

Module Catalogue

Science and Technology Subjects

English as a Foreign Language + Undergraduate Study Abroad Programme 2019/0 Semester 1

At the end of the English section of the programme you must take a test which will determine your progress on the module part of the programme. Depending on your score you will be able to follow one of the following study pathways:

If you achieve a test result of 'B2 Low' you will follow this course of study

1. Academic Language for Disciplinary Study.
2. Academic Spoken Communication Skills for International Students
3. Interpersonal Global Communication

If you achieve a test result of 'B2 Intermediate' you will follow this course of study

Choose 2 modules from the following options:

1. Academic Language for Disciplinary Study.
 2. Academic Spoken Communication Skills for International Students
 3. Interpersonal Global Communication
- Plus one free choice of module at either level 4 or 5

If you achieve a test result of 'B2 High' you will follow this course of study

- You can choose 3 modules from Level 4, Level 5, or Level 6

Please note that all students are restricted to a maximum of 1 London Studies module, and 1 Practical MAD module upon submission of a portfolio that is then accepted as being of the required standard.

Module Code	Module Name	Level	Semester	UK Credit Value	Credit Equivalency
Computer Science and Engineering					
4COSC001W	Programming Principles I	4	Semester 1	20	US Credits 4 / ECTS credits 10*
5BUIS003W	Information Technology Security	5	Semester 1	20	US Credits 4 / ECTS credits 10*
5COSC001W	Object Oriented Programming	5	Semester 1	20	US Credits 4 / ECTS credits 10*
5COSC002W	Database Systems	5	Semester 1	20	US Credits 4 / ECTS credits 10*

5COSC015W	Advanced Client-side Development	5	Semester 1	20	US Credits 4 / ECTS credits 10*
6CCGD001W	Game Development Group Project III	6	Semester 1	20	US Credits 4 / ECTS credits 10*
6COSC001W	Enterprise Application Development	6	Semester 1	20	US Credits 4 / ECTS credits 10*
6COSC005W	Advanced Server-Side Web Programming	6	Semester 1	20	US Credits 4 / ECTS credits 10*
6MMCS001W	Mobile User Experience	6	Semester 1	20	US Credits 4 / ECTS credits 10*
6MMCS004W	Advanced Interactive Media Development	6	Semester 1	20	US Credits 4 / ECTS credits 10*
6SENG001W	Reasoning about Programs	6	Semester 1	20	US Credits 4 / ECTS credits 10*
6SENG002W	Concurrent Programming	6	Semester 1	20	US Credits 4 / ECTS credits 10*
Life Sciences					
4BICH003W	Science: History Philosophy and Practice	4	Semester 1	20	US Credits 4 / ECTS credits 10*
4BIOM003W	Critical Skills for the Biomedical Sciences	4	Semester 1	20	US Credits 4 / ECTS credits 10*
4CHMA001W	Chinese Medicine: Concepts and Context	4	Semester 1	20	US Credits 4 / ECTS credits 10*
4HMDS001W	Yoga and Meditation	4	Semester 1	20	US Credits 4 / ECTS credits 10*
4PHYM001W	Human Physiology	4	Semester 1	20	US Credits 4 / ECTS credits 10*

5BICH003W	Molecular Biology and Genetics	5	Semester 1	20	US Credits 4 / ECTS credits 10*
5BIOM001W	Medical Genetics and Genomics	5	Semester 1	20	US Credits 4 / ECTS credits 10*
5BIOM003W	Molecular and Cellular Therapeutics	5	Semester 1	20	US Credits 4 / ECTS credits 10*
5BIOM007W	Applied Pathobiology	5	Semester 1	20	US Credits 4 / ECTS credits 10*
5BIOM008W	Infection and Immunity	5	Semester 1	20	US Credits 4 / ECTS credits 10*
5BIOM009W	Human Parasitology	5	Semester 1	20	US Credits 4 / ECTS credits 10*
5EVBI002W	Urban Living and the Environment	5	Semester 1	20	US Credits 4 / ECTS credits 10*
5PHYM001W	Medical Physiology	5	Semester 1	20	US Credits 4 / ECTS credits 10*
5PHYM004W	Pathophysiology	5	Semester 1	20	US Credits 4 / ECTS credits 10*
6BICH002W	Proteins and Enzymes	6	Semester 1	20	US Credits 4 / ECTS credits 10*
6BIOL003W	Applied Biotechnology	6	Semester 1	20	US Credits 4 / ECTS credits 10*
6BIOM002W	Cellular and Molecular Pathology	6	Semester 1	20	US Credits 4 / ECTS credits 10*

