

BSc PHYSIOLOGY

STAGE 1

1. Students take all of the following four core modules:

BIOL10050 Animal Diversity and Evolution
BIOL10020 Cells, Genes & Microbes
CHEM10050 Organic Chemistry & Chemical Biology
CHEM10060 Physical & Inorganic Chemistry

2. Students that did not achieve at least a C3 in Higher Leaving Certificate Chemistry (or equivalent) students must take the following Chemistry module:

CHEM00010 Introductory Chemistry

3. (a) Students take one of the following Maths modules:

MATH10060 Differential & Integral Calculus
MATH10070 Introduction to Calculus

and (b) one of the following Maths modules:

MATH10040 Numbers & Functions
MATH10050 Linear Algebra & Geometry
MATH10080 Calculus & Statistics
MATH10090 Matrices & Vectors

NB: Students that have selected MATH10060 should select either MATH10040 or MATH10050. Students that have selected MATH10070 should select either MATH10080 or MATH10090.

3. (c) Students that did not achieve at least a C3 in Higher Leaving Certificate Mathematics or at least an A2 in Ordinary Mathematics must also take the following Mathematics module:

MATH00010 Introduction to Mathematics

4. In the absence of higher level Leaving Certificate Physics (at least a C3) or equivalent students must take the following Physics module:

PHYC10020 Physics of the Cell for Lifesciences

Students must take a minimum of 50 credits of modules from within the BSc programme. Elective modules (total of 10 credits) may also be selected from within the BSc Programme.

STAGE 2

1. Students take all of the following five core modules:

PHYS20040 An introduction to Physiology: Human cells and tissues
PHYS20030 Physiology of the internal environment of the human body
PHYS20020 Physiology of sensing and responding to the internal and external environment
BMOL20050 Metabolic biochemistry
BIOC20010 The Molecules of Life.

2. *Students take one of the following two optional modules:*

BMOL20010 Molecular Genetics and Biotechnology
GENE20010 Animal and Plant Genetics

3. *The following two modules are recommended as options or electives for students wishing to deepen their knowledge of Physiology*

CELB20010 Cell Biology
BMOL20030 Integrated Brain

Students must take a minimum of 50 credits of modules from within the BSc programme. Elective modules (total of 10 credits) may also be selected from within the BSc Programme.

STAGE 3

BSc Physiology (Single Major)

1. *Students take the following eight core modules:*

PHYS30010 Cardiovascular System
PHYS30020 Respiratory Physiology
PHYS30040 Endocrine and Reproductive Physiology
PHYS30090 Digestion, Absorption and Excretion
PHYS30190 Experimental Physiology
STAT20070 Biostatistics
NEUR30080 Membrane Biology
NEUR30070 Motion and Emotion

2. *Students take two of the following optional modules:*

ANAT 20020 Palaeoanthropology & Human Evolution
BIOC30010 Metabolism and Disease
BIOC30030 Biochemist's Toolkit
BIOC30040 Structure-based Drug Design
BMOL30040 Cell Signalling
BMOL30020 Molecular Basis of Disease
NEUR30060 Sensory Neuroscience
GENE30030 Genetic Basis of Disease
PHAR30010 Chemotherapeutic Agents
PHAR30050 Molecular Pharmacology
ZOO 30030 Evolutionary Biology
PERS30290 Exercise in the Lifespan

Students must take a minimum of 50 credits of modules from within the BSc programme. Elective modules (total of 10 credits) may also be selected from within the BSc Programme.

BSc Physiology (Joint Major)

Students take four modules from Option List 1 (below) and one from Option List 2 (below). This generates the 25 credits required by Physiology. The second subject

also stipulates 25 credits. The remaining modules in the two lists (Option Lists 1 and 2) are available for the 10 credits of elective modules.

Option List 1

PHYS30010 Cardiovascular System
PHYS30020 Respiratory Physiology
PHYS30040 Endocrine and Reproductive Physiology
PHYS30090 Digestion, Absorption and Excretion
STAT20070 Biostatistics

Option List 2

NEUR30070 Higher Cortical Function
NEUR30080 Membrane Biology
NEUR30060 Sensory Neuroscience

STAGE 4

BSc Physiology (Single Major)

1. Students take the following seven core modules:

PHYS30070 Gastrointestinal Physiology
PHYS30110 Adaptation to Hypoxia
PHYS30160 Local Control of Vascular Resistance
PHYS30060 Renal & UT Physiology
PHYS30170 Physiological Control of the Upper Airway in Health and Disease
PHYS30180 Integrated Animal Physiology
PHYS40060 Physiology Research Project

2. Students take two optional modules from the two lists below with at least one from Option List 1

Option List 1

NEUR40020 Synaptic Plasticity
NEUR40030 Synaptic Signalling

Option List 2

BMOL30030 Regulation of Gene Expression
PHAR30010 Chemotherapeutic Agents
BIOC30030 Biochemst's Toolkit
BMOL30020 Molecular Basis of Disease
GENE30030 Genetic Basis of Disease
GENE40030 Gene Regulation

BSc Physiology (Joint Major)

1. Students take the following core module:

PHYS40070 Physiology Joint Honours Project

2. Students take one of the following optional modules:

NEUR40020 Synaptic Plasticity

NEUR40030 Synaptic Signalling

3. Students take three of the following optional modules:

PHYS30070 Gastrointestinal Physiology

PHYS30110 Adaptation to Hypoxia

PHYS30160 Local Control of Vascular Resistance

PHYS30060 Renal & UT Physiology

PHYS30170 Physiological Control of the Upper Airway in Health and Disease

PHYS30180 Integrated Animal Physiology