Sports and Exercise Science

Undergraduate Degrees 2026

We study people.

We study how they move, how they think *and how they react* under pressure.

Sports and exercise science is an exciting field that brings together psychology, physiology, biomechanics and nutrition to help us understand how the human body performs and reacts to physical activity or recovers from disease or injury.

Whether you're passionate about elite sport or health and wellbeing, our programme offers a dynamic and supportive environment to help you succeed as a Sports and Exercise Scientist.

When you study a degree in sport and exercise science at Lancaster, you will join our thriving community of like-minded students within Lancaster Medical School.

This is where you will make life-long friends and memories in practical sessions.

It's where you will learn from renowned, research-active academics.

And it's where we will prepare you for life beyond Lancaster, developing your employability and ensuring you're ready to make an impact. Our graduates have gone on to exciting roles with the likes of Manchester United and Manchester City football teams, as well as leading pharmaceutical and healthcare businesses. Others have taken their studies to the next level with master's degrees and PhDs here at Lancaster or in the USA.

Your time at university has the potential to define the rest of your life. I would like you to be assured that we are here to support you every step of the way.

Deputy Head of Lancaster Medical School

Professor Bob Lauder

Joint 8TH for Sports Science

The Times and Sunday Times Good University Guide 2025

Our degrees

Do you dream of working with elite athletes or sports teams to enable them to reach peak performance?

Perhaps you see your purpose in supporting people to live active, healthy lives following illness or injury.

Whatever your aspirations, our sports and exercise science degrees will offer you the knowledge and tools to support people to achieve their potential through physical activity.

Led by experts in their fields within Lancaster Medical School, you will succeed in a supportive and forward-thinking environment. You will gain the knowledge, skills and values required to become a confident and analytical sports and exercise scientist of the future.

If you choose our Sports and Exercise Science (Study Abroad) BSc programme, you will have the opportunity to explore different perspectives on sports and exercise science, while experiencing life and education in a different country and environment.

Degree title	Degree (Hons)	UCAS code	Course duration (years)	Typical A level offer
Sports and Exercise Science	BSc	C600	3	ABB
Sports and Exercise Science (Study Abroad)	BSc	C602	4	ABB

This table shows our typical offer for A level students. See our website for alternative qualifications such as International Baccalaureate or BTEC.

This course is endorsed by the Chartered Association of Sport and Exercise Sciences (CASES), the professional body for sport and exercise sciences in the UK.

Made for *learning*

When you choose sports and exercise science at Lancaster, you will join a welcoming community of students and academics on a programme which boasts excellent league table rankings.

Our practical teaching takes place in small groups, so you will have the space to ask questions, get hands-on experience and get to know your peers and academics.

Part of Lancaster Medical School

Our Sports and Exercise Science BSc is one of only a few courses of its kind delivered within a medical school. This means that you will:

+ Learn in a highly respected and academically rigorous environment.
+ Benefit from our connections with clinicians, health practitioners and sports professionals.
+ Be taught by research and industry experts within Lancaster Medical School.
+ Use clinical processes and equipment such as
  - blood tests and analysis,
  - electrocardiogram (ECG) readers,
  - glucose and lactate analysis machines,
  - cortex gas analysers, which assesses a person's lung, heart and metabolism at rest and under stress,
  - 3D motion capture to measure how joints move.

Research with impact

You will learn from academics who are experts in their fields.

+ Dr Chris Gaffney has sent worms to the International Space Station to explore muscle atrophy.
+ Dr Kate Slade is researching the relationship between hearing loss, mental health and cognitive decline.
+ Dr Hannah Jarvis has been using Hollywood film technology to aid the rehabilitation of injured athletes and stroke survivors.
+ Dr Philip Nagy is exploring injury prevention among classical dancers, cricketers and footballers.
+ Dr Sarah Powell is assessing the perceptions of physical education and sports and exercise science in the UK education system.
+ Dr Michelle Swainson is carrying out a major study into the thresholds of visceral fat that predict cardiometabolic risk and bone health.