6BIOM003W	Clinical Immunology and Immunohaematology	6	Semester 1	20	US Credits 4 / ECTS credits 10*
6BIOM004W	Diagnostic Biochemistry and Haematology	6	Semester 1	20	US Credits 4 / ECTS credits 10*
6BIOM005W	Medical Microbiology in the Genomics Era	6	Semester 1	20	US Credits 4 / ECTS credits 10*
6HMNT003W	Nutrition and Performance	6	Semester 1	20	US Credits 4 / ECTS credits 10*
6PHYM002W	Topics in Neuroscience	6	Semester 1	20	US Credits 4 / ECTS credits 10*
Psychology					
4PSYC001W	Social Psychology	4	Semester 1	20	US Credits 4 / ECTS credits 10*
4PSYC002W	Cognitive Psychology	4	Semester 1	20	US Credits 4 / ECTS credits 10*
4PSYC006W	Individual Differences	4	Semester 1	20	US Credits 4 / ECTS credits 10*
5PSYC001W	Data Analysis for Psychology	5	Semester 1	20	US Credits 4 / ECTS credits 10*
5PSYC008W	Systems Neuroscience	5	Semester 1	20	US Credits 4 / ECTS credits 10*
6PSYC003W	Occupational and Work Psychology	6	Semester 1	20	US Credits 4 / ECTS credits 10*

6PSYC008W	Clinical Psychology	6	Semester 1	20	US Credits 4 / ECTS credits 10*
6PSYC011W	Music and the Mind	6	Semester 1	20	US Credits 4 / ECTS credits 10*
6PSYC013W	Psychology of Education	6	Semester 1	20	US Credits 4 / ECTS credits 10*

* All transcripts are issued in UK credits. Please note the recommendation of a 4 US credit value equivalency is provided as guidance. Final credit values for all modules for US students are decided by your home institution and will be dependent on its credit transfer policies.

Computer Science and Engineering

Programming Principles I

Module Code: 4COSC001W

Level 4

Semester 1

Location: Cavendish

UK Credit Value: 20

Equivalent Credit Value: US Credits 4 / ECTS credits 10*

An introduction to Computer Programming with a strongly-typed language. The module concentrates on teaching the fundamentals of programming using a requirements-centred approach to algorithm design. Basic coding structures such as sequence, selection, and iteration will be covered. There will be an emphasis on practical exercises to develop programming experience and confidence.

Assessment: Practical Work (50%), In-Class Test/Assignment exam conditions (50%)

*All transcripts are issued in UK credits.

Information Technology Security

Module Code: 5BUIS003W

Level 5

Semester 1

Location: Cavendish

UK Credit Value: 20

Equivalent Credit Value: US Credits 4 / ECTS credits 10*

This module examines the issues involved with recognising security threats to computer systems, their consequences and methods of dealing with such threats. In particular, it provides an overview of access controls, software development security, business continuity, legal issues and compliance, and physical security.

Assessment: Group Coursework (50%), Examination - closed book (50%)

*All transcripts are issued in UK credits.

Object Oriented Programming

Module Code: 5COSC001W

Level 5

Semester 1

Location: Cavendish

UK Credit Value: 20

Equivalent Credit Value: US Credits 4 / ECTS credits 10*

Pre-requisite: Programming experience required

This module covers in a practical way the design and implementation of object-oriented software for typical software applications through the entire software lifecycle.

Assessment: Coursework (50%), Examination - closed book (50%)

*All transcripts are issued in UK credits.

Database Systems

Module Code: 5COSC002W

Level 5

Semester 1

Location: Cavendish

UK Credit Value: 20

**Equivalent Credit Value: US Credits 4 /
ECTS credits 10***

Pre-requisite: 4COSC003W *Computer Science Practice*

The module builds on the concepts of database design and data manipulation via SQL that were introduced in Computer Science Practice. In addition, it introduces UML notations, and Normalisation as a method for checking table structures. Application programming with embedded SQL and Data Security are also addressed.

Assessment: Coursework (70%), Examination - closed book (30%)

*All transcripts are issued in UK credits.

Advanced Client-side Development

Module Code: 5COSC015W

Level 5

Semester 1

Location: Cavendish

UK Credit Value: 20

**Equivalent Credit Value: US Credits 4 /
ECTS credits 10***

This module provides practical knowledge and understanding of client-side or/else front-end development programming using advanced HTML5, CSS3 and JavaScript. Client-side technologies, including HTML5 Audio and Video are covered together with a client-side scripting language, a UI and CSS framework and a client-side scripting framework. The module also covers issues pertaining to front-end security.

Assessment: In-Class Test/Assignment exam conditions (40%), Coursework (60%)

*All transcripts are issued in UK credits.

