PRIFYSGOL ABERYSTWYTH UNIVERSITY | Department of Life Sciences

Undergraduate studies in

Biological Sciences

Contents

THE TIMES THE SUNDAY TIMES GOOD UNIVERSITY GUIDE 2024 WELSH UNIVERSITY OF THE YEAR

Important information

The programme information published in this brochure was correct at time of going to print (September 2024) and may be subject to change. Prospective students are advised to check the definitive programme information, including entry requirements, that is available on our website before making an application, to ensure that the programme meets their needs.

Welcome

Welcome to the Department of Life Sciences, a world-class centre for biological science education and research based here at Aberystwyth University.

We provide an outstanding learning environment for both your academic and personal development, with state-of-the-art facilities and generous scholarships. Your course will be brought to life by our committed and inspiring lecturers, with much of our teaching being led by the cutting-edge research interests of our staff.

In the Department of Life Sciences, we are able to offer you a wide range of learning opportunities, including interactive lectures and seminars, laboratory classes, small group tutorials, and field courses. The flexibility of being able to select from a range of diverse modules means you can tailor your course to your individual interests. You will be assessed in a variety of ways, including exams, laboratory reports, presentations, and essays, all of which are designed to enhance your subject-specific, personal, and transferable skillsets.

We are proud that the majority of our courses in the Biological Sciences are accredited by the Royal Society of Biology or the British Association of Sport and Exercise Science. As well as highly satisfied students we have always had a strong track record of producing highly employable graduates.

Aberystwyth lies on the shores of Cardigan Bay on the west coast of Wales, set in stunning natural surroundings. The locality offers a fine coastline with expanses of rolling moorland and wooded valleys immediately inland, providing unique opportunities for field work. In the Department of Life Sciences, our mission is to improve the health and well-being of people through research, education and engagement activities. We believe this depends on delivering a healthy environment, healthy plants and animals, and healthy businesses.

Professor Iain Barber
Head of Department

Our courses

Single honours

We also offer:

- Agriculture
- Agriculture with Animal Science
- Agriculture with Business Management
- Animal Behaviour
- Animal Science
- Ecology
- Equine and Veterinary Bioscience
- Marine and Freshwater Biology
- Wildlife Conservation
- Zoology

Biochemistry

Royal Society of Biology Accredited Degree

BSc (Hons) | C700 | 3 years

During your Biochemistry degree at Aberystwyth, you will examine the structure and functions of the molecules that make up a cell and understand the way in which they interact in living processes. Our lecturers are active researchers, with first-hand experience of drug discovery, the investigation of diagnostic techniques, active synthesis of compounds and more.

Our Biochemistry degree places special emphasis on the practical skills required by employers in the pharmaceutical and biotechnology industries. During your studies, you will explore the techniques that have revolutionised the study of cell biology, biological chemistry, metabolism and molecular genetics, through expert tuition in scientific protocol and hands-on lab work. You will also work on tasks designed to emulate the requirements of professional practice in biochemistry.

You will benefit from:

- the application of molecular techniques including DNA extraction, sequencing and analysis
- gel electrophoresis for the separation and functional analysis of proteins
- biophysical characterisation of enzyme-catalysed reaction kinetics and thermodynamics
- extensive research and teaching labs equipped with the latest equipment, including bioimaging facilities, high-throughput DNA sequencing, proteomics, metabolomics and spectroscopic platforms.

Employability

As a graduate of this degree, you will have developed the skill set needed to work safely and independently in both research and industrial laboratory environments. As such, you will be well prepared for careers in the pharmaceutical and biotechnology industries. Many of our graduates also follow careers in education or pursue further studies at Masters or PhD level.

Module list

Below is an indicative list of modules that you may study on this course.

First year:

- Genetics, Evolution and Diversity
- Biological Chemistry
- Cell Biology *
- Microbial and Plant Diversity *
- Comparative Animal Physiology
- Skills for Biologists *.

Second year:

- Applied Molecular Biology and Bioinformatics
- Cell and Cancer Biology
- Practical Skills for Biochemists
- Proteins and Enzymes
- Research Methods *.

Final year:

- Research Project *
- Molecular Pharmacology
- Bioinformatics and Functional Genomics
- Biotechnology.

See our website for the optional modules you may select to develop your specialist interests.

* also available partially or entirely through the medium of Welsh

Key Facts

Typical offer:
UCAS tariff points: 120-104 to include B in A level Chemistry
IB: 30-28 with 5 points in Chemistry at Higher Level

Assessment weighting: Typically 100% coursework, or 50% coursework and 50% exams.

Field trips/fieldwork: No (except as part of selected research projects)

Also available:

C70F	Integrated foundation year
C701	Integrated year in industry
C709	Integrated Masters
C79F	Integrated Masters with integrated foundation year

Biology

BSc (Hons) | C100 | 3 years

On our Biology degree you will study biology on all scales, ranging from environmental to whole organism and cellular.

You will focus on the understanding of whole genomes, analysis of their evolution and investigation of individual gene function, using cutting-edge analytical approaches. You will also consider the ethical dilemmas being posed by advances in biological knowledge, for example, in controversial disease treatments or reproductive medicine. Our aim is to develop your knowledge and experimental skills as well as to encourage you to think independently, creatively and critically.

