SPORT AND EXERCISE SCIENCE
AT SWANSEA UNIVERSITY
FAST FACTS ABOUT SPORT AND EXERCISE SCIENCE

In the last twenty years the real value of Sport and Exercise Science has been recognised globally and is now an integral part of all elite-level sport. Most sports employ the services of Sport Scientists to maintain their advantage over their opponents.

The UK government now recognises and fully endorses physical activity and exercise as a means of improving the overall health of the nation. This endorsement has created job opportunities for exercise scientists in both the public and private sectors.

“Sport and exercise inspires millions of people every day. Sport Scientists help athletes make those essential marginal gains in their performance and help Olympians achieve their gold medal dreams whilst Exercise Scientists play a significant role in motivating the population to become more active more often.”

Professor Gareth Stratton, Swansea University

As a Sport and Exercise Science student at Swansea University from September 2015 your course will be delivered at the Bay Campus, a £450 million development project providing state-of-the-art facilities for teaching, study and research.

Modern Sport and Exercise Science involves cutting edge science, engineering and technological innovation. Research at Swansea University is investigating how these innovations can help to optimise elite sports performance and how it can help to improve the physical health of individuals.

Sports Science at Swansea focuses on studying the scientific theory of sports performance and exercise participation prior to its practical application.
The BSc Sports Science degree is very popular, with approximately 260 full-time students currently enrolled on the programme. Our recently updated programme has been designed to provide students with a cutting-edge and academically rigorous experience. Programme modules address all of the factors that influence human performance, as well as the methods by which these may be investigated. The three traditional disciplines of Sport and Exercise Science (Psychology, Anatomy/Physiology and Biomechanics) continue to be major themes of the programme but there is also a strong emphasis on exercise science, sports ethics, the use of technological aids, strength and conditioning performance, and the importance of nutrition. We have also integrated the concepts of ‘employability, innovation and engagement’ through each year of study. The programme has been endorsed by the British Association of Sport and Exercise Sciences (BASES) since 2010.

Swansea University’s Sport and Exercise Science staff are based within the College of Engineering, renowned for its multidisciplinary and world-leading research. This link is providing exciting new areas of research into fields such as physiological sensor and monitor development for measuring an individual’s health and sports performance, developing ways to improve physical activity engagement in paediatric populations, and the design of novel medical and health care products.

Research-active staff, state-of-the-art laboratories and high quality sporting facilities make Swansea a leading location in the UK for Sport and Exercise Science.

“Swansea has the best of both worlds in terms of city and coastal living”

Charlotte Finn, BSc Sports Science student
Laura Morris  
BSc Sports Science  
Home town: Southampton

**Why did you choose Swansea as a city to study in?**
I chose Swansea because of its brilliant location, facilities and the feeling I got from the staff during my open day visit. I knew straight away Swansea was a place I could feel comfortable.

**How are you taught compared to your studies at A level?**
The teaching is really quite similar to the small 6th form college I came from. The lecturers still have a lot of time to help you, and are very easily contactable if needed.

**Outside of the course, how do you spend your free time in Swansea?**
Most of my free time is spent with friends, playing sport or going to the gym. Swansea is a great place with a lot of things to offer.

Matt Blakey  
BSc Sports Science  
Home town: Portsmouth

**Why did you choose Swansea as a city to study in?**
I picked to study in Swansea as I enjoyed the open day and I liked the fact it was a campus university which was right next to the beach.

**How are you taught compared to your studies at A level?**
The difference from A Levels is that during A Levels the classes were a lot smaller compared to the lecture halls at university. There’s more lab work where you get to use equipment that sport scientists use in the field.

**Outside of the course, how do you spend your free time in Swansea?**
Outside of the course, I enjoy going on nights out and socialising with my mates. I play for the University Football society. We play on Wednesday afternoons and then have our weekly socials on Wednesday nights. I also have a part-time job for Saturday/Sundays.
The BSc Sport Science programme is delivered over three years. The following is a sample of some of the modules that you might expect to study at each level. It should be noted that these do vary from year to year.