Game Development Group Project III

Module Code: 6CCGD001W

Level 6

Semester 1

Location: Cavendish

UK Credit Value: 20

**Equivalent Credit Value: US Credits 4 /
ECTS credits 10***

Pre-requisite: *C++ Programming experience required*

This module provides students 3D game development experience of group working using an industry standard shader based programming API with emphasis on in-depth understanding of advanced 3D graphics algorithms and object oriented software design principles. Students participate in a team work based on an incremental and iterative game development production process to manage the full life-cycle of a computer games project underpinned by an entrepreneurial approach with the awareness of professional practices.

Assessment: Group Coursework (40%), Group Practical (60%)

*All transcripts are issued in UK credits.

Enterprise Application Development

Module Code: 6COSC001W

Level 6

Semester 1

Location: Cavendish

UK Credit Value: 20

**Equivalent Credit Value: US Credits 4 /
ECTS credits 10***

Pre-requisite: 5COSC001W *Object Oriented Programming or equivalent*

This module builds on the skills developed in 5COSC001W, 5COSC003W and 5COSC004W, by extending OOD and analysis techniques with frameworks for Enterprise Application Development (EAD). Enterprise features of contemporary frameworks are identified and then used to develop applications. Methodologies for EAD are also

explored. Throughout a focus is maintained on the layers of an Enterprise Application and the choice of an appropriate technology for each layer. By the end the student should be able to apply and reflect on the advantages and disadvantages of the variety of patterns, and methodologies used for EAD.

Assessment: Coursework (50%), Coursework (50%)

*All transcripts are issued in UK credits.

Advanced Server-Side Web Programming

Module Code: 6COSC005W

Level 6

Semester 1

Location: Cavendish

UK Credit Value: 20

**Equivalent Credit Value: US Credits 4 /
ECTS credits 10***

Pre-requisite: 5COSC006W Server-side Web Development or equivalent

The module covers the techniques and technologies involved in building large-scale advanced web applications. It is suitable for students with a background in web design and web development, with knowledge of web scripting and SQL.

Assessment: Coursework (40%), Coursework (60%)

*All transcripts are issued in UK credits.

Mobile User Experience

Module Code: 6MMCS001W

Level 6

Semester 1

Location: Cavendish

UK Credit Value: 20

**Equivalent Credit Value: US Credits 4 /
ECTS credits 10***

Pre-requisite: 4MMCS003W Web Design & Development and 4COSC001W Programming Principles I or equiv

This module is designed to give students an exposure to the complete design process of mobile interfaces, from concept creation to product testing. It exposes the students to user experience (UX) issues related to designing for multiple mobile platforms, devices and interaction styles. The module uses an industry-standard framework to demonstrate the aforementioned topics by implementing a mobile web app with responsive content and game like elements. It also covers augmented reality for mobiles using canvas and WebGL.

Assessment: In-Class Test/Assignment exam conditions (40%), Group Coursework (60%)

*All transcripts are issued in UK credits.

Advanced Interactive Media Development

Module Code: 6MMCS004W

Level 6

Semester 1

Location: Cavendish

UK Credit Value: 20

**Equivalent Credit Value: US Credits 4 /
ECTS credits 10***

This module covers essential topics of advanced animation production (motion capture pipeline, data processing, animation blending, and incorporation of the animation in an industry standard games engine). It also provides an understanding of the issues, technologies and concepts underlying the vision of pervasive computing infrastructure to create alternative interaction styles. Specifically, concepts and basic techniques of 3D capture, analysis and representation using commercial consumer depth camera (currently Kinect).

Assessment: Coursework (40%), Coursework (60%)

*All transcripts are issued in UK credits.

Reasoning about Programs

Module Code: 6SENG001W

Level 6

Semester 1

Location: Cavendish

UK Credit Value: 20

**Equivalent Credit Value: US Credits 4 /
ECTS credits 10***

Pre-requisite: 5SENG001W Algorithms: Theory Design and Implementation or equivalent

The module examines the use of formal methods in system specification and program development. A formal specification language will be covered in depth, with use of suitable case studies. The following areas will be covered: the mathematical notation of the specification language, the design of structured specifications, the use of tools to support specification development and the rigorous reasoning about specifications and programs.

Additionally, students will be introduced to the framework of formal reasoning about program specification widely known in software industry as software verification.

Assessment: Coursework (40%), Examination - closed book (60%)

*All transcripts are issued in UK credits.

Concurrent Programming

Module Code: 6SENG002W

Level 6

Semester 1

Location: Cavendish

UK Credit Value: 20

**Equivalent Credit Value: US Credits 4 /
ECTS credits 10***

Pre-requisite: 5COSC001W Object Oriented Programming or equivalent

The module introduces the concurrent programming paradigm using a practical approach to provide the student with the skills and knowledge to be able to analyse, design and develop concurrent programs. Practical experience of concurrent programming is provided via the concurrency features of Java. The areas covered are: concurrency concepts; details of a concurrent programming language; a survey of classic concurrency problems; concurrent program design and analysis using FSP and Labelled Transition Systems.