You will benefit from:

- the application of molecular techniques including DNA extraction, sequencing and analysis
- extensive research and teaching labs equipped with the latest state-of-the-art equipment, including bioimaging facilities, high-throughput DNA sequencing, proteomics, metabolomics and spectroscopic platforms
- advanced analytical expertise in bioinformatics, GIS, climate niche modelling and epidemiology supported by access to high performance computing facilities.

Employability

Recent graduates have entered employment with education authorities, the Environment Agency, conservation organisations, pharmaceutical companies, the NHS, sea life centres, public health laboratories and the water industry, to give a few examples.

Royal Society of Biology Accredited Degree

Module list

Below is an indicative list of modules that you may study on this course.

First year:

- Cell Biology *
- Comparative Animal Physiology
- Ecology and Conservation
- Genetics, Evolution and Diversity
- Microbial and Plant Diversity *
- Skills for Biologists *.

Second year:

- Climate Change: Plants, Animals and Ecosystems
- Evolution and Molecular Systematics
- Practical and Professional Skills in Microbiology
- Research Methods *.

Final year:

- Biotechnology
- Global Biodiversity Conservation
- Research Project *.

See our website for the optional modules you may select to develop your specialist interests.

* also available partially or entirely through the medium of Welsh

Key Facts

Typical offer:
UCAS tariff points: 120-104 to include B in A level Biology
IB: 30-28 with 5 points in Biology at Higher Level

Assessment weighting: Typically 100% coursework, or 40-60% coursework and 60-40% exams

Field trips/fieldwork: Yes

Also available:

C101	Integrated foundation year
C102	Integrated year in industry
C109	Integrated Masters
C09F	Integrated Masters with integrated foundation year

Biology and Climate Change

BSc (Hons) | FC71 | 3 years

The Biology and Climate Change degree explores creative ways of responding to the challenges and opportunities of the current climate crisis, and will equip you with relevant subject-specific knowledge alongside the multi-disciplinary, interpersonal skills and attributes needed to create a more just and sustainable world. If your intention involves having a positive impact on the world, this course will set you securely on that rewarding journey.

On this degree, you will learn about the science underpinning climate, and how humans have changed these processes in recent times. You will explore the impacts of climate change on biodiversity at the level of species, habitats and ecosystems, and the scope for organisms and populations to evolve in the light of this threat. By working across disciplines, you will learn the need for both scientific research and governance in tackling these important issues.

You will benefit from:

- the great variety of local habitats and ecosystems, both marine and terrestrial, and ideal locations to study the impacts of climate change on biodiversity, and the scope for mitigation
- the chance to carry out field research, both locally and abroad
- the option of a range of overseas courses
- the chance to work with established academic researchers who work on various aspects of the past, present and future effects of global change on natural ecosystems.

Employability
Our graduates are well placed for roles in climate change management, adaptation and mitigation and careers in related areas, such as environmental education and consultancy or conservation.

Module list

Below is an indicative list of modules that you may study on this course.

First year:
- Climate and Climate Change
- Ecology and Conservation
- Genetics, Evolution and Diversity
- Interdisciplinary Approaches to Climate Change
- Microbial and Plant Diversity *
- Skills for Wildlife Scientists *.

Second year:
- Climate Change: Plants, Animals and Ecosystems
- The Governance of Climate Change
- Research Methods *.

Final year:
- Research Project *
- Global Biodiversity Conservation.

See our website for the optional modules you may select to develop your specialist interests.

* also available partially or entirely through the medium of Welsh

Key Facts

Typical offer:
UCAS tariff points: 120-104 to include B in A level Biology
IB: 30-28 with 5 points in Biology at Higher Level

Assessment weighting: Typically 100% coursework, or 40-60% coursework and 60-40% exams

Field trips/fieldwork: Yes

Also available:
FC7F Integrated foundation year.

Biomedical Science

BSc (Hons) | B900 | 3 years

Biomedical science is a fascinating and rewarding field of study that explores the human body and its diseases. By studying biomedical science, you can gain valuable knowledge and skills for a variety of careers in healthcare, research, education and industry.

The BSc Biomedical Science degree allows you to explore the integration of knowledge and clinical practice in relation to human health and disease. In addition to undertaking a diverse set of practical exercises in state-of-the-art facilities, you will also conduct a final year research project on an aspect of biomedical science of your choice.

You will benefit from:

- access to extensive research and teaching labs equipped with the latest equipment, including bioimaging facilities, high-throughput DNA sequencing, proteomics, metabolomics and spectroscopic platforms
- state-of-the-art physiological, biomechanical and psychological equipment and laboratories
- a solid foundation in the study of cellular, molecular and chemical biology

Employability
Graduates may pursue careers as biomedical scientists, in hospital and clinical genetics laboratories, clinical trials and the regulatory sector, diagnostic pathology and clinical laboratories, education, research and development for the pharmaceutical industry, to name a few.

Module list

Below is an indicative list of modules that you may study on this course.

First year:
- Biological Chemistry
- Cell Biology *
- Genetics, Evolution and Diversity
- Human Physiological Systems
- Microbial and Plant Diversity *
- Skills for Biologists.

Second year:
- Cell and Cancer Biology
- Immunology
- Research Methods *
- One Health Microbiology.

Final year:
- Bioinformatics and Functional Genomics
- Microbial Pathogenesis
- Molecular Pharmacology
- Research Project *.