**Year One**
Year One is concerned with the development of knowledge and understanding of fundamental concepts and principles underlying the study of Sport and Exercise Science. The modules studied are:
- Human Anatomy
- Human Physiology
- Strength & Conditioning
- Biomechanics & Technology A
- Biomechanics & Technology B
- Psychological Dimensions of Sport: Children
- Foundations of Exercise Science
- Research Methods & Ethics

**Year Two**
Year Two develops knowledge and understanding in both discipline-specific and interdisciplinary areas. The modules studied are:
- Kinanthropometry
- Human Nutrition
- Human Physiology 2
- Strength & Conditioning 2
- Biomechanics & Technology C
- Biomechanics & Technology D
- Ethics of Doping: Health, Sport and Society
- Psychological Principles of Sport: Elite Performers
- Sport, Diet & Disease
- Sport and Exercise Physiology
- Sports Biomechanics
- Health Related Exercise
- Dissertation

**Year Three**
Year Three provides students with the opportunity to choose areas of specialised interest, developing advanced knowledge and understanding. The year culminates with a supervised dissertation in their chosen area. The modules choices are:
- Psychological Dimensions of Sport: Adolescents
- Exercise Science: Interventions and Applications
- Employability, Innovation & Engagement
- Research Methods

**HOW WILL I STUDY?**
Students are encouraged to be active learners, with a typical class involving a combination of lectures, problem solving in small groups, class discussion and guidance for independent study.

There are laboratory and field practicals in nearly all modules, including Anatomy, Physiology, Biomechanics, Psychology and Strength & Conditioning. Practical sports and exercise activities are used throughout to assist in learning theoretical principles and to demonstrate the application of Sport and Exercise Science concepts. Part-time study options are also available please contact us for details.

**TYPICAL ENTRY REQUIREMENTS**
BSc Sports Science [ UCAS code: C600 ]
A-levels: BBB (must include at least one of the following subjects: Maths, Biology, Physics, Chemistry, PE or Psychology)

Other: We will also consider a variety of vocational, professional and other qualifications in science-related disciplines. These include the BTEC national Diploma, the Higher National Diploma, Baccalaureate and the AVCE.

**EXCELLENCE BURSARIES**
We offer excellence bursaries to applicants who achieve three ‘A’ grades at A-level (or equivalent) and who make Swansea University their first choice on their UCAS applications. These bursaries are for £3000 over the first two years of the degree.

**SPORT SCHOLARSHIPS**
Each year the University offers students with outstanding talent an Undergraduate Sporting Entrance Scholarship. These are worth £1000 per year and are renewable for three years. www.swan.ac.uk/scholarships/sports-scholarships
RESEARCH AT SWANSEA

Sport and Exercise Science research is organised within the Applied Sports, Technology, Exercise and Medicine (A-STEM) Research Centre but we have strong links with many other research centres. Fourteen academics and over twenty postgraduate research students are affiliated to A-STEM and work together to drive research and innovation forward. This occurs in two main themes: (1) Elite Sports Performance and (2) Exercise Medicine and Health. Sports scientists have used their research in sport psychology, physiology and biomechanics to help improve performance across a range of sports including elite rugby and football players and Olympic gold medal winners. Understanding how junior athletes grow and develop into elite performers is also a key area of study, as is research in anti-doping in elite sport. Exercise scientists are involved in research into diabetes, kidney disease and cancer, and in children's health and well-being, including the study of factors influencing active lifestyles and developmental coordination disorder.

A-STEM is uniquely located in the College of Engineering, allowing engineers and sport and exercise scientists to work closely on exciting research projects. For example, the Sports Visualisation Group analyse video material to produce data for immediate analysis of sports performance during a match. The development of new capabilities in advanced sensor and data processing is also helping to improve the accuracy of exercise and training loads in clinical and athlete populations.

Academics in A-STEM use their research to keep their teaching up-to-date and to develop working relationships with the sport and exercise industry and with the healthcare sector. We have international research links and ongoing collaborative projects with universities across Europe and in Australia, New Zealand, Canada and the United States. As an undergraduate you will have an opportunity to work alongside academics to develop your own research skills and interests through your dissertation in Year 3 of the BSc programme.