Assessment: Coursework (40%), Examination - closed book (60%)

*All transcripts are issued in UK credits.

Life Sciences

Science: History Philosophy and Practice

Module Code: 4BICH003W

Level 4

Semester 1

Location: Cavendish

UK Credit Value: 20

**Equivalent Credit Value: US Credits 4 /
ECTS credits 10***

The module will introduce students to the history and philosophy of science and to its practice in the modern world. Students will be taught about scientific communities and how scientists communicate with one another and how to read and evaluate scientific papers. We will explore the principles of scientific research, including interpreting data and critically examining scientific claims.

Assessment: Coursework (40%), Presentation (10%), Examination - closed book (50%)

*All transcripts are issued in UK credits.

Critical Skills for the Biomedical Sciences

Module Code: 4BIOM003W

Level 4

Semester 1

Location: Cavendish

UK Credit Value: 20

**Equivalent Credit Value: US Credits 4 /
ECTS credits 10***

The module will introduce students to laboratory procedures and the practice and principle of experimental design, data analysis and interpretation which lead to disease diagnosis. Emphasis will be placed on learning good laboratory techniques, the importance of conducting research in an ethical, professional and honest manner with

consideration for scientific advances and technological innovation. Students will also document key transferable skills linked to their career pathway in a professional personal development portfolio

Assessment: Portfolio (70%), In-Class Test/Assignment exam conditions (30%)

*All transcripts are issued in UK credits.

Chinese Medicine: Concepts and Context

Module Code: 4CHMA001W

Level 4

Semester 1

Location: Cavendish

UK Credit Value: 20

**Equivalent Credit Value: US Credits 4 /
ECTS credits 10***

An introduction to the distinct and coherent Chinese medical model, the result of a continuous process of critical thought, clinical observation and testing over the past two millennia. The key philosophical and historical concepts that are important in the understanding of Chinese Medicine, including an introduction to the four examinations and disease causes which underpin the understanding of the diagnostic process within this medical model.

Assessment: Essay (60%), Essay (40%)

*All transcripts are issued in UK credits.

Yoga and Meditation

Module Code: 4HMDS001W

Level 4

Semester 1

Location: Cavendish

UK Credit Value: 20

**Equivalent Credit Value: US Credits 4 /
ECTS credits 10***

This experiential module aims to provide an introduction to the theoretical and conceptual framework for exploring the physical, mental, spiritual and social dimensions of yoga and meditation. Students are given the opportunity to personally experience the effects of yoga postures, breathing, relaxation and meditation techniques. The principles underlying the safe practice of yoga and meditation are considered. For the duration of the module students will be expected to develop a yoga and meditation practice, as well as maintain a learning journal. The journal will enable the student to reflect on the experience of practising yoga and meditation.

Assessment: Practical Work (50%), Essay (50%)

*All transcripts are issued in UK credits.

Human Physiology

Module Code: 4PHYM001W

Level 4

Semester 1

Location: Cavendish

UK Credit Value: 20

**Equivalent Credit Value: US Credits 4 /
ECTS credits 10***

This module will provide an introduction to the organisation communication and support systems of the human body. Major physiological systems will be covered with emphasis placed on the relationship between their structure and function.

Assessment: Coursework (50%), Examination - closed book (50%)

*All transcripts are issued in UK credits.

Molecular Biology and Genetics

Module Code: 5BICH003W

Level 5

Semester 1

Location: Cavendish

UK Credit Value: 20

**Equivalent Credit Value: US Credits 4 /
ECTS credits 10***

Pre-requisites: 4BICH001W Biochemistry and 4BIOL002W Cell Biology or equivalent

This module will build on fundamental principles covered at level 4 about DNA and gene expression to introduce concepts about epigenetic and microRNA gene regulation. The module will discuss polymorphisms and their

inheritance. A range of molecular techniques will be covered which include DNA isolation from a range of starting sources, amplification of specific regions of DNA, separation of DNA fragments, cloning, recombinant DNA expression and sequencing.

Assessment: Multiple-Choice Question Test (30%), Coursework (40%), Presentation Group (30%)

*All transcripts are issued in UK credits.