* also available partially or entirely through the medium of Welsh

Key Facts

Typical offer:
UCAS tariff points: 120-104 with B in Biology or Chemistry
IB: 30-28 with 5 points in Biology at Higher Level

Assessment weighting: Typically 100% coursework, or 40-60% coursework, and 60-40% exams

Also available:
B901 Integrated year in industry

Genetics

BSc (Hons) | C400 | 3 years

Our Genetics degree capitalises on the Department of Life Sciences' long-established strengths in genetics research. We have facilities for DNA sequencing and bioimaging, and high-performance computing for bioinformatics. In addition, the Institute of Biological, Environmental & Rural Sciences (IBERS) is home to the National Plant Phenomics Centre. Staff with expertise in these approaches will guide your learning on the Genetics degree.

The course content ranges from the fundamentals of evolution to the frontiers of modern genetics, including medical genomics and bioinformatics. You will study cancer biology, chromosome genetics, gene expression and development, evolution and population genetics, and biotechnology. You will also receive tuition in scientific protocol and the correct scientific procedures for recording, interpreting and reporting data.

You will benefit from:

- the application of molecular techniques including DNA manipulation, sequencing and analysis
- access to extensive research and teaching labs equipped with the latest state-of-the-art equipment, including microscopy facilities, high-throughput DNA sequencing, proteomics, metabolomics and spectroscopic platforms
- guaranteed lab-based research project in the final year.

Employability
Our Genetics degree will provide you with plenty of hands-on lab work, and thus the skills to take up a professional career in genetics within healthcare, industry or universities. Potential opportunities include clinical genetics, biomedical genetics, biotechnology, forensic research, genetic counselling, conservation genetics and plant breeding. This degree also frequently leads to postgraduate research at Masters and PhD level.

Royal Society of Biology Accredited Degree

Module list

Below is an indicative list of modules that you may study on this course.

First year:
- Genetics, Evolution and Diversity
- Cell Biology *
- Microbial and Plant Diversity *
- Comparative Animal Physiology
- Skills for Biologists*
- Ecology and Conservation.

Second year:
- Applied Molecular Biology and Bioinformatics
- Cell and Cancer Biology
- Chromosome Dynamics
- Evolution and Molecular Systematics
- Research Methods *.

Final year:
- Research Project *
- Bioinformatics and Functional Genomics
- Biotechnology
- Molecular Biology of Development.

See our website for the optional modules you may select to develop your specialist interests.

* also available partially or entirely through the medium of Welsh

Key Facts

Typical offer:
UCAS tariff points: 120-104 to include B in A level Biology
IB: 30-28 with 5 points in Biology at Higher Level

Assessment weighting: Typically 100% coursework, or 40-60% coursework and 60-40% exams

Field trips/fieldwork: No (except as part of selected research projects)

Also available:
C40F Integrated foundation year
C401 Integrated year in industry

Genetics and Biochemistry

BSc (Hons) | CC47 | 3 years

This degree explores the interface between genetics — with its almost limitless potential to help understand human health and disease — evolution and the diversity of living things. Biochemistry provides a mechanistic understanding of how genes dictate the biology of an organism.

Hallmarks of this degree are the close integration of genetics and biochemistry to understand the molecular genetics of health and disease, and the prioritisation of the practical skills in demand by research and industry. During your studies, you will develop a solid foundation of understanding in genetics and biochemistry, covering aspects such as human genetics, gene expression, developmental and cancer biology, biotechnology, genetic engineering and pharmacology. You will also receive tuition in scientific protocol and the correct experimental methodology for recording, interpreting and reporting a variety of data. At the conclusion of your studies, you will have developed the skills needed to work in a range of professional laboratory environments.

You will benefit from:

- the application of molecular techniques including DNA extraction, sequencing and analysis
- gel electrophoresis for the separation and functional analysis of proteins
- biophysical characterisation of enzyme-catalysed reaction kinetics and thermodynamics
- extensive research and teaching labs equipped with the latest equipment, including bioimaging facilities, high-throughput DNA sequencing, proteomics, metabolomics and spectroscopic platforms.

Employability
This degree offers you an avenue into employment in the growth areas of biomedicine, forensic science, DNA profiling (of humans, animals and plants), clinical cytogenetics and genetic counselling, biotechnology and food production.

Royal Society of Biology Accredited Degree

Module list

Below is an indicative list of modules that you may study on this course.

First year:
- Genetics, Evolution and Diversity
- Biological Chemistry
- Cell Biology *
- Microbial and Plant Diversity *
- Comparative Animal Physiology
- Skills for Biologists *.

Second year:
- Applied Molecular Biology and Bioinformatics
- Cell and Cancer Biology
- Chromosome Dynamics
- Practical Skills for Biochemists
- Proteins and Enzymes
- Research Methods *.

Final year:
- Research Project *
- Biotechnology
- Molecular Biology of Development
- Bioinformatics and Functional Genomics.

See our website for the optional modules you may select to develop your specialist interests

* also available partially or entirely through the medium of Welsh

Key Facts

Typical offer:
UCAS tariff points: 120-104 to include B in A level Chemistry
IB: 30-28 with 5 points in Chemistry at Higher Level

Assessment weighting: Typically 100% coursework, or 50% coursework and 50% exams

Field trips/fieldwork:
No (except as part of selected research projects)

Also available:
CC4F Integrated foundation year
CC48 Integrated year in industry

Health Science

(Nutrition and Exercise)

BSc (Hons) | B994 | 3 years

This degree provides a broad understanding of the scientific basis of human biology and explores how nutrition and exercise can contribute to the prevention and treatment of medical conditions.

