and Structure of Plants and Animals (5)	
BL1006	Habitats and Ecosystems (5)	
MB1003	Microbiology in Society (5)	
Chemistry		
CM1200	Fundamentals of Modern Chemistry Part 1 (10)	
CM1201	Fundamentals of Modern Chemistry Part 2a (10)	
CM1203	Teaching Chemistry Concepts (5)	
Education		
ED1101	Introduction to Science Education (5)	
ED1102	Introductory Teaching Practice Placement Science Education (5)	
Route 2 (Physics	s and Mathematics) ¹	
Students take 6	60 credits as follows:	
Core Modules		
Physics		
PY1052	Introductory Physics I (10)	
PY1053	Introductory Physics II (10)	
Mathematics		
AM1052	Introduction to Mechanics (5)	
AM1053	Introduction to Mathematical Modelling (5)	
MA1058	Introduction to Linear Algebra (5)	
MA1059	Calculus (5)	
MS2013	Geometry (5)	
ST1051	Introduction to Probability and Statistics (5)	
Education		
ED1101	Introduction to Science Education (5)	
ED1102	Introductory Teaching Practice Placement Science Education (5)	
Route 3 (Compu	ter Science and Mathematics) ¹	
	60 credits as follows:	
Core Modules		
Computer Scier	nce	
CS1115	Web Development 1 (5)	
CS1117	Introduction to Programming (15)	

AM1053	Introduction to Mathematical Modelling (5)	
MA1058	Introduction to Linear Algebra (5)	
MA1059	Calculus (5)	
MS2013	Geometry (5)	
ST1051	Introduction to Probability and Statistics (5)	
Education		
ED1101	Introduction to Science Education (5)	
ED1102	Introductory Teaching Practice Placement Science Education (5)	
Route 4 (Chemistry	y and Mathematics) ¹	
Students take 60	credits as follows:	
Core Modules		
Chemistry		
CM1200	Fundamentals of Modern Chemistry Part 1 (10)	
CM1201	Fundamentals of Modern Chemistry Part 2a (10)	
CM1203	Teaching Chemistry Concepts (5)	
Mathematics		
AM1052	Introduction to Mechanics (5)	
MA1058	Introduction to Linear Algebra (5)	
MA1059	Calculus (5)	
MS2013	Geometry (5)	
ST1051	Introduction to Probability and Statistics (5)	
Education		
ED1101	Introduction to Science Education (5)	
ED1102	Introductory Teaching Practice Placement Science Education (5)	
Route 5 (Computer	r Science and Chemistry)	
Students take 60	credits as follows:	
Core Modules		
Computer Science	e	
CS1021	Relational Databases I (5)	
CS1115	Web Development 1 (5)	
CS1117	Introduction to Programming (15)	
Chemistry		
CM1200	Fundamentals of Modern Chemistry Part 1 (10)	
CM1201	Fundamentals of Modern Chemistry Part 2a (10)	
CM1203	Teaching Chemistry Concepts (5)	
Education		
ED1101	Introduction to Science Education (5)	
ED1102	Introductory Teaching Practice Placement Science Education (5)	
Year 2		60
Students take mo following routes:	dules to the value of 60 credits in one of the	
Route 1 (Biology a	nd Chemistry)	
Students take 60	credits as follows:	
Core Modules		
Biology		
AE2001	Fundamentals of Ecology (5)	
MB2905	Fundamentals of Microbiology (5)	
ML2901	Introductory Molecular Biology (5)	
PS2001	Introduction to Plant Biotechnology (5)	
Chemistry		