Their research is shaping our understanding of the world and this feeds into our degrees, ensuring your education is informed by cutting-edge thinking.

Test your knowledge

We use a broad range of assessment methods, including:

+ Online tests
+ Written assignments and your dissertation
+ Group presentations and debates
+ Traditional written exams

1ST

for teaching quality in Sports Science

The Times and Sunday Times Good University Guide 2025

Charlie, *graduate*

Sports and Exercise Science BSc

Since graduating from my Sports and Exercise Science BSc at Lancaster, I have gone on to study a master's degree in physiotherapy.

I chose to study a broader degree in sports and exercise science before specialising in physiotherapy because I wanted to build a strong scientific foundation in anatomy, physiology, biomechanics and human performance.

My undergraduate degree also allowed me to thoroughly explore fields such as sports psychology and performance analysis. I also gained unique placement experience in my final year as a lead strength and conditioning coach for an elite adolescent cricket team.

Ultimately, my degree in sports and exercise science has been the ideal preparation for MSc study and means I can employ evidence-based practice and apply a critical approach to my work.

Strive to engage and learn to make the most of the degree, and don't forget to enjoy it!

Gain *real-world* experience

While studying sports and exercise science at Lancaster University, you will have many opportunities to gain real-world experience that will significantly enhance your employability.

You will have the chance to participate in hands-on research projects, working alongside experienced academics and professionals.

These projects will help you to build analytical, problem-solving and technical skills that are highly valued by employers.

Joining student-led sports societies, taking on leadership roles, or pursuing coaching qualifications will also help you develop transferable skills such as teamwork, communication and time management. In addition, Lancaster's career services can support you with tailored advice, CV workshops and interview preparation, ensuring you are fully equipped to enter the job market with confidence.

By actively engaging with all these opportunities, you'll enhance your practical experience and professional network. You'll also gain a deeper understanding of the diverse career paths available in sports and exercise science—from coaching and performance analysis to rehabilitation and health promotion.

10TH

for Sports Science

Complete University Guide 2025

Esmee, *second-year student*

Sports and Exercise Science BSc

The best part of my degree so far has been gaining a role as a research intern over the summer.

It allowed me to gain research experience while meeting with stroke charities in the local community. I learned how to develop questionnaires and lead focus groups.

This project really showed me the value and importance of our research as the stroke survivors we worked with were thankful that we were taking an interest in their needs and circumstances. It made me realise the impact of this work on people affected by stroke, their carers, and the healthcare professionals treating them.

We have written up our research as a research paper and have had it accepted into the premier stroke conference in the world, the European Stroke Organisation Conference in Finland.

Several of our students have gained invaluable experience as research interns on a Lancaster-led project.

The project has been led by Dr Hannah Jarvis who is a Lecturer in biomechanics. She organised summer research studentships for two students to work with stroke survivors, exploring the factors that prevent them from accessing exercise rehabilitation.

The opportunity has allowed the students to gain paid experience on a research project and develop real-world skills including communicating with people with language difficulties, working alongside healthcare professionals and charity partners, analysing data and writing a scientific paper.

1ST

for student satisfaction in Sports Science

Complete University Guide 2025

Your global *experience*

Our four-year Sports and Exercise Science (Study Abroad) BSc is an amazing opportunity to broaden your academic horizons and take your university journey to the next level.

By spending your third year studying at one of our trusted and prestigious international partner universities in countries such as the USA or Australia, you will experience learning in a different culture and society.

By choosing our Sports and Exercise Science (Study Abroad) BSc, you will study your first and second year at Lancaster University, following the same course structure as our three-year Sports and Exercise Science BSc.

During your year abroad, you will study modules that complement your learning at Lancaster and gain fresh perspectives on sports and exercise science while also meeting new people with diverse experiences.