Medical Genetics and Genomics

Module Code: 5BIOM001W

Level 5

Semester 1

Location: Cavendish

UK Credit Value: 20

**Equivalent Credit Value: US Credits 4 /
ECTS credits 10***

Pre-requisite: *4BIOL002W Cell Biology and 4BICH001W Biochemistry or equivalent*

Students will build on their knowledge of classical genetics, molecular biology and biochemistry. Teaching of molecular genetics, epigenetics and genomics technologies will be underpinned by vital elements of biochemistry needed to fully appreciate these complex and exciting fields. Students will be introduced to the fields of medical and population genetics through the study of common and rare human genetic disorders and genetic studies on experimental organisms. The importance of genetics and genomics to humanity will be explored through the study of diagnostic genetics and an introduction to genetic counselling. Throughout the module consideration will be given to recent developments, current practices and ethical considerations in genetic research and practice.

Assessment: Coursework (25%), Coursework (25%), Examination - closed book (50%)

*All transcripts are issued in UK credits.

Molecular and Cellular Therapeutics

Module Code: 5BIOM003W

Level 5

Semester 1

Location: Cavendish

UK Credit Value: 20

**Equivalent Credit Value: US Credits 4 /
ECTS credits 10***

This module comprises lectures and tutorials designed to give students an understanding of molecular and cellular therapeutic strategies available for the treatment of inherited and acquired diseases. As the field is progressing rapidly the contents are upgraded annually to introduce cutting edge current concepts and opinions. Modern molecular and gene therapies, immunotherapy, bacteriophage-based therapies, clinical trials and associated ethical issues are discussed.

Assessment: Coursework (25%), Multiple-Choice Question Test (25%), Examination - closed book (50%)

*All transcripts are issued in UK credits.

Applied Pathobiology

Module Code: 5BIOM007W

Level 5

Semester 1

Location: Cavendish

UK Credit Value: 20

**Equivalent Credit Value: US Credits 4 /
ECTS credits 10***

Pre-req: *4BIOM004W Functional Anatomy, 4PHYM001W Human Physiology, 4BICH001W Biochemistry or equiv*

The module aims to build on knowledge of human physiology, biochemistry and anatomy acquired at Level 4 and to provide a biological insight into understanding disease processes. At the end of this module the student will be able to explain the patho-physiological alterations occurring in a number of disorders and be able to elucidate shared mechanisms within or between disease states. This module also aims to introduce the principle laboratory tests carried out by the specialist Biomedical Science disciplines as well as their integrated role of in disease investigation.

Assessment: Coursework (50%), Examination - closed book (50%)

*All transcripts are issued in UK credits.

Infection and Immunity

Module Code: 5BIOM008W

Level 5

Semester 1

Location: Cavendish

UK Credit Value: 20

**Equivalent Credit Value: US Credits 4 /
ECTS credits 10***

Pre-requisite: 4BIOL002W Cell Biology and 4BIOM004W Functional Anatomy or equivalent

An overview of pathogenic microorganisms, the factors which contribute to their virulence and pathogenicity, and the diseases they cause will be combined with an overview of the human immune system, its evolutionary development and its interactions with those microorganisms. The different components of the immune system will be covered in depth and consideration given to the roles of different leucocytes and effector molecules in the immune response including the key features and effectors of inflammation. Alongside consideration of the roles of the immune system in the elimination of microorganisms other key roles of the immune system will be considered including wound healing, immuno- surveillance and the immune response to malignancy/ cellular abnormality.

Assessment: Coursework (40%), Examination - closed book (60%)

*All transcripts are issued in UK credits.

Human Parasitology

Module Code: 5BIOM009W

Level 5

Semester 1

Location: Cavendish

UK Credit Value: 20

**Equivalent Credit Value: US Credits 4 /
ECTS credits 10***

The pathogenesis of human parasitic diseases; case histories will be used to demonstrate the principles and practice of parasitology. Life cycles and control of insect, worm and protozoan parasites including malaria, schistosomiasis, trypanosomiasis and nematode infections. The failures and successes of control programmes will be reviewed. Other topics covered will be the impact of HIV/AIDS, the effect of parasitic infections on nutrition and the importance of insects as vectors of parasitic diseases.

Assessment: In-Class Participation (40%), Examination - closed book (60%)

*All transcripts are issued in UK credits.

Urban Living and the Environment

Module Code: 5EVBI002W

Level 5

Semester 1

Location: Cavendish

UK Credit Value: 20

**Equivalent Credit Value: US Credits 4 /
ECTS credits 10***

Urbanisation presents a unique set of challenges to the environment and organisms, including humans. This module will explore impacts of the built environment, industry, transport and recreation on urban ecosystems and human health and wellbeing.

Assessment: Group Coursework (60%), Examination - open book (40%)

*All transcripts are issued in UK credits.