CM2001	Main Group and Transition Element Chemistry (5)	CM2008	Structure, Bonding and Quantum Mechanics (5)	
CM2002	Intermediate Stereochemistry, Reactivity and	Mathematics		
0140005	Mechanisms in Organic Chemistry (5)	AM2071	Transform and Variational Methods (5)	
CM2005	Structures and Reactions of Main Group Compounds (5)	MA2071	Multivariable Calculus (5)	
CM2008	Structure, Bonding and Quantum Mechanics (5)	MS2005	Discrete Mathematics (5)	
Education	Structure, boriding and Quantum Mechanics (5)	MS3001	Introduction to Abstract Algebra (5)	
ED2103	Fundamental Principles of Science Education (10)	Education		
ED2103 ED2104		ED2103	Fundamental Principles of Science Education (10)	
	Introduction to Science Education Teaching Placement (10)	ED2104	Introduction to Science Education Teaching Placement (10)	
	and Mathematics)	Route 5 (Compu	iter Science and Chemistry)	
	credits as follows:	Students take (60 credits as follows:	
Core Modules		Core Modules		
Physics		Computer Scie	nce	
PY2101	Classical Mechanics (5)	CS1110	Computer Hardware Organization (5)	
PY2102	Introduction to Quantum Physics (5)	CS1111	Systems Organisation (5)	
PY2103	Electrostatics and Magnetostatics (5)	CS2214	Multimedia (5)	
PY2108	Experimental Methods I (5)	CS2513	Intermediate Programming (5)	
Mathematics		Chemistry		
AM2071	Transform and Variational Methods (5)	CM2001	Main Group and Transition Element Chemistry (5)	
MA2071	Multivariable Calculus (5)	CM2002	Intermediate Stereochemistry, Reactivity and	
MS2005	Discrete Mathematics (5)		Mechanisms in Organic Chemistry (5)	
MS3001	Introduction to Abstract Algebra (5)	CM2005	Structures and Reactions of Main Group	
Education			Compounds (5)	
ED2103	Fundamental Principles of Science Education (10)	CM2008	Structure, Bonding and Quantum Mechanics (5)	
ED2104	Introduction to Science Education Teaching	Education		
	Placement (10)	ED2103	Fundamental Principles of Science Education (10)	
, ,	er Science and Mathematics)	ED2103 ED2104	Introduction to Science Education Teaching	
Students take 60		ED2104	• • • • • • • • • • • • • • • • • • • •	
Students take 60 Core Modules	er Science and Mathematics) O credits as follows:	ED2104 Year 3	Introduction to Science Education Teaching Placement (10)	60
Students take 60 Core Modules Computer Science	er Science and Mathematics) O credits as follows:	ED2104 Year 3 Students take r	Introduction to Science Education Teaching Placement (10) modules to the value of 60 credits in one of the	60
Students take 60 Core Modules Computer Science CS1110	er Science and Mathematics) O credits as follows: Ce Computer Hardware Organization (5)	Year 3 Students take r	Introduction to Science Education Teaching Placement (10) modules to the value of 60 credits in one of the s:	60
Students take 60 Core Modules Computer Science CS1110 CS1111	cer Science and Mathematics) O credits as follows: Ce Computer Hardware Organization (5) Systems Organisation (5)	Year 3 Students take r following route Route 1 (Biology	Introduction to Science Education Teaching Placement (10) modules to the value of 60 credits in one of the s: y and Chemistry)	60
Students take 60 Core Modules Computer Science CS11110 CS1111 CS2214	cr Science and Mathematics) O credits as follows: Ce Computer Hardware Organization (5) Systems Organisation (5) Multimedia (5)	Year 3 Students take refollowing route Route 1 (Biology Students take 6	Introduction to Science Education Teaching Placement (10) modules to the value of 60 credits in one of the s:	60
Students take 60 Core Modules Computer Science CS11110 CS1111 CS2214 CS2513	cer Science and Mathematics) O credits as follows: Ce Computer Hardware Organization (5) Systems Organisation (5)	Year 3 Students take r following route Route 1 (Biology Students take C Core Modules	Introduction to Science Education Teaching Placement (10) modules to the value of 60 credits in one of the s: y and Chemistry)	60
Students take 60 Core Modules Computer Science CS1110 CS1111 CS2214 CS2513 Mathematics	cer Science and Mathematics) O credits as follows: Ce Computer Hardware Organization (5) Systems Organisation (5) Multimedia (5) Intermediate Programming (5)	Year 3 Students take r following route Route 1 (Biology Students take Core Modules Biology	Introduction to Science Education Teaching Placement (10) modules to the value of 60 credits in one of the s: y and Chemistry) 60 credits as follows:	60
Students take 60 Core Modules Computer Science CS11110 CS11111 CS2214 CS2513 Mathematics AM2071	cer Science and Mathematics) O credits as follows: Cee Computer Hardware Organization (5) Systems Organisation (5) Multimedia (5) Intermediate Programming (5) Transform and Variational Methods (5)	Year 3 Students take r following route Route 1 (Biology Students take C Core Modules Biology BL2001	Introduction to Science Education Teaching Placement (10) modules to the value of 60 credits in one of the s: y and Chemistry) 60 credits as follows: Plant and Animal Genetics (5)	60
