

Module Guide

Foundation (FHEQ Level 3) Engineering Stream 1 (2 semester) Overview	
Semester One Modules	
SCI100 Interactive Learning Skills and Communication (ILSC)	<p>This module has been designed to be delivered in conjunction with Principles of ICT in order to benchmark and satisfy the progression criteria with regard to student communication and learning skills competency. Focus is put on the relevant transferable and portable skills of effective and professional communication.</p> <p>The course utilizes a number of practical activities to allow candidates to achieve these essential skills, students will be introduced to techniques and strategies to manage speech anxiety; enhance grammar and vocabulary, think critically under pressure; research, package and deliver logical and persuasive communication both orally and in a variety of written formats; summarise; and become an effective listener; understand cultural and gender differences; and work effectively in a team and as an individual.</p>
ICT003 Principles of ICT	<p>This Principles of ICT module attempts to deliver an accurate snapshot of the state of ICT as it exists currently, as well as to equip the student with a useful set of skills in the use of common productivity software and Internet based applications. The module introduces candidates to the interesting challenges that ICT presents today and covers many anchor points that may serve as a bridge to their interests and lifestyles. These bridges include the technology in their mobile telephones, computing equipment, home appliances, motor vehicles, shopping, movies and entertainment software. Students shall obtain a good understanding of and ability to apply common applications (Ms Word, Excel and Power Point) to document creation, data collation and presentation whilst students will also be made aware of the benefits of using web based applications for information presentation and will be expected to use IT to communicate information effectively in a variety of forms. Students will learn to identify important considerations involved in the choice and maintenance of a computer system.</p>
SCI101 Analytical Techniques 1	<p>This module has been designed to be delivered in conjunction with the standard International Foundation in the engineering, computing, technology and sciences to support the mathematical entry requirement of the science-based degree schemes of Swansea University. Students will obtain a good understanding of and ability to apply the requisite basic Analytical Techniques, knowledge and skills. A variety of subjects will be covered in this module including financial and quantitative reporting, Rational and irrational numbers, logarithms, Factorization, linear simultaneous equations and quadratic, cubic, polynomial and exponential functions.</p>

SCI116 Physics 2	This module has been designed to be delivered in conjunction with the standard International Foundation programmes in the engineering and technology as well as computer science in order to support the fundamental knowledge base and intellectual skills. The lectures cover topics such as Wave motion, Electric charge, Quantization of charge, Magnets and the earth's magnetic field, Photon interactions and Bohr model.
Semester Two Modules	
SCI103 Analytical Techniques 3	This module has been designed to be delivered in conjunction with the standard International Foundation in Technology, Computer Science and Mathematics programmes. Students will obtain a good understanding of and ability to apply the requisite basic mathematical techniques, knowledge and skills. Lectures will be taught on a variety of topics including first order differential equations, determinants, Eigenvalues, vectors and Maclaurin's Theorem.
SCI117 Physics 3	This module has been designed to be delivered in conjunction with the standard International Foundation programme in engineering and technology sciences in order to support the fundamental knowledge base and intellectual skills. Lectures will cover a variety of topics including Newton's laws of motion, types of forces in nature, velocity and acceleration, kinetic and potential energy, centre of mass and centre of gravity of a body, Pascal's principle, Avogadro's number, thermodynamics and the electromagnetic spectrum.
SCI120 Environmental Awareness	This module has been designed to be delivered in conjunction with the standard International Foundation programmes in engineering and technology as well as computer science in order to support the fundamental knowledge base and intellectual skills. students shall obtain a good understanding of and ability to apply the requisite knowledge and skills with regard to the biogeochemical context, engineering and ICT design influences in response to certain environmental issues as well as sustainable development in the UK and internationally. Lectures will be conducted on a variety of topics including the biogeochemical cycle, global systems and their current circulations, pollutants, climate change: mitigation or adaptation, sustainability in engineering and environmental management.
SCI123 Fundamentals of Materials	This module is modelled on that of the School of Engineering (see EG-080) and should be delivered in conjunction with standard The College, Swansea University International Foundation in Engineering and Technology to support knowledge and understanding with regard to the application of materials to the engineering sciences and as a basis to further study of the prescribed degree schemes of Swansea University. The lectures on this course will