INVolVEMENT IN INDUSTRY

In addition to teaching and research, academic staff are actively engaged in applied work within sport and exercise settings. Our well-established links include organisations and commercial partners such as Diabetes UK, Haemair Ltd, Haemaflow Ltd, Play Wales, Abdertawe Bro Morgannwg University Health Board, Hywell Dda University Health Board, the Welsh Rugby Union, UK Sport, the football Premier League and Active Swansea.

We also work with elite sports teams including Scarlets RFC, Ospreys RFC, GB swimming and GB Bobsleigh. Our staff also regularly consult in exercise settings with populations with chronic disease, including diabetes, cancer, cardiac rehabilitation and renal care. Experience and knowledge gained by staff who work with external clients and industry is used within our teaching to illustrate the transfer of knowledge from theory to practice, bringing Sport and Exercise Science to life.

CAREER PROSPECTS

Opportunities for Sport and Exercise Science graduates continue to grow in both the public and private sectors. The major areas of employment include Sport and Exercise Science support (e.g. Welsh Institute of Sport, UK Sport, and Professional Sports Teams), Sports Development, Sports Promotion, Sports Commerce (clothing, equipment, tourism), Sports Management, Sports Coaching, Teaching and Lecturing, Health and Fitness Consultancy and Management, Health Promotion and Leisure Management, scientific careers within the NHS.

EMPLOYABILITY

We take the future employment prospects of our students very seriously and we work with the Swansea University Employability Academy and our industrial partners to provide meaningful work experience opportunities.

Our Innovation and Engagement group, consists of external partners representing a range of different fields including elite sport, fitness and health, business and management. This group is helping us to integrate many of the specific skills sought by employers into the Sports Science programme.

Every year we organise a number of careers events and activities for our students. The University’s Annual Careers Fair is attended by many of the UK’s largest graduate recruiters.
**Stephanie Hanley**
MSc Sports Science at Swansea University

What area of Sport Science did you enjoy most while studying in Swansea?
From the start of my degree I always had a greater interest in the physiology side of the course. I liked the fact that there was a good balance between lectures and labs and felt as though all the lecturers were passionate about their subject which made the learning experience a lot more enjoyable.

How did studying here help you get to the position you are today?
Having been given the opportunity to assist in a PhD study in the university during my undergraduate degree it gave me a greater insight into clinical exercise physiology, something I didn’t think I had much of an interest in originally. This has led onto me doing a research masters in the physiological and psychological responses to exercise in patients waiting for and following bariatric surgery.

What advice would you give to current students?
I would advise all students to go beyond the allocated teaching hours in the degree and volunteer to assist in studies in the university and take up any work experience opportunities that come up. This will enable you to discover where your passions in sports science lie and should give you a better idea about the direction you want to take after your degree.

**Claire Sims**
Active Young People Coordinator, Neath Port Talbot County Borough Council

What undergraduate/postgraduate courses did you study at Swansea University and why?
Sport Science – because I always wanted to go into a career in sport and I enjoyed science at school – I preferred Swansea and it’s course to other Universities I visited.

How did studying at Swansea University help you get to the position you are today and does it help you on a day to day basis?
Whilst at University I saw an advert in the Sport Science department for casual coaching vacancies with my current employer. I worked around my studies, gaining experience and qualifications where I could. As I was graduating, a full time position became available which I wouldn’t have been prepared for had I not undertaken the casual coaching opportunities. I’ve since moved to another organisation for a year and a half then returned to the Council in a higher position than when I first started. Although I don’t utilise my degree from day to day, the skills I acquired throughout my degree definitely have had an impact on the way I work, and was an essential criteria for my current post. I’m now continuing to build on my undergraduate studies by persuing a Masters in Sports Management and Leadership.

What advice would you give current students studying Sport Science at Swansea University?
Enjoy the course, and University life in general, but don’t forget about the future – start thinking about your career before the summer of graduation – you’ll be competing with thousands more like you, so get as much extra-curricular experiences under your belt as you can – these could be the things that swing that first interview your way!