Medical Physiology

Module Code: 5PHYM001W

Level 5

Semester 1

Location: Cavendish

UK Credit Value: 20

**Equivalent Credit Value: US Credits 4 /
ECTS credits 10***

Pre-requisite: 4PHYM001W Human Physiology or equivalent

Using student-centred enquiry based learning, which allows students to become co-creators of their own knowledge in a small group format, students will be required to integrate and synthesize material covered in this module with learning from both Physiological Biochemistry and Physiological Networks in order to further their understanding of how the different body systems are regulated and how one system influences another. Clinical disorders will be

used to demonstrate the consequence(s) of disruption to normal function in one system on another system/other systems.

Assessment: Portfolio (90%), In-Class Test/Assignment exam conditions (10%)

*All transcripts are issued in UK credits.

Pathophysiology

Module Code: 5PHYM004W

Level 5

Semester 1

Location: Cavendish

UK Credit Value: 20

Equivalent Credit Value: US Credits 4 /
ECTS credits 10*

Pre-requisite: *Level 4 Physiology module or equivalent*

Building on level 4 Physiology, this module describes and explains major pathophysiological processes and underlying mechanisms e.g. cellular growth patterns, injury, repair, inflammation, aging, and how these contribute to the features of disease.

Assessment: Essay (50%), Examination - closed book (50%)

*All transcripts are issued in UK credits.

Proteins and Enzymes

Module Code: 6BICH002W

Level 6

Semester 1

Location: Cavendish

UK Credit Value: 20

Equivalent Credit Value: US Credits 4 /
ECTS credits 10*

Pre-requisite: *4BICH001W Biochemistry and 5BICH002W Bioinformatics or equivalent*

A primer in the practical approach to studying protein function through an appreciation of structure and biochemistry. In vivo, in vitro and in silico methods to analyse proteins, particularly enzymes, will be explored. Recombinant protein production will be addressed theoretically and modern structural techniques will be addressed practically. Parameters of biochemical and biophysical assays will be explored to understand function of particular proteins. Students will learn a practical appreciation for how to make amino acid substitutions in proteins and how to evaluate the outcomes of these mutations. Protein evolution will be discussed from underlying principles at the DNA level to subtle modifications in function through adaptation of function. Software packages that allow protein manipulation and structure rendering will be employed. Tutorials will be employed for all topics to engage students with the comprehension and evaluation of data, particularly, but not limited to, published material

Assessment: Coursework (40%), Examination - closed book (60%)

*All transcripts are issued in UK credits.

Applied Biotechnology

Module Code: 6BIOL003W

Level 6

Semester 1

Location: Cavendish

UK Credit Value: 20

Equivalent Credit Value: US Credits 4 /
ECTS credits 10*

The module will explore various applications of biotechnology including applications in medicine, food production, solving environmental problems and industrial production of commodity chemicals and energy.

Assessment: Presentation Group (20%), Essay (20%), Examination - closed book (60%)

*All transcripts are issued in UK credits.

Cellular and Molecular Pathology

Module Code: 6BIOM002W

Level 6

Semester 1

Location: Cavendish

UK Credit Value: 20

Equivalent Credit Value: US Credits 4 /
ECTS credits 10*

Pre-requisite: 5BIOM007W Applied Pathobiology or equivalent

Students will explore the cellular and molecular basis of disease at an advanced level to provide the underpinning knowledge for the critical evaluation of routine practice and emerging molecular diagnostic techniques. To reflect the workload of the modern laboratory, there will be a focus on cancer (including solid and blood tumours). Integrated case studies will be used to explore in detail the diagnostic process, methods for assessing prognosis and the role of predictive testing for personalised medical treatment.

Assessment: Portfolio (50%), Examination - closed book (50%)

*All transcripts are issued in UK credits.

Clinical Immunology and Immunohaematology

Module Code: 6BIOM003W

Level 6

Semester 1

Location: Cavendish

UK Credit Value: 20

**Equivalent Credit Value: US Credits 4 /
ECTS credits 10***

Pre-requisite: 5BIOM008W Infection and Immunity or equivalent

Immune responses to pathogens, immunopathology and prevention of infectious diseases, immune responses to tumours. Immunodeficiency, hypersensitivity and autoimmunity including investigation, diagnosis, pathology and treatment. Manipulation of immune responses including vaccines and immunotherapy. Transplantation, rejection and immunosuppression. Scientific basis, applications and clinical aspects of blood transfusion.

Assessment: Coursework (40%), Examination - open book (60%)

*All transcripts are issued in UK credits.

Diagnostic Biochemistry and Haematology

Module Code: 6BIOM004W

Level 6

Semester 1

Location: Cavendish

UK Credit Value: 20

**Equivalent Credit Value: US Credits 4 /
ECTS credits 10***

Pre-requisite: 5BIOM007W Applied Pathobiology and 5BICH001W Metabolic Biochemistry or equivalent

Clinical and technical theory and practice underpinning the current biochemistry and haematology laboratory investigation of selected disorders. Including processes for method evaluation and the incorporation of quality assurance systems for decision making.