	include metallic bonding, oxidation and reduction, hydrocarbon, polymers, adhesives and bonding.
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Foundation (FHEQ Level 3) Engineering Stream 1 (Entry Point A of 3 Semester) Overview	
Semester One Modules	
SCI100 Interactive Learning Skills and Communication (ILSC)	<p>This module has been designed to be delivered in conjunction with Principles of ICT in order to benchmark and satisfy the progression criteria with regard to student communication and learning skills competency. Focus is put on the relevant transferable and portable skills of effective and professional communication.</p> <p>The course utilizes a number of practical activities to allow candidates to achieve these essential skills, students will be introduced to techniques and strategies to manage speech anxiety; enhance grammar and vocabulary, think critically under pressure; research, package and deliver logical and persuasive communication both orally and in a variety of written formats; summarise; and become an effective listener; understand cultural and gender differences; and work effectively in a team and as an individual.</p>
ICT003 Principles of ICT	<p>This Principles of ICT module attempts to deliver an accurate snapshot of the state of ICT as it exists currently, as well as to equip the student with a useful set of skills in the use of common productivity software and Internet based applications. The module introduces candidates to the interesting challenges that ICT presents today and covers many anchor points that may serve as a bridge to their interests and lifestyles. These bridges include the technology in their mobile telephones, computing equipment, home appliances, motor vehicles, shopping, movies and entertainment software. Students shall obtain a good understanding of and ability to apply common applications (Ms Word, Excel and Power Point) to document creation, data collation and presentation whilst students will also be made aware of the benefits of using web based applications for information presentation and will be expected to use IT to communicate information effectively in a variety of forms. Students will learn to identify important considerations involved in the choice and maintenance of a computer system.</p>
ESP1 English Portfolio 1	<p>The module has been designed to enable students to reach a linguistic level appropriate for academic study on their chosen degree scheme. The aim of English Skills Portfolio is to enable students to develop their English Language level within an academic context, and to equip students with the linguistic and academic skills necessary to perform confidently within their chosen discipline, whilst simultaneously encouraging them to become effective independent learners.</p>

Semester Two Modules	
SCI101 Analytical Techniques 1	This module has been designed to be delivered in conjunction with the standard International Foundation in the engineering, computing, technology and sciences to support the mathematical entry requirement of the science-based degree schemes of Swansea University. Students will obtain a good understanding of and ability to apply the requisite basic Analytical Techniques, knowledge and skills. A variety of subjects will be covered in this module including financial and quantitative reporting, Rational and irrational numbers, logarithms, Factorization, linear simultaneous equations and quadratic, cubic, polynomial and exponential functions.
SCI116 Physics 2	This module has been designed to be delivered in conjunction with the standard International Foundation programmes in the engineering and technology as well as computer science in order to support the fundamental knowledge base and intellectual skills. The lectures cover topics such as Wave motion, Electric charge, Quantization of charge, Magnets and the earth's magnetic field, Photon interactions and Bohr model.
SCI120 Environmental Awareness	This module has been designed to be delivered in conjunction with the standard International Foundation programmes in engineering and technology as well as computer science in order to support the fundamental knowledge base and intellectual skills. students shall obtain a good understanding of and ability to apply the requisite knowledge and skills with regard to the biogeochemical context, engineering and ICT design influences in response to certain environmental issues as well as sustainable development in the UK and internationally. Lectures will be conducted on a variety of topics including the biogeochemical cycle, global systems and their current circulations, pollutants, climate change: mitigation or adaptation, sustainability in engineering and environmental management.
ESP2 English Portfolio 2	The module has been designed to enable students to reach a linguistic level appropriate for academic study on their chosen degree scheme. The aim of English Skills Portfolio is to enable students to develop their English Language level within an academic context, and to equip students with the linguistic and academic skills necessary to perform confidently within their chosen discipline, whilst simultaneously encouraging them to become effective independent learners.

Semester Three Modules	
SCI103 Analytical Techniques 3	This module has been designed to be delivered in conjunction with the standard International Foundation in Technology, Computer Science and Mathematics programmes. Students will obtain a good understanding of and ability to apply the requisite basic mathematical techniques, knowledge and skills. Lectures will be taught on a variety of topics including first order differential equations, determinants, Eigenvalues, vectors and Maclaurin's Theorem.
SCI117 Physics 3	This module has been designed to be delivered in conjunction with the standard International Foundation programme in engineering and technology sciences in order to support the fundamental knowledge base and intellectual skills. Lectures will cover a variety of topics including Newton's laws of motion, types of forces in nature, velocity and acceleration, kinetic and potential energy, centre of mass and centre of gravity of a body, Pascal's principle, Avogadro's number, thermodynamics and the electromagnetic spectrum.
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ESP3 English Portfolio 3	The module has been designed to enable students to reach a linguistic level appropriate for academic study on their chosen degree scheme. The aim of English Skills Portfolio is to enable students to develop their English Language level within an academic context, and to equip students with the linguistic and academic skills necessary to perform confidently within their chosen discipline, whilst simultaneously encouraging them to become effective independent learners.