Taught by experts in their field, you will study modules in cell and molecular biology, human anatomy and physiology, biochemistry, pharmacology, microbiology, immunology, nutrition, metabolism, bioinformatics and genetics. You will develop an understanding of research methods and the ability to apply this to new and interesting topics. There is a particular focus on laboratory skills throughout the degree which will prepare you for work in the biomedical sciences.

You will benefit from:

- access to extensive research and teaching labs equipped with the latest equipment, including bioimaging facilities, high-throughput DNA sequencing, proteomics, metabolomics and spectroscopic platforms
- use of state-of-the-art physiological, biomechanical and psychological equipment and laboratories.

Employability
Graduates may pursue careers in clinical and community healthcare, clinical genetics laboratories, clinical trials and the regulatory sector, sales and marketing related to healthcare and diagnostic products, diagnostic pathology and clinical laboratories, education, research and development for the pharmaceutical industry, to name a few.

Royal Society of Biology Accredited Degree

Module list

Below is an indicative list of modules that you may study on this course.

First year:
- Biological chemistry
- Cell Biology *
- Genetics, Evolution and Diversity
- Human Anatomy and Kinesiology
- Human Physiological Systems
- Skills in Nutrition, and Science Communication.

Second year:
- Applied Molecular Biology and Bioinformatics
- Cell and Cancer Biology
- Immunology
- Research Methods *
- Sport & Exercise Physiology
- Sport and Exercise Nutrition.

Final year:
- Applied Sports Nutrition
- Research Project *.

See our website for the optional modules you may select to develop your specialist interests.

* also available partially or entirely through the medium of Welsh

Key Facts

Typical offer:
UCAS tariff points: 120-104 to include B in A level Biology
IB: 30-28 with 5 points in Biology at Higher Level

Assessment weighting: Typically 100% coursework, or 40-60% coursework, and 60-40% exams

Field trips/fieldwork: No

Also available:
B995 Integrated year in industry
B996 Integrated foundation year

Microbiology

BSc (Hons) | C500 | 3 years

On our Microbiology degree you will explore the organisms that are too small to be visible to the naked eye. These include viruses, bacteria, protists and fungi. Microorganisms are essential to our understanding of life on Earth; they impact on human and animal disease, food production and spoilage, and are central to global nutrient cycles.

The study of microbiology requires expertise in immunology, genetics, biochemistry, cell biology and research methods, and you will receive training in these throughout your degree. You will learn about worldwide concerns such as antimicrobial resistance and emerging pathogens, as well as the beneficial use of microbes in biotechnology for food production and agriculture. Throughout the course there is a strong focus on practical training in microbiological and molecular techniques, which will prepare you for a career as a professional scientist. There are practical modules in Years One and Two and an advanced research project makes up one-third of your final year.

You will benefit from:

- extensive research and teaching labs equipped with the latest facilities for bioimaging, flow cytometry, lab scale to pilot plant fermentation, and extreme experimental environments
- the application of molecular techniques including DNA extraction, sequencing and analysis
- being taught by research-active teaching staff with expertise in microbiology, including biodefence, animal-microbe interactions, epidemiology, biofuels, brewing and extreme environment microbiology.

Employability
Our Microbiology degree will provide you with the skills to enter a career in healthcare, industry or education. Recent graduates have been employed by laboratory supplies companies in development or sales roles, and have entered the biotechnology sector or teacher training.

Royal Society of Biology Accredited Degree

Module list

Below is an indicative list of modules that you may study on this course.

First year:
- Cell Biology *
- Ecology and Conservation
- Genetics, Evolution and Diversity
- Microbial and Plant Diversity *
- Skills for Biologists *.

Second year:
- Environmental Microbiology and Monitoring *
- One Health Microbiology
- Practical and Professional Skills in Microbiology *
- Research Methods *.

Final year:
- Research Project *
- Biotechnology
- Microbial Pathogenesis.

See our website for the optional modules you may select to develop your specialist interests.

* also available partially or entirely through the medium of Welsh

Key Facts

Typical offer:
UCAS tariff points: 120-104 to include B in A level Biology
IB: 30-28 with 5 points in Biology at Higher Level

Assessment weighting: Typically 100% coursework, or 40-60% coursework and 60-40% exams

Field trips/fieldwork: Yes (as part of selected Research Projects, or optional module choices)

Also available:
C501 Integrated foundation year
C502 Integrated year in industry
C509 Integrated Masters
C59F Integrated Masters with integrated foundation year

Plant Biology

BSc (Hons) | C200 | 3 years

Excellent career opportunities await Plant Biology graduates, and Aberystwyth University is an ideal place for the first step in your career. We host internationally acclaimed plant breeding programmes for high-sugar grasses, plant genetics resources and databases, botany gardens and the National Plant Phenomics Centre. Our campus is also set within beautiful and accessible countryside that hosts a range of habitats and species.

On this degree you will study all aspects of plant life, from the molecular to the landscape levels, while also examining global issues relating to plants. You will consider how plant-based technologies can help us meet the demands of a growing human population and respond to global threats including food security and climate change. The course will also provide you with real-life opportunities to challenge your knowledge and think creatively.