Students take 60 Core Modules Computer Science CS11110 CS1111 CS2214 CS2513 Mathematics AM2071 MA2071	cer Science and Mathematics) O credits as follows: Ce Computer Hardware Organization (5) Systems Organisation (5) Multimedia (5) Intermediate Programming (5) Transform and Variational Methods (5) Multivariable Calculus (5)	Year 3 Students take if following route Route 1 (Biology Students take Core Modules Biology BL2001 BC2001	Introduction to Science Education Teaching Placement (10) modules to the value of 60 credits in one of the s: y and Chemistry) 60 credits as follows: Plant and Animal Genetics (5) Biomolecules (5)	60
Students take 60 Core Modules Computer Science CS1110 CS1111 CS2214 CS2513 Mathematics AM2071 MA2071 MS2005	cer Science and Mathematics) O credits as follows: Ce Computer Hardware Organization (5) Systems Organisation (5) Multimedia (5) Intermediate Programming (5) Transform and Variational Methods (5) Multivariable Calculus (5) Discrete Mathematics (5)	Year 3 Students take in following route Route 1 (Biology Students take Core Modules Biology BL2001 BC2001 ZY2000	Introduction to Science Education Teaching Placement (10) modules to the value of 60 credits in one of the s: y and Chemistry) 60 credits as follows: Plant and Animal Genetics (5)	60
Students take 60 Core Modules Computer Science CS1110 CS1111 CS2214 CS2513 Mathematics AM2071 MA2071 MS2005 MS3001	cer Science and Mathematics) O credits as follows: Ce Computer Hardware Organization (5) Systems Organisation (5) Multimedia (5) Intermediate Programming (5) Transform and Variational Methods (5) Multivariable Calculus (5)	Year 3 Students take r following route Route 1 (Biology Students take Core Modules Biology BL2001 BC2001 ZY2000 Chemistry	Introduction to Science Education Teaching Placement (10) modules to the value of 60 credits in one of the s: y and Chemistry) 60 credits as follows: Plant and Animal Genetics (5) Biomolecules (5) Vertebrate Diversity (5)	60
Students take 60 Core Modules Computer Science CS11110 CS1111 CS2214 CS2513 Mathematics AM2071 MA2071 MS2005 MS3001 Education	cer Science and Mathematics) Ocredits as follows: Cee Computer Hardware Organization (5) Systems Organisation (5) Multimedia (5) Intermediate Programming (5) Transform and Variational Methods (5) Multivariable Calculus (5) Discrete Mathematics (5) Introduction to Abstract Algebra (5)	Year 3 Students take in following route Route 1 (Biology Students take Core Modules Biology BL2001 BC2001 ZY2000 Chemistry CM2003	Introduction to Science Education Teaching Placement (10) modules to the value of 60 credits in one of the s: y and Chemistry) 60 credits as follows: Plant and Animal Genetics (5) Biomolecules (5) Vertebrate Diversity (5) Energetics and Kinetics (5)	60
Students take 60 Core Modules Computer Science CS11110 CS1111 CS2214 CS2513 Mathematics AM2071 MA2071 MS2005 MS3001 Education ED2103	cer Science and Mathematics) Ocredits as follows: Computer Hardware Organization (5) Systems Organisation (5) Multimedia (5) Intermediate Programming (5) Transform and Variational Methods (5) Multivariable Calculus (5) Discrete Mathematics (5) Introduction to Abstract Algebra (5) Fundamental Principles of Science Education (10)	Year 3 Students take in following route Route 1 (Biology) Students take (Core Modules) Biology BL2001 BC2001 ZY2000 Chemistry CM2003 CM2004	Introduction to Science Education Teaching Placement (10) modules to the value of 60 credits in one of the s: y and Chemistry) 60 credits as follows: Plant and Animal Genetics (5) Biomolecules (5) Vertebrate Diversity (5) Energetics and Kinetics (5) States of Matter (5)	60
Students take 60 Core Modules Computer Science CS11110 CS1111 CS2214 CS2513 Mathematics AM2071 MA2071 MS2005 MS3001 Education	cer Science and Mathematics) O credits as follows: Ce Computer Hardware Organization (5) Systems Organisation (5) Multimedia (5) Intermediate Programming (5) Transform and Variational Methods (5) Multivariable Calculus (5) Discrete Mathematics (5) Introduction to Abstract Algebra (5) Fundamental Principles of Science Education (10) Introduction to Science Education Teaching	Year 3 Students take r following route Route 1 (Biology Students take Core Modules Biology BL2001 BC2001 ZY2000 Chemistry CM2003 CM2004 CM2007	Introduction to Science Education Teaching Placement (10) modules to the value of 60 credits in one of the s: y and Chemistry) 60 credits as follows: Plant and Animal Genetics (5) Biomolecules (5) Vertebrate Diversity (5) Energetics and Kinetics (5)	60
Students take 60 Core Modules Computer Science CS1110 CS1111 CS2214 CS2513 Mathematics AM2071 MA2071 MS2005 MS3001 Education ED2103 ED2104	ce Computer Hardware Organization (5) Systems Organisation (5) Multimedia (5) Intermediate Programming (5) Transform and Variational Methods (5) Multivariable Calculus (5) Discrete Mathematics (5) Introduction to Abstract Algebra (5) Fundamental Principles of Science Education (10) Introduction to Science Education Teaching Placement (10)	Year 3 Students take refollowing route Route 1 (Biology Students take Core Modules Biology BL2001 BC2001 ZY2000 Chemistry CM2003 CM2004 CM2007 Education	Introduction to Science Education Teaching Placement (10) modules to the value of 60 credits in one of the s: y and Chemistry) 60 credits as follows: Plant and Animal Genetics (5) Biomolecules (5) Vertebrate Diversity (5) Energetics and Kinetics (5) States of Matter (5) Spectroscopy (5)	60