Foundation (FHEQ Level 3) Engineering Stream 1 (Entry Point B of 3 Semester) Overview	
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SCI101 Analytical Techniques 1	<p>This module has been designed to be delivered in conjunction with the standard International Foundation in the engineering, computing, technology and sciences to support the mathematical entry requirement of the science-based degree schemes of Swansea University. Students will obtain a good understanding of and ability to apply the requisite basic Analytical Techniques, knowledge and skills. A variety of subjects will be covered in this module including financial and quantitative reporting, Rational and irrational numbers, logarithms, Factorization, linear simultaneous equations and quadratic, cubic, polynomial and exponential functions.</p>
SCI116 Physics 2	<p>This module has been designed to be delivered in conjunction with the standard International Foundation programmes in the engineering and technology as well as computer science in order to support the fundamental knowledge base and intellectual skills. The lectures cover topics such as Wave motion, Electric charge, Quantization of charge, Magnets and the earth's magnetic field, Photon interactions and Bohr model.</p>
ESP2 English Portfolio 2	<p>The module has been designed to enable students to reach a linguistic level appropriate for academic study on their chosen degree scheme. The aim of English Skills Portfolio is to enable students to develop their English Language level within an academic context, and to equip students with the linguistic and academic skills necessary to perform confidently within their chosen discipline, whilst simultaneously encouraging them to become effective independent learners.</p>

Semester Two Modules	
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SCI120 Environmental Awareness	This module has been designed to be delivered in conjunction with the standard International Foundation programmes in engineering and technology as well as computer science in order to support the fundamental knowledge base and intellectual skills. students shall obtain a good understanding of and ability to apply the requisite knowledge and skills with regard to the biogeochemical context, engineering and ICT design influences in response to certain environmental issues as well as sustainable development in the UK and internationally. Lectures will be conducted on a variety of topics including the biogeochemical cycle, global systems and their current circulations, pollutants, climate change: mitigation or adaptation, sustainability in engineering and environmental management.
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Foundation (FHEQ Level 3) Engineering Stream 1 (November Entry) Overview	
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ICT003 Principles of ICT	<p>This Principles of ICT module attempts to deliver an accurate snapshot of the state of ICT as it exists currently, as well as to equip the student with a useful set of skills in the use of common productivity software and Internet based applications. The module introduces candidates to the interesting challenges that ICT presents today and covers many anchor points that may serve as a bridge to their interests and lifestyles. These bridges include the technology in their mobile telephones, computing equipment, home appliances, motor vehicles, shopping, movies and entertainment software. Students shall obtain a good understanding of and ability to apply common applications (Ms Word, Excel and Power Point) to document creation, data collation and presentation whilst students will also be made aware of the benefits of using web based applications for information presentation and will be expected to use IT to communicate information effectively in a variety of forms. Students will learn to identify important considerations involved in the choice and maintenance of a computer system.</p>

Semester Two Modules	
SCI101 Analytical Techniques 1	This module has been designed to be delivered in conjunction with the standard International Foundation in the engineering, computing, technology and sciences to support the mathematical entry requirement of the science-based degree schemes of Swansea University. Students will obtain a good understanding of and ability to apply the requisite basic Analytical Techniques, knowledge and skills. A variety of subjects will be covered in this module including financial and quantitative reporting, Rational and irrational numbers, logarithms, Factorization, linear simultaneous equations and quadratic, cubic, polynomial and exponential functions.
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SCI120 Environmental Awareness	This module has been designed to be delivered in conjunction with the standard International Foundation programmes in engineering and technology as well as computer science in order to support the fundamental knowledge base and intellectual skills. students shall obtain a good understanding of and ability to apply the requisite knowledge and skills with regard to the biogeochemical context, engineering and ICT design influences in response to certain environmental issues as well as sustainable development in the UK and internationally. Lectures will be conducted on a variety of topics including the biogeochemical cycle, global systems and their current circulations, pollutants, climate change: mitigation or adaptation, sustainability in engineering and environmental management.
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SCI103 Analytical Techniques 3	<p>This module has been designed to be delivered in conjunction with the standard International Foundation in Technology, Computer Science and Mathematics programmes. Students will obtain a good understanding of and ability to apply the requisite basic mathematical techniques, knowledge and skills. Lectures will be taught on a variety of topics including first order differential equations, determinants, Eigenvalues, vectors and Maclaurin's Theorem.</p>