You will benefit from:

- world-class facilities including botany gardens with a wide range of temperate and tropical plants, an extensive range of growth rooms and glasshouses, a museum of historic botanical specimens, and plant genetic resources collections and databases
- access to the National Plant Phenomics Centre and the possibility to engage with our world-leading plant breeding programmes
- many fieldwork opportunities, including the possibility of studying temperate, tropical and Arctic-Alpine flora
- beautiful habitats, including marine, moorland, mountain, woodland and grassland ecosystems, offering a fabulous variety of fieldwork and recreational opportunities.

Employability

Career opportunities for Plant Scientists are truly excellent, with many jobs and few trained scientists in this area, and we are perfectly placed to help you exploit UK and international links. Our graduates are working in conservation management, industrial and government-funded plant research institutes and the scientific Civil Service.

Royal Society of Biology
Accredited Degree

Module list

Below is an indicative list of modules that you may study on this course.

First year:

- Cell Biology *
- Crop, Grassland, Soil and Agricultural Land Management *
- Genetics, Evolution and Diversity
- Microbial and Plant Diversity *
- Skills for Biologists *.

Second year:

- Agronomy and Crop Improvement
- Climate Change: Plants, Animals and Ecosystems
- Ecological Surveying *
- Research Methods *.

Final year:

- Research Project *
- Frontiers in Plant Science
- Microbial Pathogenesis.

See our website for the optional modules you may select to develop your specialist interests.

* also available partially or entirely through the medium of Welsh.

Key Facts

Typical offer:
UCAS tariff points: 120-104 to include B in A level Biology
IB: 30-28 with 5 points in Biology at Higher Level.

Assessment weighting: Typically 100% coursework, or 40-60% coursework and 60-40% exams.

Field trips/fieldwork: Yes.

Also available:
C20F Integrated foundation year
C202 Integrated year in industry.

Sport and Exercise Science

(C600 only)

BSc (Hons) | C600 | 3 years

On this degree you will benefit from the expertise of our sport and exercise scientists, who have worked with a number of organisations, teams, and individual sports people, ranging from recreational athletes to those who have achieved success at European or world championship level. Under their guidance, you will develop your own practical skills in our dedicated sport and exercise laboratories.

On our Sport and Exercise Science degree, you will study the psychological, physiological and biomechanical foundations of sport and exercise, and develop an understanding of how these are important in optimising the training regime of sports competitors and exercise participants. You will develop a scientific understanding of how the human body moves, exercises and performs sport, and an appreciation of how sport and exercise science can improve human health and function, prevent disease or injury, or increase athletic performance. Upon graduation, you will be well prepared to support athletes, promote physical activity and health, and deliver exercise programmes.

You will benefit from:

- ready access to a wide range of sports and facilities, including our own Sports Centre on campus, plus naturally provided facilities such as the renowned mountain biking tracks nearby at Bwlch Nant yr Arian, our excellent beaches and mountains to mention a few
- access to industry-standard laboratories with modern equipment for the physiological, biomechanical and psychological analysis of sport performance and exercise participation.

Employability

Some of our graduates have gone on to further study and careers in the NHS (as GPs, cardiac technicians, physiotherapists, research scientists), or as Ministry of Defence personnel. Others have gone on to work as sport scientists in professional sports clubs (Bournemouth and Coventry City football clubs, Llanelli Scarlets RFC). An increasing number use the skills they developed as students to set up their own businesses.

Module list

Below is an indicative list of modules that you may study on this course.

First year:

- Cell Biology *
- Human Anatomy and Kinesiology
- Human Physiological Systems
- Psychology of Physical Activity and Health
- Research Designs to Assess and Monitor Clients
- Skills in Nutrition, and Science Communication.

Second year:

- Applying evidence based interventions
- Motor Learning and Performance
- Physical Activity for Health
- Research Methods *
- Sport and Exercise Physiology
- Sport and Exercise Nutrition.

Final year:

- Consultancy work
- Research Project *
- Training and Performance Enhancement.

See our website for the optional modules you may select to develop your specialist interests.