Students take 60 Core Modules Computer Science CS11110 CS11111 CS2214 CS2513 Mathematics AM2071 MA2071 MS2005 MS3001 Education ED2103 ED2104 Route 4 (Chemistic	ce Computer Hardware Organization (5) Systems Organisation (5) Multimedia (5) Intermediate Programming (5) Transform and Variational Methods (5) Multivariable Calculus (5) Discrete Mathematics (5) Introduction to Abstract Algebra (5) Fundamental Principles of Science Education (10) Introduction to Science Education Teaching Placement (10) ry and Mathematics)	Year 3 Students take in following route Route 1 (Biology) Students take in Core Modules Biology BL2001 BC2001 ZY2000 Chemistry CM2003 CM2004 CM2007 Education ED3101	Introduction to Science Education Teaching Placement (10) modules to the value of 60 credits in one of the s: y and Chemistry) 60 credits as follows: Plant and Animal Genetics (5) Biomolecules (5) Vertebrate Diversity (5) Energetics and Kinetics (5) States of Matter (5) Spectroscopy (5) Science Education II (15)	60
Students take 60 Core Modules Computer Science CS11110 CS1111 CS2214 CS2513 Mathematics AM2071 MA2071 MS2005 MS3001 Education ED2103 ED2104 Route 4 (Chemister Students take 60	ce Computer Hardware Organization (5) Systems Organisation (5) Multimedia (5) Intermediate Programming (5) Transform and Variational Methods (5) Multivariable Calculus (5) Discrete Mathematics (5) Introduction to Abstract Algebra (5) Fundamental Principles of Science Education (10) Introduction to Science Education Teaching Placement (10)	Year 3 Students take refollowing route Route 1 (Biology Students take Core Modules Biology BL2001 BC2001 ZY2000 Chemistry CM2003 CM2004 CM2007 Education	Introduction to Science Education Teaching Placement (10) modules to the value of 60 credits in one of the s: y and Chemistry) for credits as follows: Plant and Animal Genetics (5) Biomolecules (5) Vertebrate Diversity (5) Energetics and Kinetics (5) States of Matter (5) Spectroscopy (5) Science Education II (15) Teaching Practice Placement Science Education II	60
Students take 60 Core Modules Computer Science CS11110 CS1111 CS2214 CS2513 Mathematics AM2071 MS2005 MS3001 Education ED2103 ED2104 Route 4 (Chemister Students take 60 Core Modules	ce Computer Hardware Organization (5) Systems Organisation (5) Multimedia (5) Intermediate Programming (5) Transform and Variational Methods (5) Multivariable Calculus (5) Discrete Mathematics (5) Introduction to Abstract Algebra (5) Fundamental Principles of Science Education (10) Introduction to Science Education Teaching Placement (10) ry and Mathematics)	Year 3 Students take in following route Route 1 (Biology) Students take in Gore Modules Biology BL2001 BC2001 ZY2000 Chemistry CM2003 CM2004 CM2007 Education ED3101 ED3102	Introduction to Science Education Teaching Placement (10) modules to the value of 60 credits in one of the s: y and Chemistry) 60 credits as follows: Plant and Animal Genetics (5) Biomolecules (5) Vertebrate Diversity (5) Energetics and Kinetics (5) States of Matter (5) Spectroscopy (5) Science Education II (15) Teaching Practice Placement Science Education II (15)	60
Students take 60 Core Modules Computer Science CS1110 CS1111 CS2214 CS2513 Mathematics AM2071 MS2005 MS3001 Education ED2103 ED2104 Route 4 (Chemist Students take 60 Core Modules Chemistry	ce Computer Hardware Organization (5) Systems Organisation (5) Multimedia (5) Intermediate Programming (5) Transform and Variational Methods (5) Multivariable Calculus (5) Discrete Mathematics (5) Introduction to Abstract Algebra (5) Fundamental Principles of Science Education (10) Introduction to Science Education Teaching Placement (10) Try and Mathematics) Occedits as follows:	Year 3 Students take r following route Route 1 (Biology Students take Core Modules Biology BL2001 EC2001 ZY2000 Chemistry CM2003 CM2004 CM2007 Education ED3101 ED3102	Introduction to Science Education Teaching Placement (10) modules to the value of 60 credits in one of the s: y and Chemistry) 50 credits as follows: Plant and Animal Genetics (5) Biomolecules (5) Vertebrate Diversity (5) Energetics and Kinetics (5) States of Matter (5) Spectroscopy (5) Science Education II (15) Teaching Practice Placement Science Education II (15) s and Mathematics)	60