Altogether, your global experience will see you return to Lancaster in your final year as a more well-rounded, confident and employable version of yourself. This fourth year of your studies will follow the same curriculum as the final year of our three-year Sports and Exercise Science BSc.

If you apply for our study abroad programme, we will also consider you for the standard degree programme. If, during your first or second year, you decide you no longer wish to study abroad, you can simply switch to the standard degree programme.

Keep in mind that, while we offer a range of exciting destinations, the availability of places at overseas partners may vary year to year. Learn more at **lancaster.ac.uk/study-abroad.**

“I can’t recommend studying abroad enough - the experience was life-changing.”

Study Abroad at University of Wollongong, near Sydney, Australia

Lancaster University

Lauren

Sports and Exercise Science (Study Abroad BSc) student

I’ve always wanted to live and study in another part of the world. Wollongong is about the size of Lancaster and the university is only five minutes from the beach. You could go for a swim before breakfast!

Choosing to study abroad was a big leap, and I was homesick for a week or so, but after that it was absolutely amazing, and I had a million people offer to teach me to surf!

I studied modules in physiology and exercise science and those credits were transferred to my Lancaster degree.

After my studies, I stayed on to do some travelling with the friends I’d made there. I can’t recommend studying abroad enough - the experience was life-changing.

Sports and Exercise Science

(Including Study Abroad)

BSc Hons

Led by experts in their field at Lancaster Medical School, our Sports and Exercise Science BSc and study abroad variant will equip you with the knowledge, skills, and values needed for success. You'll graduate as a competent, analytical, and highly employable sports and exercise scientist.

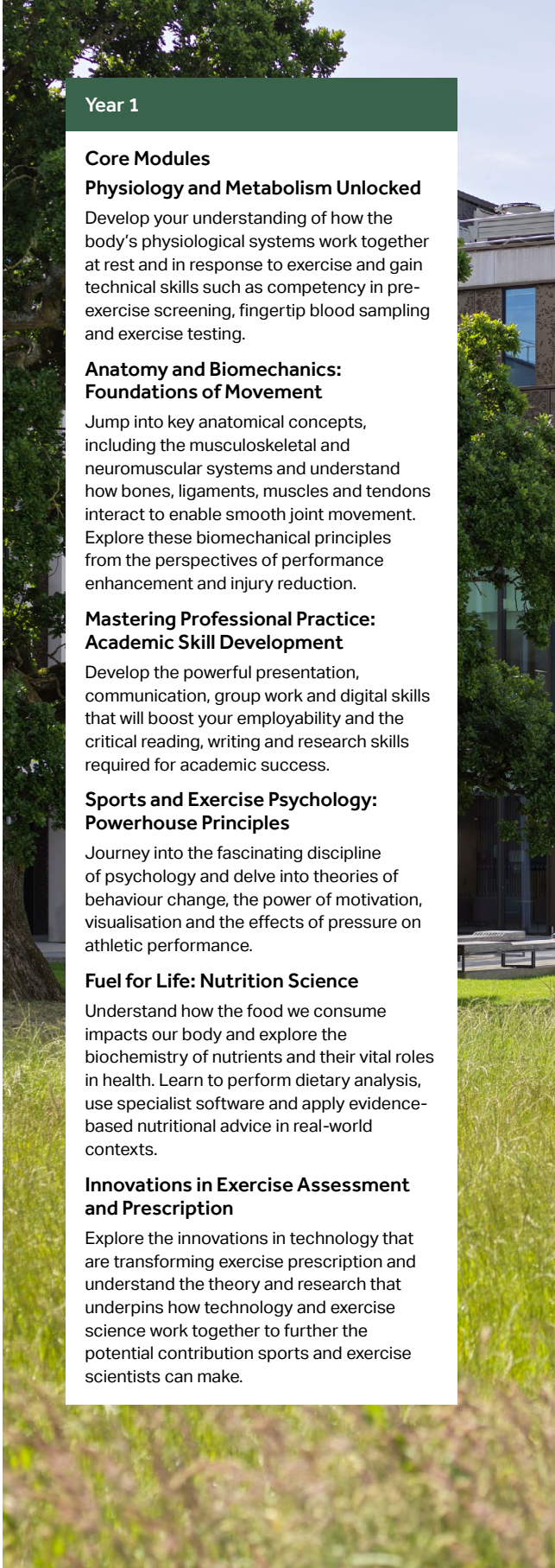
+ In Year 1, you will gain a solid foundation in the core disciplines of biomechanics, psychology and physiology alongside topics such as nutrition, technology and academic skills development.
+ In Year 2, you will begin to apply your knowledge to real-world scenarios with a focus on health, exercise and sport.
+ In Year 3 you will undertake a research project on a topic of your choice to make a unique contribution to sports and exercise science research. You will also explore in greater depth the themes in exercise and health or sports that most interest you.
+ Year 4 – if you choose to study abroad in your third year, you will complete the modules from Year 3 in your fourth year.