* also available partially or entirely through the medium of Welsh

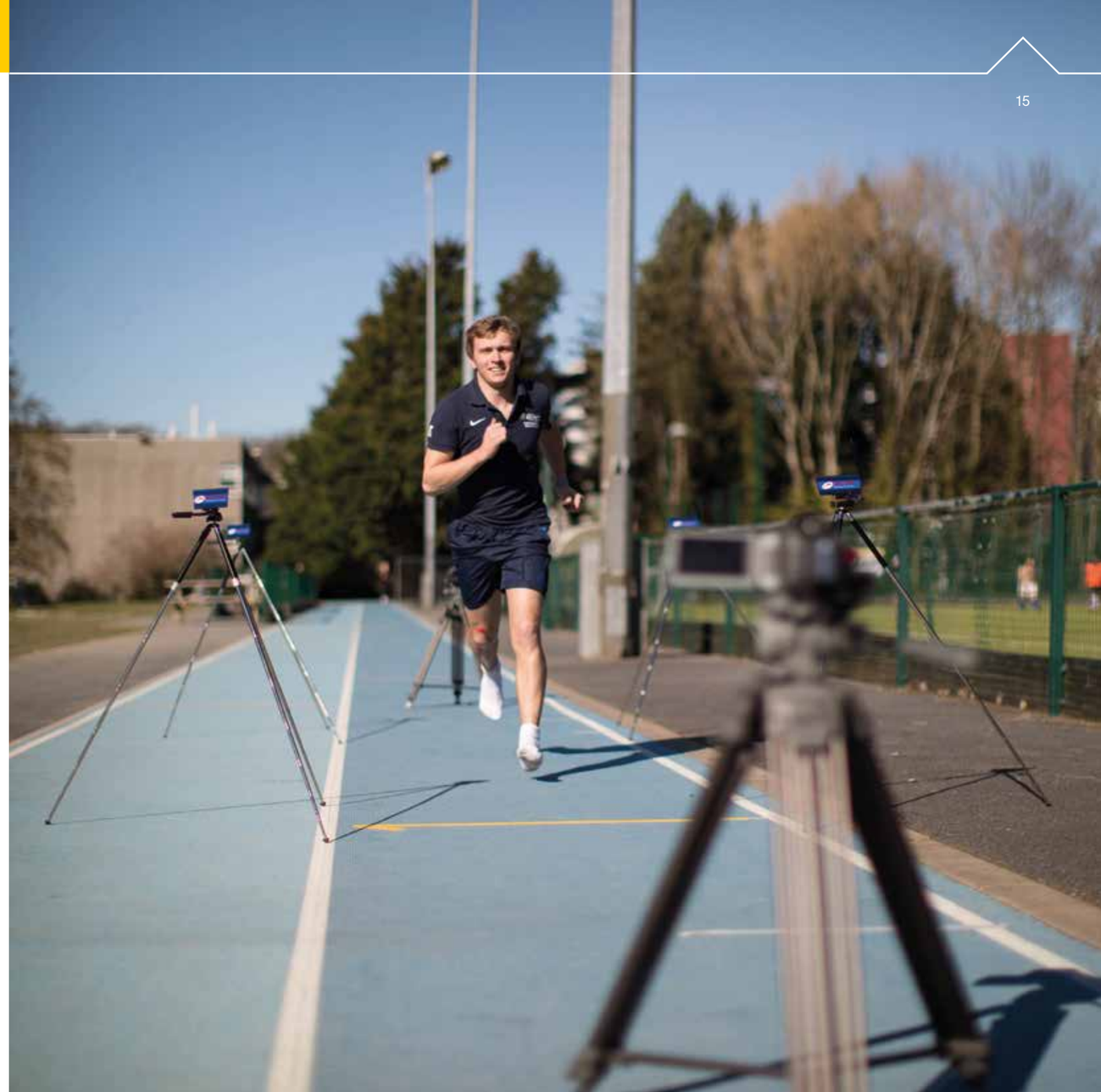
Key Facts

Typical offer:
UCAS tariff points: 120-104
IB: 30-26

Assessment weighting: Typically 100% coursework

Field trips/fieldwork: No

Also available:
C60F Integrated foundation year
C602 Integrated year in industry



Integrated year in industry

If you want to broaden your horizons and get a taste of the workplace or experience a career through a work placement, then the integrated year in industry will strengthen and improve your career prospects after graduating. The majority of our single honours courses are available with the option of an integrated year in industry.

The integrated year in industry takes place in your third year, after which you will return to Aberystwyth to complete your degree in your fourth year. The year is assessed and contributes towards your final degree mark.

Advantages:

- More employable when you graduate
- More likely to have a higher starting salary
- More likely to secure a graduate level job

Our own students have identified additional advantages:

- Find out what you would actually like to do as a graduate
- Great experience - exploring a new area which can be abroad
- Makes your final year easier
- Develop your social and professional networks

Applications and interviews can be time-consuming and you will graduate a year later than your university friends, but the advantages of the integrated year in industry definitely outweigh the disadvantages.

What support is available?

- Support is provided by an academic member of staff primarily responsible for the integrated year in industry students and the department's own Careers consultant, working hand in hand with the Careers Service
- In your first year you will receive guidance on how to explore career opportunities and enhance employability
- In your second year you will receive help searching for posts, writing CVs, cover letters and making applications. You will receive formal interview practice and official approval of your placement(s)
- During your Year in Industry you will receive regular contact and support and will be visited by an academic supervisor

Emily, Assistant Laboratory Technician, Micropharm, UK

My placement is laboratory based so the experience I have gained has been mainly skills based. I have learnt how to set up cytotoxicity and trypsin assays, handle liquid nitrogen, calibrate pipettes and how to use various other pieces of lab equipment. But additionally I have learnt how to present my findings in meetings and write SOPs for others to understand. I think that my placement will help me career-wise as it shows I have a whole 12 months of lab experience when applying for jobs. It has also confirmed for me that working for a pharmaceutical company is something I would like to do after I graduate as I have loved my placement so far.

Studying through the medium of Welsh

All our undergraduate degree schemes can be studied partly through the medium of Welsh. For some degree schemes, more than half the modules are available through the medium of Welsh.

You may choose to present all your coursework, including assignments and oral presentations, through the medium of Welsh and complete your written examinations in Welsh, regardless of the module's medium of instruction. The Department also ensures that all Welsh-speaking students are allocated a personal tutor and dissertation tutor who can speak the language. These teaching arrangements mean that our Welsh-medium provision is open to students from a range of different Welsh language backgrounds.