Students take 60 Core Modules Computer Science CS11110 CS11111 CS2214 CS2513 Mathematics AM2071 MA2071 MS2005 MS3001 Education ED2103 ED2104 Route 4 (Chemister Students take 60 Core Modules Chemistry CM2001	ce Computer Hardware Organization (5) Systems Organisation (5) Multimedia (5) Intermediate Programming (5) Transform and Variational Methods (5) Multivariable Calculus (5) Discrete Mathematics (5) Introduction to Abstract Algebra (5) Fundamental Principles of Science Education (10) Introduction to Science Education Teaching Placement (10) ry and Mathematics) O credits as follows: Main Group and Transition Element Chemistry (5)	Year 3 Students take in following route Route 1 (Biology) Students take (Core Modules) Biology BL2001 BC2001 ZY2000 Chemistry CM2003 CM2004 CM2007 Education ED3101 ED3102 Route 2 (Physic) Students take (Core in the stake (Introduction to Science Education Teaching Placement (10) modules to the value of 60 credits in one of the s: y and Chemistry) 60 credits as follows: Plant and Animal Genetics (5) Biomolecules (5) Vertebrate Diversity (5) Energetics and Kinetics (5) States of Matter (5) Spectroscopy (5) Science Education II (15) Teaching Practice Placement Science Education II (15)	60
Students take 60 Core Modules Computer Science CS1110 CS1111 CS2214 CS2513 Mathematics AM2071 MS2005 MS3001 Education ED2103 ED2104 Route 4 (Chemist Students take 60 Core Modules Chemistry	ce Computer Hardware Organization (5) Systems Organisation (5) Multimedia (5) Intermediate Programming (5) Transform and Variational Methods (5) Multivariable Calculus (5) Discrete Mathematics (5) Introduction to Abstract Algebra (5) Fundamental Principles of Science Education (10) Introduction to Science Education Teaching Placement (10) ry and Mathematics) O credits as follows: Main Group and Transition Element Chemistry (5) Intermediate Stereochemistry, Reactivity and	Year 3 Students take in following route Route 1 (Biology) Students take in Goldowing route Route 1 (Biology) Students take in Gore Modules Biology BL2001 BC2001 ZY2000 Chemistry CM2003 CM2004 CM2007 Education ED3101 ED3102 Route 2 (Physical Students take in Gore Modules)	Introduction to Science Education Teaching Placement (10) modules to the value of 60 credits in one of the s: y and Chemistry) 50 credits as follows: Plant and Animal Genetics (5) Biomolecules (5) Vertebrate Diversity (5) Energetics and Kinetics (5) States of Matter (5) Spectroscopy (5) Science Education II (15) Teaching Practice Placement Science Education II (15) s and Mathematics)	60
Students take 60 Core Modules Computer Science CS11110 CS1111 CS2214 CS2513 Mathematics AM2071 MA2071 MS2005 MS3001 Education ED2103 ED2104 Route 4 (Chemist Students take 60 Core Modules Chemistry CM2001 CM2002	credits as follows: Computer Hardware Organization (5) Systems Organisation (5) Multimedia (5) Intermediate Programming (5) Transform and Variational Methods (5) Multivariable Calculus (5) Discrete Mathematics (5) Introduction to Abstract Algebra (5) Fundamental Principles of Science Education (10) Introduction to Science Education Teaching Placement (10) Try and Mathematics) Coredits as follows: Main Group and Transition Element Chemistry (5) Intermediate Stereochemistry, Reactivity and Mechanisms in Organic Chemistry (5)	Year 3 Students take in following route Route 1 (Biology) Students take in Goldowing route Route 1 (Biology) Students take in Gore Modules Biology BL2001 BC2001 ZY2000 Chemistry CM2003 CM2004 CM2007 Education ED3101 ED3102 Route 2 (Physical Students take in Gore Modules) Physics	Introduction to Science Education Teaching Placement (10) modules to the value of 60 credits in one of the s: y and Chemistry) 60 credits as follows: Plant and Animal Genetics (5) Biomolecules (5) Vertebrate Diversity (5) Energetics and Kinetics (5) States of Matter (5) Spectroscopy (5) Science Education II (15) Teaching Practice Placement Science Education II (15) s and Mathematics) 60 credits as follows:	60
Students take 60 Core Modules Computer Science CS11110 CS11111 CS2214 CS2513 Mathematics AM2071 MA2071 MS2005 MS3001 Education ED2103 ED2104 Route 4 (Chemister Students take 60 Core Modules Chemistry CM2001	ce Computer Hardware Organization (5) Systems Organisation (5) Multimedia (5) Intermediate Programming (5) Transform and Variational Methods (5) Multivariable Calculus (5) Discrete Mathematics (5) Introduction to Abstract Algebra (5) Fundamental Principles of Science Education (10) Introduction to Science Education Teaching Placement (10) ry and Mathematics) O credits as follows: Main Group and Transition Element Chemistry (5) Intermediate Stereochemistry, Reactivity and	Year 3 Students take in following route Route 1 (Biology) Students take in Goldowing route Route 1 (Biology) Students take in Gore Modules Biology BL2001 BC2001 ZY2000 Chemistry CM2003 CM2004 CM2007 Education ED3101 ED3102 Route 2 (Physical Students take in Gore Modules)	Introduction to Science Education Teaching Placement (10) modules to the value of 60 credits in one of the s: y and Chemistry) 50 credits as follows: Plant and Animal Genetics (5) Biomolecules (5) Vertebrate Diversity (5) Energetics and Kinetics (5) States of Matter (5) Spectroscopy (5) Science Education II (15) Teaching Practice Placement Science Education II (15) s and Mathematics)	60