You will graduate equipped with a professional profile ready to embark on a successful career or further study.

Please visit our website for entry requirements.

Enhancing your curriculum

We continually review and enhance our course curricula to ensure we are delivering the best possible learning experience, and to make sure that the subject knowledge and transferable skills you develop will prepare you for your future. Information within this publication with respect to courses and modules is correct at the time of publication, and the University will make every reasonable effort to offer courses and modules as advertised. In some cases, changes may be necessary and may result in new modules or some modules and combinations being unavailable, for example as a result of student feedback, timetabling, staff changes and new research.



Year 1

Core Modules

Physiology and Metabolism Unlocked

Develop your understanding of how the body's physiological systems work together at rest and in response to exercise and gain technical skills such as competency in pre-exercise screening, fingertip blood sampling and exercise testing.

Anatomy and Biomechanics: Foundations of Movement

Jump into key anatomical concepts, including the musculoskeletal and neuromuscular systems and understand how bones, ligaments, muscles and tendons interact to enable smooth joint movement. Explore these biomechanical principles from the perspectives of performance enhancement and injury reduction.

Mastering Professional Practice: Academic Skill Development

Develop the powerful presentation, communication, group work and digital skills that will boost your employability and the critical reading, writing and research skills required for academic success.

Sports and Exercise Psychology: Powerhouse Principles

Journey into the fascinating discipline of psychology and delve into theories of behaviour change, the power of motivation, visualisation and the effects of pressure on athletic performance.

Fuel for Life: Nutrition Science

Understand how the food we consume impacts our body and explore the biochemistry of nutrients and their vital roles in health. Learn to perform dietary analysis, use specialist software and apply evidence-based nutritional advice in real-world contexts.

Innovations in Exercise Assessment and Prescription

Explore the innovations in technology that are transforming exercise prescription and understand the theory and research that underpins how technology and exercise science work together to further the potential contribution sports and exercise scientists can make.

Year 2

Core Modules

Molecules to Muscles: Human Integrative Physiology

Reach further into metabolism, find out more about exercise performance and grasp the integrative nature of physiology. Master how to test human economy, efficiency and resistance to fatigue and apply your knowledge to real-world sport and health-based scenarios.

Sports and Exercise Psychology: The Embodied, Embedded and Extended Performer

Delve into the fascinating social, cognitive, behavioural and emotional processes that shape sport and exercise environments, highlighting how they interact to impact performance and wellbeing and gain the skills to effectively communicate these complex interactions.

Breaking Boundaries: Debates Shaping Sports and Exercise Science

Participate in current debates with a progressive and evidence-based mindset. Explore groundbreaking ideas and concepts that challenge the way we think about sports and exercise science and its impact on the public and athletes.

Advanced Biomechanics: Optimising Human Potential

Elevate your understanding of biomechanics and develop skills in the analysis and critical appraisal of the biomechanical principles of human movement, focussing on optimising function in the real-world.