Studying through the medium of Welsh is advantageous in many ways, including:

- increased job prospects
- being taught in smaller groups
- being part of a friendly and welcoming Welsh-speaking community

All students studying Welsh medium modules will also be eligible for the University's Welsh medium study scholarship, worth up to £250 per year. Furthermore, many of our degree courses are eligible for Coleg Cymraeg Cenedlaethol undergraduate scholarships worth £1500 over three years. For more information about these scholarships and for a list of the eligible degree schemes please see the Coleg Cymraeg Cenedlaethol website:
colegcymraeg.ac.uk/en/students/university

Research

The Department of Life Sciences is an internationally-recognised research and teaching centre providing a unique base for research in response to global challenges such as food security, sustainability, and the impacts of climate change. Our scientists conduct research on genes and molecules, nutrition and exercise, and whole organisms from microbes to entire ecosystems.

Microbiology Research Group

We study the ecological, physiological and metabolic capabilities of a wide range of micro-organisms, in particular fungi and bacteria. Our aim is to understand their important roles in ecosystem function, discover how better to exploit them in biotechnology, and modulate their impact, both beneficial and harmful on humans, domesticated animals, plants and the natural environment.

Molecular Biosystems Research Group

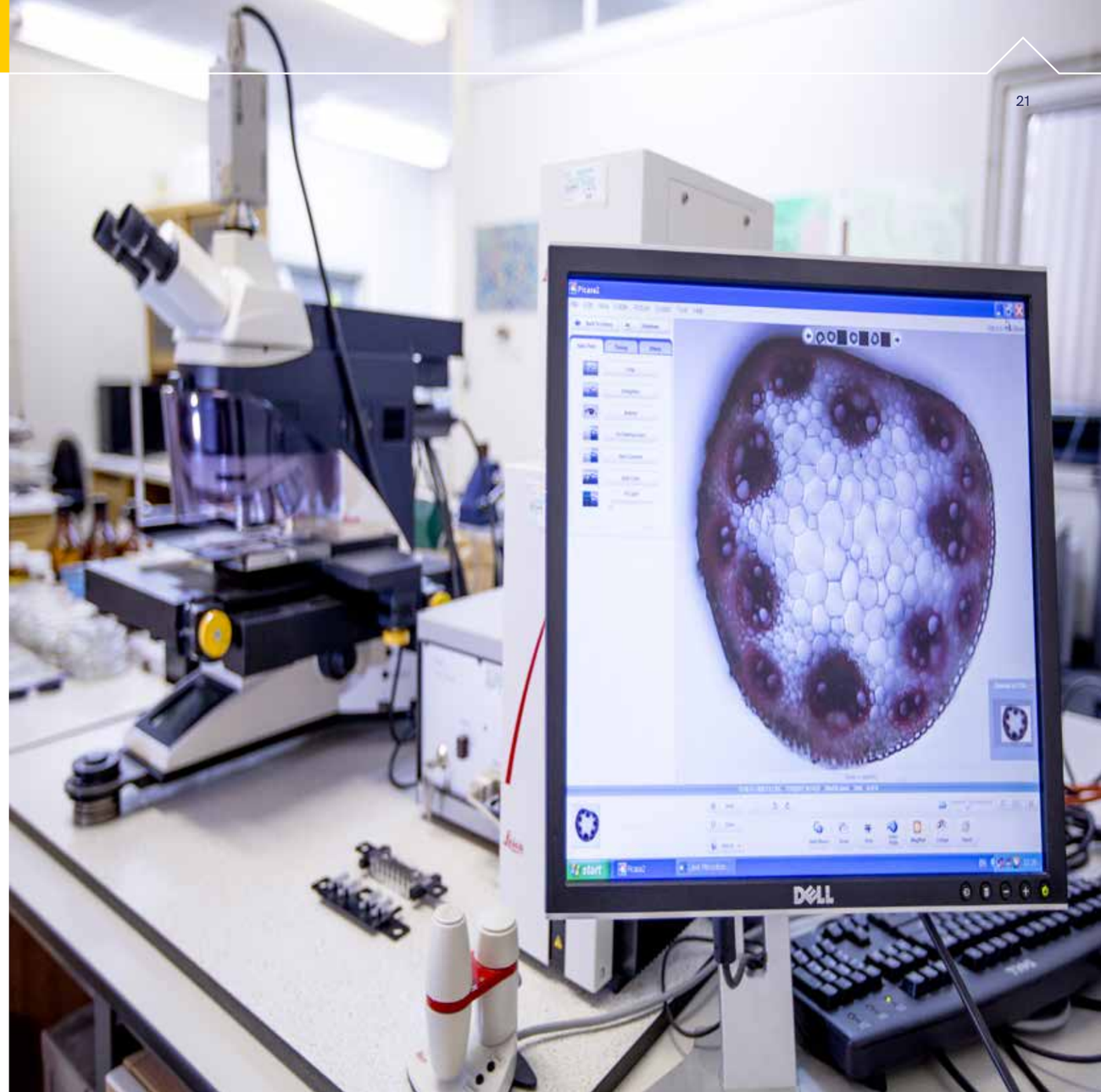
We use molecular approaches to study living systems as assemblies of chemical processes. This group brings together scientists who are applying the latest approaches to tackle several global challenges, including developing novel antimicrobials and other medicinal compounds, and increasing agricultural efficiency for food and biofuel production. The strategies employed include traditional and cutting-edge methods for separating and characterising biomolecules, as well as genomic, proteomic and metabolomic approaches.