Foundation (FHEQ Level 3) Engineering Stream 2 (2 semester) Overview	
Semester One Modules	
SCI100 Interactive Learning Skills and Communication (ILSC)	<p>This module has been designed to be delivered in conjunction with Principles of ICT in order to benchmark and satisfy the progression criteria with regard to student communication and learning skills competency. Focus is put on the relevant transferable and portable skills of effective and professional communication.</p> <p>The course utilizes a number of practical activities to allow candidates to achieve these essential skills, students will be introduced to techniques and strategies to manage speech anxiety; enhance grammar and vocabulary, think critically under pressure; research, package and deliver logical and persuasive communication both orally and in a variety of written formats; summarise; and become an effective listener; understand cultural and gender differences; and work effectively in a team and as an individual.</p>
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SCI120 Environmental Awareness	This module has been designed to be delivered in conjunction with the standard International Foundation programmes in engineering and technology as well as computer science in order to support the fundamental knowledge base and intellectual skills. students shall obtain a

	<p>good understanding of and ability to apply the requisite knowledge and skills with regard to the biogeochemical context, engineering and ICT design influences in response to certain environmental issues as well as sustainable development in the UK and internationally. Lectures will be conducted on a variety of topics including the biogeochemical cycle, global systems and their current circulations, pollutants, climate change: mitigation or adaptation, sustainability in engineering and environmental management.</p>
SCI130 Chemistry	<p>This module has been designed to be delivered in conjunction with the standard Stage 1 programmes in the engineering, computer science and mathematics in order to support the fundamental knowledge in chemistry and intellectual skills requisite for successful completion of the prescribed degree schemes of Swansea University. Topics will include atomic structure, chemical measurements and stoichiometry, reaction kinetics and aqueous systems.</p>

Foundation (FHEQ Level 3) Engineering Stream 2 (Entry Point A of 3 Semester) Overview	
Semester One Modules	
SCI100 Interactive Learning Skills and Communication (ILSC)	<p>This module has been designed to be delivered in conjunction with Principles of ICT in order to benchmark and satisfy the progression criteria with regard to student communication and learning skills competency. Focus is put on the relevant transferable and portable skills of effective and professional communication.</p> <p>The course utilizes a number of practical activities to allow candidates to achieve these essential skills, students will be introduced to techniques and strategies to manage speech anxiety; enhance grammar and vocabulary, think critically under pressure; research, package and deliver logical and persuasive communication both orally and in a variety of written formats; summarise; and become an effective listener; understand cultural and gender differences; and work effectively in a team and as an individual.</p>
ICT003 Principles of ICT	<p>This Principles of ICT module attempts to deliver an accurate snapshot of the state of ICT as it exists currently, as well as to equip the student with a useful set of skills in the use of common productivity software and Internet based applications. The module introduces candidates to the interesting challenges that ICT presents today and covers many anchor points that may serve as a bridge to their interests and lifestyles. These bridges include the technology in their mobile telephones, computing equipment, home appliances, motor vehicles, shopping, movies and entertainment software. Students shall obtain a good understanding of and ability to apply common applications (Ms Word, Excel and Power Point) to document creation, data</p>

	<p>collation and presentation whilst students will also be made aware of the benefits of using web based applications for information presentation and will be expected to use IT to communicate information effectively in a variety of forms. Students will learn to identify important considerations involved in the choice and maintenance of a computer system.</p>
<p>ESP1 English Portfolio 1</p>	<p>The module has been designed to enable students to reach a linguistic level appropriate for academic study on their chosen degree scheme. The aim of English Skills Portfolio is to enable students to develop their English Language level within an academic context, and to equip students with the linguistic and academic skills necessary to perform confidently within their chosen discipline, whilst simultaneously encouraging them to become effective independent learners.</p>
<p>Semester Two Modules</p>	
<p>SCI101 Analytical Techniques 1</p>	<p>This module has been designed to be delivered in conjunction with the standard International Foundation in the engineering, computing, technology and sciences to support the mathematical entry requirement of the science-based degree schemes of Swansea University. Students will obtain a good understanding of and ability to apply the requisite basic Analytical Techniques, knowledge and skills. A variety of subjects will be covered in this module including financial and quantitative reporting, Rational and irrational numbers, logarithms, Factorization, linear simultaneous equations and quadratic, cubic, polynomial and exponential functions.</p>
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<p>SCI120 Environmental Awareness</p>	<p>This module has been designed to be delivered in conjunction with the standard International Foundation programmes in engineering and technology as well as computer science in order to support the fundamental knowledge base and intellectual skills. students shall obtain a good understanding of and ability to apply the requisite knowledge and skills with regard to the biogeochemical context, engineering and ICT design influences in response to certain environmental issues as well as sustainable development in the UK and internationally. Lectures will be conducted on a variety of topics including the biogeochemical cycle, global systems and their current circulations, pollutants, climate change:</p>