Conquer the Data: Research Methods and Statistical Mastery

Learn qualitative, quantitative and mixed method approaches to research study design, develop key data processing and analysis techniques and become competent with statistical software packages. Evaluate information critically, examine sport and exercise science research, make informed decisions and deliver actionable outcomes. Design your own research with confidence and apply your findings.

Sports and Exercise Medicine: Patient to Performer

Understand the crucial role sport and exercise scientists play in public health and athlete care by investigating current topics, from appraising prevention strategies for concussion in contact sports to engaging with people living with medical conditions.

Year 3

Core Modules

Engaging the Public: Power in Science Communication

Unlock the power of science communication and become a catalyst for change in the field of sports and exercise science. You will design and deliver your own science communication production, gaining valuable employability skills in strategic communication, creating accessible content and collaborating as part of a dynamic team while expanding your professional profile.

Cutting-Edge Science: Research Dissertation in Sports and Exercise Science

Working alongside an expert supervisor, you will be immersed in every aspect of the research process - from design and data collection to the analysis and interpretation process, to answer a question of your choice from the field of sports and exercise science. By the end of the module, you will have both a polished research project and the confidence to showcase your skills and communicate your findings with impact.

Optional Modules

You will choose three modules from a range of options taught by experts within Lancaster Medical School. Options currently include:

+ Life at the Extremes: Environmental and Exercise Physiology
+ Applied Biomechanics: Performance and Rehabilitation
+ Game Changing: Applied Sports and Exercise Psychology
+ Maximise Elite Performance: Redefining Excellence
+ Optimise Health: Transform Outcomes from Patient to Population

Year 4

For Study Abroad students

You will study the core and optional modules described above for Year 3.

Hands-on *experience* from the start of your *studies*

From your first weeks with us, you will learn to use cutting-edge, professional-standard equipment, tests and techniques.

With outstanding facilities located across our £25m sports centre and modern Health Innovation Campus you will capture and analyse physiological and biomechanical data. You will also explore psychological interventions to maximise performance and improve health.

Human Performance Laboratory

You'll spend a lot of time here, getting hands-on experience with a range of research-grade equipment.

Our blood analysis station will allow you to determine red blood cell count, the uptake of glucose following a dietary intervention, or the amount of lactate in response to exercise.

Our professional-standard treadmill with gas analyser facilitates assessments of physiological responses to exercise across a range of sporting and clinical populations.

We also have an Isokinetic Dynamometer, which offers the most sophisticated assessments of joint strength, the same equipment used by international sports teams.

Human Biomechanics Laboratory

As a sports and exercise science student at Lancaster University, you will have access to our new human biomechanics laboratory in biomechanics modules.

The equipment in this laboratory is the gold-standard for measuring biomechanical function, similar to that used to create Computer Generated Images (CGI) in movies.

We are one of very few universities that have 3D markerless technology, which uses AI to track how our joints and limbs move. We also have 3D motion capture where markers on the body track movement.

In addition, the laboratory includes two force platforms and electromyography which measure how much force we exert on our bodies and how active our muscles are.

Watch our video demonstrating the Human Biomechanics Laboratory.

Health Innovation Campus

As part of Lancaster Medical School, Sports and Exercise Science is based at Lancaster's modern Health Innovation Campus.

This purpose-built facility is home to an ecosystem of multidisciplinary experts working on some of society's most significant health challenges. It's where you will use our biomechanics laboratory and provides plenty of space for collaborative working or quiet study.

Sport at Lancaster

Our 100-station fitness suite is split across two levels and features high-specification fitness equipment, from high-quality cardio machines to our competition-standard strength and conditioning room. With a 25m indoor pool, 8.5m climbing wall and a wide range of courts and pitches, you'll find the facilities you need to excel in your sport.