Parasitology and Epidemiology Research Group

This group engages in investigations that address coevolutionary relationships between parasites and their hosts, and systems-based investigations. We are collectively addressing some of the world's major health problems caused by biomedical and veterinary pathogens. Our research interests span a variety of disciplines and involve molecular and biochemical parasitology, the landscape epidemiology of vector borne diseases, and the evolutionary and immunological implications of host-parasite interactions. We consider a range of infectious diseases caused by viruses, bacteria, protozoa, microsporidia and helminths.

Diet, Exercise and Health Research Group

This group is uniquely placed in the UK to link international studies on the causal relationship between diet, exercise and health with plant and animal breeding as well as the chemical phenotyping of food materials. With a focus on the use of metabolomics technology the group has developed collaborations with clinical experts having an interest in the development of chemical fingerprint screening methods for human diseases. Core strategic research programmes enhance the quality of animal products to meet the rapidly changing requirements of consumers for food which is safe, healthy, traceable, of consistent eating quality, diverse and convenient.



Research highlights

The Queen presents award to Aberystwyth University for parasite research

Queen Camilla presented a prestigious award to Aberystwyth University for its pioneering parasitology work at a ceremony in Buckingham Palace. The royal honour recognises the work of scientists at the University's Department of Life Sciences who specialise in a particular group of parasitic flatworms which cause devastating diseases such as Schistosomiasis in people and Fasciolosis in livestock.

Schistosomiasis is a tropical disease usually spread through contact with contaminated fresh water, killing an estimated 12,000 people and infecting more than 200 million individuals every year. Fasciolosis affects more than 300 million cattle and 250 million sheep world-wide, at a cost of over £2.5 billion a year to the agriculture industry.

Aberystwyth University Vice-Chancellor Professor Jon Timmis receiving the award from Her Majesty the Queen at Buckingham Palace.

Can green tea prevent age-related disease?

Aberystwyth University scientists are testing how nutrients in green tea can affect age-related diseases by monitoring people's brain activity. As we age our body becomes less able to absorb nutrients from our diet and this contributes to some of the health difficulties we may experience as we get older.

"Improving older people's health is a major focus of much of our dietary, health and future foods work here in Aberystwyth. We know that diet can make a big difference in improving people's welfare, reducing illness and in turn lessening pressures on our health service. That is why this type of research is so important." (Dr Amanda Lloyd from the Department of Life Sciences)

Secret Arctic microbial night life investigated by Aberystwyth scientists.

Aberystwyth University academics are visiting Svalbard in the Arctic to investigate the night life of microbes. Their research aims to give a clear picture of how life survives each season on Arctic glaciers and what this means for their ecology as they face a warming Arctic. Unlocking the secrets of the microbes that live in the glaciers in the Arctic has the potential to reveal future medicines, and even inform us about how to wash our clothes using more environmentally friendly products.

Dr Arwyn Edwards researching on Svalbard. Photo: Klemens Weisleitner.

£1 million for early lung cancer diagnosis test research.

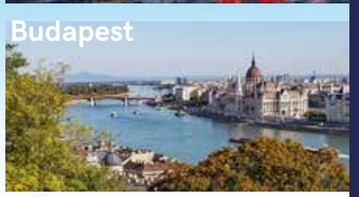
Scientists' work to develop a new rapid diagnostic kit to detect lung cancer has received a £1 million grant boost. Lung cancer affects almost 50,000 people a year in the UK, kills more people than any other cancer and costs the NHS more than £2.4bn a year. The team are developing a new rapid diagnostic kit to quickly identify people most likely to benefit from scanning. They have already identified biomarkers in urine that can diagnose a number of other cancers and diseases. It can also identify what stage the disease has reached in a patient.

Global opportunities

Aberystwyth's Global Opportunities team offer an exciting range of options for you to go overseas as part of your degree: from short courses and volunteering opportunities in the summer, to a full semester or year abroad studying at one of our partner universities. Our partners include Norway, Japan, Denmark, Canada, Austria, Spain, and New Mexico.

If you choose to study with an integrated year abroad, the University enables you to study for one or two semesters during your third year, returning to Aberystwyth for your final year and graduation.

Reports have shown that students who study abroad are more attractive to employers and earn more than their peers. Take advantage of the opportunity of a lifetime while improving your critical skills by choosing to study abroad.



The application process

1 Apply through UCAS.com

Check the UCAS deadline on UCAS.com. Aberystwyth University institution code: A40.
TOP TIP: You'll be given a 10-digit UCAS ID number. Keep this to hand as you'll be asked for it many times.

2 The University will consider your application

TOP TIP: Use UCAS Hub to keep an eye on your application. At Aberystwyth we aim to make a decision within seven days.

3 The offer will show on UCAS Hub

The University's decision will show on UCAS Hub - if you've been made an offer, it will tell you what grades you need to achieve to secure your place.

4 Decide where to go

Once you've received all your offers, you'll need to decide which university you want to go to, within a set time. This is when you'll need to note which universities will be your Firm and Insurance choices.

5 Accommodation

Once you've chosen your Firm/Insurance choice you'll be invited to apply for accommodation.

6 Results day

UCAS Hub will tell you whether your place is confirmed at your Firm choice. If you don't get the grades you'd hoped for, you may want to consider entering Clearing.

7 Start packing!

Remember to keep an eye on your emails for information about arrival and welcome activities.

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