DV2102	
PY3103	Electromagnetism (5)
PY3107	Experimental Physics II (5)
Mathematics	V . IT M.I. I (5)
AM3051	Vector and Tensor Methods (5)
MA4403	Discrete Time Financial Models (5)
Education	
ED3101	Science Education II (15)
ED3102	Teaching Practice Placement Science Education II (15)
Route 3 (Compu	iter Science and Mathematics)
Students take (60 credits as follows:
Core Modules	
Computer Scie	nce
CS3500	Software Engineering (5)
Plus three mod	lules from the following:
CS1021	Relational Databases I (5)
CS1116	Web Development 2 (5)
CS1069	Network and Internet Technologies (5)
CS2213	Data Analytics for Digital Humanities I (5)
CS2515	Algorithms and Data Structures I (5)
CS3062	Computing in Society (5)
Mathematics	
AM3051	Vector and Tensor Methods (5)
MA4403	Discrete Time Financial Models (5)
Education	, ,
ED3101	Science Education II (15)
ED3102	Teaching Practice Placement Science Education II (15)
Route 4 (Chemi:	stry and Mathematics)
Students take (60 credits as follows:
Core Modules	
Chemistry	
CM2003	Energetics and Kinetics (5)
CM2004	States of Matter (5)
CM2007	Spectroscopy (5)
Mathematics	
AM1053	Introduction to Mathematical Modelling (5)
AM3051	Vector and Tensor Methods (5)
MA4403	Discrete Time Financial Models (5)
Education	District Fille Fillation Models (0)
ED3101	Science Education II (15)
ED3101	Teaching Practice Placement Science Education II
	(15)
	ıter Science and Chemistry)
	60 credits as follows:
Core Modules	
Computer Scie	nce
CS3500	Software Engineering (5)
Plus two modu	les from the following:
CS1069	Network and Internet Technologies (5)
CS1116	Web Development 2 (5)
CS2213	Data Analytics for Digital Humanities I (5)
CS2515	Algorithms and Data Structures I (5)