Assessment: Presentation Group (50%), Examination - closed book (50%)

*All transcripts are issued in UK credits.

Medical Microbiology in the Genomics Era

Module Code: 6BIOM005W

Level 6

Semester 1

Location: Cavendish

UK Credit Value: 20

**Equivalent Credit Value: US Credits 4 /
ECTS credits 10***

Pre-requisite: 5BIOM008W Infection and Immunity or equivalent

Detection, identification and characterization of pathogenic microorganisms. Pathogenesis, transmission and epidemiology of infectious diseases; treatment and prevention of infectious with emphasis on diseases of current and emerging importance. Also covered are: laboratory automation, antibiotic resistance; microbial genomics and bioinformatics: public health measures used for disease control.

Assessment: Coursework (40%), Examination - closed book (60%)

*All transcripts are issued in UK credits.

Nutrition and Performance

Module Code: 6HMNT003W

Level 6

Semester 1

Location: Cavendish

UK Credit Value: 20

**Equivalent Credit Value: US Credits 4 /
ECTS credits 10***

Pre-requisite: 5HMNT001W Diet in Health and Disease and 5HMNT002W Applied Nutrition or equivalent
Sound nutritional practices based on scientific research form the platform for athletic performance. This module provides students with an overview of the role of nutrition in regulating physiological processes associated with sport and exercise performance. Nutritional requirements and recommendations for physically active individuals are covered. The module also allows students the opportunity to assess the efficacy of nutritional strategies intended to enhance athletic performance.

Assessment: Coursework (50%), In-Class Test/Assignment exam conditions (50%)

*All transcripts are issued in UK credits.

Topics in Neuroscience

Module Code: 6PHYM002W

Level 6

Semester 1

Location: Cavendish

UK Credit Value: 20

**Equivalent Credit Value: US Credits 4 /
ECTS credits 10***

Pre-requisite: 5PHYM002W Physiological Networks or equivalent

The module provides a detailed survey of selected structural and functional aspects of neuroscience, with emphasis upon diseases affecting the nervous system. Detailed physiological and cellular aspects of neuroscience will be addressed, focussing on specific topics (typically, neurodevelopment, control and disorders of movement, learning and memory and neurodegenerative diseases). Students will develop their analytical and investigative skills in order to explore issues in neuroscience and potential therapeutic interventions.

Assessment: Portfolio (40%), Examination - Seen (60%)

*All transcripts are issued in UK credits.

Psychology

Social Psychology

Module Code: 4PSYC001W

Level 4

Semester 1

Location: Cavendish

UK Credit Value: 20

**Equivalent Credit Value: US Credits 4 /
ECTS credits 10***

This module provides a broad introduction to social psychology and the study of how individuals think, feel, and behave in a social context. Specific topics include an introduction to the nature of social existence (questioning the idea of reality and the meaning of death and dying) and social perception (including the self-concept; elements of social perception, and; stereotypes, prejudice, and discrimination). Students will also learn about the impact of social influence (including conformity and obedience; attitudes and persuasion, and; group influence) and social relationships (attraction and close relationships; helping behaviour, and; aggression). As part of this module, students will also develop their academic essay-writing skills and exam-answering skills, and will be taught methods of using summative feedback to improve written work.

Assessment: Essay (50%), Examination - closed book (50%)

*All transcripts are issued in UK credits.

Cognitive Psychology

Module Code: 4PSYC002W

Level 4

Semester 1

Location: Cavendish

UK Credit Value: 20

**Equivalent Credit Value: US Credits 4 /
ECTS credits 10***

The study of "thinking" and how people process the world around them and interact with it forms a core topic in

psychology, namely cognition. This module provides students with a broad overview of the key themes in Cognitive Psychology, including memory, attention, sensation and perception (including object recognition, imagery), learning theory, language and problem solving. Teaching will include both formal lectures and hands on activities to provide insight into how research into cognition is carried out.

Assessment: Coursework (40%), Examination - closed book (60%)

*All transcripts are issued in UK credits.

Individual Differences

Module Code: 4PSYC006W

Level 4

Semester 1

Location: Cavendish

UK Credit Value: 20

**Equivalent Credit Value: US Credits 4 /
ECTS credits 10***

Considers topics in the field of psychological individual differences, e.g. personality, psychological testing, intelligence, cognitive style, emotion, motivation, mood, mental health, gender and ethnicity. There is a focus on topics, models and issues currently seen as well supported by empirical evidence, important in the field, and for applied practice. Teaching and learning methods include lectures, practical workshops, seminars and independent study.

Assessment: Coursework (50%), Examination - closed book (50%)

*All transcripts are issued in UK credits.