Lily, *first-year student*

Sports and Exercise Science BSc

I compete at a national and international level in road and track cycling, and I am currently racing for an Elite Development team - Brother UK Team Onform.

The facilities at Lancaster are incredible. There are three different gyms to choose from at the Sports Centre. My favourite is the strength and conditioning suite where I do most of my training to supplement cycling. The Human Performance Laboratory is also amazing and is where we spend time studying subjects such as physiology.

I would absolutely recommend Lancaster to other competitive athletes; the contact hours are well-timetabled and you finish early on Wednesday afternoons, which is great for fitting in training.

This, alongside the academic support we receive, allows you to manage the balance between training and workload perfectly.

After completing my degree, I'd love to get a job within professional cycling, whether that's data analysis, nutrition or, if I do further study, physiotherapy.

"The facilities at Lancaster are incredible."

4TH

for student experience in Sports Science

The Times and Sunday Times Good University Guide 2025

Hello *future!*

10TH for Sports Science

The Guardian Good University Guide 2025

Our course has been carefully designed with employability at its heart, both through the content of our taught modules and the professional development opportunities available.

This means you will graduate with a strong scientific understanding of sports and exercise science, as well as the mindset, confidence and workplace experience to stand out in the competitive world of employment.

Our teaching and assessment styles replicate professional environments, meaning our graduates have significant experience in applying their knowledge. Tutorials and workshops on career planning are also integral parts of your degree. You will undertake professional practice modules, giving you excellent preparation for applying to graduate-level jobs and graduate schemes.

A degree in sports and exercise science can open up a wide range of careers in the health sector and sports industry, including:

+ Exercise Physiologist
+ Biomechanist
+ Performance Analyst
+ Physiotherapist (with further training)
+ Strength and Conditioning Coach (with further training)

Graduate destinations

A degree in sports and exercise science from Lancaster Medical School has opened doors for our graduates to enter exciting careers in sports, health and associated industries, with roles at big-name national and international organisations, such as:

+ Player recruitment operations at City Football Group
+ First Team Analyst at Morecambe Football Club
+ Fitness and Sports Instructor with the Canadian Forces

Our graduates have also gone on to roles in the health sector (some with further training), including:

+ Physician Associate
+ Physiotherapist
+ Trainee Vascular Scientist
+ Senior Assistant Clinical Cardiac Physiologist

And related careers including:

+ Product Specialist at Stryker Orthopaedics, a medical technology company
+ Marketing Coordinator
+ Teaching roles

You may also pursue further postgraduate study here at Lancaster Medical School or embark on a research career. Some of our recent graduates have gone on to postgraduate study, taking a deeper dive into areas such as:

+ Anterior cruciate ligament (ACL) injury mitigation at Manchester United
+ Nutritional supplementation for cognitive and physical performance in elite athletes and surgeons with Team Nutrition
+ Attitudes towards and perceptions of concussion in rugby

“I chose to study sports and exercise science at Lancaster because of the opportunities it gave that other universities didn’t.”

Kieran, *third-year student*

Sports and Exercise Science BSc

I chose to study sports and exercise science at Lancaster because of the opportunities it gave that other universities didn’t. I’ve been able to work in a laboratory alongside athletes, get my personal training qualifications and take part in professional development opportunities — all alongside my course, giving me the best opportunity post-degree.

I’ve also worked with a nutrition company, OTE, testing their gel supplements. This gave me experience in working with a large company.

In my second year, I was fortunate enough to visit the Red Bull Athlete Performance Centre (APC) in Austria. This helped me to see where my career can take me and the importance of testing to keep elite athletes at their best, even during the post-sport season. I am now using this experience as inspiration for my master’s in research at Lancaster, which I am starting in the autumn.

Find out more

Sports and Exercise Science
Lancaster Medical School, Lancaster University, Lancaster, LA1 4AT
T: +44 (0)1524 65201
E: sportsadmit@lancaster.ac.uk
lancaster.ac.uk/saes