CS3062	Computing in Society (5)	
Chemistry		
CM2003	Energetics and Kinetics (5)	
CM2004	States of Matter (5)	
CM2007	Spectroscopy (5)	
Education		
ED3101	Science Education II (15)	
	Teaching Practice Placement Science Education II (15)	
Year 4		60
Students take mod following routes:	dules to the value of 60 credits in one of the	
Route 1 (Biology an	d Chemistry)	
Students take 60 c	credits as follows:	
Core Modules		
Education		
ED4101	Science Education III (10)	

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)

Research Portfolio A (5)

Teaching Practice Placement Science Education III

Conceptual Foundations in School Placement

Conceptual Foundations in the Philosophy and

Route 2 (Physics and Mathematics)

ED4102

ED4103

ED4104

Students take 60 credits as follows:

Core Modules	
Education	
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)

Route 3 (Computer Science and Mathematics)
Students take **60** credits as follows:

Core Modules

Education

ED4101 Science Education III (10)

+ DEG (HOII:	sy science Education (IN413
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)
Route 4 (Chemisti	ry and Mathematics)
Students take 60	credits as follows:

Core Modules	
Education	
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)

Route 5 (Computer Science and Chemistry)

Students take 60 credits as follows:

Core Modules

Education	
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

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*.

Students must have a minimum grade of H3 in Leaving Certificate Mathematics to enter this route.