Data Analysis for Psychology

Module Code: 5PSYC001W

Level 5

Semester 1

Location: Cavendish

UK Credit Value: 20

**Equivalent Credit Value: US Credits 4 /
ECTS credits 10***

Pre-requisite: 4PSYC005W Introduction to Psychological Research Methods or equivalent

Students taking this module will develop their competence in collecting and coding qualitative data by acquiring interviewing skills and by developing their skill in coding transcript data. They will also develop skills in designing, analysing, and interpreting the results of experiments with more than two conditions, and survey designs involving multiple predictors.

Assessment: Portfolio (40%), Examination - closed book (60%)

*All transcripts are issued in UK credits.

Systems Neuroscience

Module Code: 5PSYC008W

Level 5

Semester 1

Location: Cavendish

UK Credit Value: 20

**Equivalent Credit Value: US Credits 4 /
ECTS credits 10***

Pre-requisite: 4PSYC003W Biological Psychology or equivalent

The first part of this module examines the general principles of neuronal communication at a more detailed level than when initially encountered in Biological Psychology. This knowledge is then related to the brain's ability to adapt, to learn and to commit to memory and also to the complex circuits involved in specific sensory functions, such as vision and audition. Plasticity is a theme that runs throughout the module and we also consider the role of genetics in neuroscience

Assessment: Presentation Group (50%), Examination - closed book (50%)

*All transcripts are issued in UK credits.

Occupational and Work Psychology

Module Code: 6PSYC003W

Level 6

Semester 1

Location: Cavendish

UK Credit Value: 20

**Equivalent Credit Value: US Credits 4 /
ECTS credits 10***

Pre-requisite: 4PSYC001W Social Psychology and 4PSYC006W Individual Differences or equivalent

What do organizations want from their employees and what do employees want from the organizations in which they work? How do we ensure the right fit between organizations and their employees? This module looks at the individual in the workplace, the way people work in teams, how they are led and what motivates them. In doing so, the module explores the principles by which psychology is applied to theory and practice in the workplace. The module also focusses on employability, that is, what is employability and what skill sets do employers seek from graduates? Students on this module will be taught how to decipher job adverts, apply for jobs, write up CV's, how to answer interview questions and how to present oneself.

Assessment: Presentation Group (50%), Examination - closed book (50%)

*All transcripts are issued in UK credits.

Clinical Psychology

Module Code: 6PSYC008W

Level 6

Semester 1

Location: Cavendish

UK Credit Value: 20

**Equivalent Credit Value: US Credits 4 /
ECTS credits 10***

Pre-req: 5PSYC002W Brain, Mind & Behaviour or 1PSY502 Psychobiology & Clinical Neuroscience or equiv

Focusing on the theory and practice of clinical psychology, a critical approach is taken towards the diagnosis and classification of mental illness, current aetiological theories and a range of clinical interventions used by clinical psychologist and other mental health professionals. Psychological disorders and conditions considered include: depression, suicidal behaviour, the psychoses, personality disorders, eating disorders, dissociative disorders and anxiety.

Assessment: Coursework (40%), Examination - closed book (60%)

*All transcripts are issued in UK credits.

Music and the Mind

Module Code: 6PSYC011W

Level 6

Semester 1

Location: Cavendish

UK Credit Value: 20

**Equivalent Credit Value: US Credits 4 /
ECTS credits 10***

Pre-requisite: 4PSYC002W Cognitive Psychology OR musical training (at discretion of Module Leader)

With emphasis on cognitive theories, this module examines music in relation to the concept of mind. It includes an overview of auditory psychophysics and considers how cultural, social and neurological factors influence musical development. Links between music and perception, memory, emotion, language and creativity are also explored, providing students with a solid understanding of the cognitive mechanisms underlying musical production and appreciation. The module also considers the broad role that music plays in society and health.

Assessment: Presentation Group (50%), In-Class Test/Assignment exam conditions (50%)

*All transcripts are issued in UK credits.

Psychology of Education

Module Code: 6PSYC013W

Level 6

Semester 1

Location: Cavendish

UK Credit Value: 20

**Equivalent Credit Value: US Credits 4 /
ECTS credits 10***

Pre-requisite: 4PSYC004W Developmental Psychology and Research Methods experience or equivalent

This module aims to explore how psychological theory and research has been applied to teaching and learning in formal settings from pre-school to university. Key topics include: Theories of teaching and learning, assessment,

schooling, literacy, inclusion, bullying, motivation, educational neuroscience and critical pedagogy. The module will address how the work of educational psychologists, speech and language therapists and teachers is informed by empirical research.

Assessment: Coursework (40%), Examination - closed book (60%)

*All transcripts are issued in UK credits.