	mitigation or adaptation, sustainability in engineering and environmental management.
ESP2 English Portfolio 2	The module has been designed to enable students to reach a linguistic level appropriate for academic study on their chosen degree scheme. The aim of English Skills Portfolio is to enable students to develop their English Language level within an academic context, and to equip students with the linguistic and academic skills necessary to perform confidently within their chosen discipline, whilst simultaneously encouraging them to become effective independent learners.
Semester Three Modules	
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Foundation (FHEQ Level 3) Engineering Stream 2 (Entry Point B of 3 Semester) Overview	
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ICT003 Principles of ICT	<p>This Principles of ICT module attempts to deliver an accurate snapshot of the state of ICT as it exists currently, as well as to equip the student with a useful set of skills in the use of common productivity software and Internet based applications. The module introduces candidates to the interesting challenges that ICT presents today and covers many anchor points that may serve as a bridge to their interests and lifestyles. These bridges include the technology in their mobile telephones, computing equipment, home appliances, motor vehicles, shopping, movies and entertainment software. Students shall obtain a good understanding of and ability to apply common applications (Ms Word, Excel and Power Point) to document creation, data collation and presentation whilst students will also be made aware of the benefits of using web based applications for information presentation and will be expected to use IT to communicate information effectively in a variety of forms. Students will learn to identify important considerations involved in the choice and maintenance of a computer system.</p>
Semester Two Modules	
SCI101 Analytical Techniques 1	<p>This module has been designed to be delivered in conjunction with the standard International Foundation in the engineering, computing, technology and sciences to support the mathematical entry requirement of the science-based degree schemes of Swansea University. Students will obtain a good understanding of and ability to apply the requisite basic Analytical Techniques, knowledge and skills. A variety of subjects will be covered in this module including financial and quantitative reporting, Rational and irrational numbers, logarithms, Factorization, linear simultaneous equations and quadratic, cubic, polynomial and exponential functions.</p>

SCI116 Physics 2	This module has been designed to be delivered in conjunction with the standard International Foundation programmes in the engineering and technology as well as computer science in order to support the fundamental knowledge base and intellectual skills. The lectures cover topics such as Wave motion, Electric charge, Quantization of charge, Magnets and the earth's magnetic field, Photon interactions and Bohr model.
SCI120 Environmental Awareness	This module has been designed to be delivered in conjunction with the standard International Foundation programmes in engineering and technology as well as computer science in order to support the fundamental knowledge base and intellectual skills. students shall obtain a good understanding of and ability to apply the requisite knowledge and skills with regard to the biogeochemical context, engineering and ICT design influences in response to certain environmental issues as well as sustainable development in the UK and internationally. Lectures will be conducted on a variety of topics including the biogeochemical cycle, global systems and their current circulations, pollutants, climate change: mitigation or adaptation, sustainability in engineering and environmental management.
Semester Two Modules	
SCI117 Physics 3	This module has been designed to be delivered in conjunction with the standard International Foundation programme in engineering and technology sciences in order to support the fundamental knowledge base and intellectual skills. Lectures will cover a variety of topics including Newton's laws of motion, types of forces in nature, velocity and acceleration, kinetic and potential energy, centre of mass and centre of gravity of a body, Pascal's principle, Avogadro's number, thermodynamics and the electromagnetic spectrum.
SCI130 Chemistry	This module has been designed to be delivered in conjunction with the standard Stage 1 programmes in the engineering, computer science and mathematics in order to support the fundamental knowledge in chemistry and intellectual skills requisite for successful completion of the prescribed degree schemes of Swansea University. Topics will include atomic structure, chemical measurements and stoichiometry, reaction kinetics and aqueous systems.
SCI103 Analytical Techniques 3	This module has been designed to be delivered in conjunction with the standard International Foundation in Technology, Computer Science and Mathematics programmes. Students will obtain a good understanding of and ability to apply the requisite basic mathematical techniques, knowledge and skills. Lectures will be taught on a variety of topics including first order differential equations, determinants, Eigenvalues, vectors and Maclaurin's Theorem.