We study **people**

We study how they move, how they think, and how they react under pressure. We study how their bodies react to exercise; from couch to 5k, to monitoring elite athletic performance. We examine how exercise is beneficial before surgical procedures, how the menstrual cycle impacts injury susceptibility, and how exercise benefits mental health. We study all this and much, much more.

Our home is Lancaster Medical School, renowned for the quality of its teaching and its commitment to nurturing its students to really bring out their best. To do this, we have purposely small class sizes where you’ll get to know the academic team (and they’ll get to know you), and where you’ll forge friendships that will last a lifetime.

Our academic team are all leaders in their respective fields of research, and this ‘research-led teaching’ brings real benefits as you get to learn from and contribute to world-class research from teachers passionate about teaching. As well as the Sports and Exercise Science team, you’ll be taught your biology modules by our colleagues in the Division of Biomedical and Life Sciences, a department currently ranked 4th in the UK by the Guardian University Guide.

All this will give you both the hard skills of a Sports and Exercise Scientist, and the transferrable skills that will make you valuable to a range of employers. Our graduates have gone on to Master’s level study here and in the USA, and have been employed by leading pharma and allied health businesses.

**Studying Sports and Exercise Science at Lancaster University will give you the confidence to take your studies wherever you want.**

For more information visit [lancaster.ac.uk](http://lancaster.ac.uk)
Discover **Sports and Exercise Science**

You will explore the science behind human performance in sports, exercise and health. Using our state-of-the-art equipment, you will gain the skills to capture and analyse physiological and biomechanical data to better understand human performance and activity. You will learn how to act to enhance performance and activity - whether for competition or disease management - and how to provide feedback to an athlete, a patient or member of the general public.

**Connected**

You will benefit from Lancaster Medical School’s excellent connections with clinicians, practitioners, and professionals working in both the health and sports domains, whilst gaining experience of working with athletes and members of the wider community.

**Professional**

The course content covered in year one allows you to complete an industry recognised fitness qualification from one of the UK’s leading providers of learning and education in the active leisure, wellbeing and fitness sector. This enables you to become a qualified fitness professional alongside your academic studies and gain experience of working with people in an exercise and fitness environment, boosting your employability.

**Choice**

In your second year, you can begin to tailor your degree by choosing to study either Exercise Medicine (health performance) or Sports Medicine (athletic performance). Options in your third year allow you to continue with your chosen direction, or widen your studies by mixing optional modules.

Meet our students: **Poppy**

Poppy graduates this year and is looking forward to taking a break over the summer before beginning her postgraduate studies in the Scientist Training Programme in the NHS. This interview is from when we caught up with her at the end of her second year of studies.

**Why did you choose to study Sports and Exercise Science?**

I’ve always been interested in science – I’m scientifically-minded I suppose – but I’ve also always really been into my sports. For me it’s just the perfect combination, applying science to sport. And with it being in the Medical School, I was always really interested in the medical side of sports science, so again, it’s a perfect combination for me.

**Why did you choose Lancaster University?**

I was drawn in by the Sports and Exercise Science degree being run through the Medical School, and I liked how the degree had small class sizes – there weren’t many people on the course and the lecturers seemed really knowledgeable in their respective research areas, and really supportive and really interested in us.

**Was Lancaster always your first choice to study Sports and Exercise Science?**

I’m not going to lie, I always thought I’d go to Loughborough, but when I came up to see Lancaster University for an Open Day, I knew it was the place for me. Before I came, I wasn’t expecting it to be so supportive but honestly, when I came on that Open Day, I knew that Lancaster was more my style with a lot fewer people on the course.

**Do you take part in any Societies?**

I do. I’m on my college netball team, I trampoline for the University, and even though I’ve never done it before in my life, I’ve just started playing Lacrosse. I’d always done netball and trampolining though, and I really wanted to continue with them at university. Doing that has given me the best network of friends. I would say getting involved in societies is really important. Even if you’ve never done a sport, or whatever else you might like to try before, just do it: You’ll meet so many new friends; people who are interested in the same things as you.

For more information visit [lancaster.ac.uk](http://lancaster.ac.uk)
For more information visit lancaster.ac.uk

A career in the making

Sports and exercise science contributes 147,300 jobs to the UK workforce.*

For every £1 that students invest in their education in sports and exercise science yields £5.50 in higher future wages.* A sports and exercise science graduate will earn £667,000 (not adjusted for inflation) more in earnings across their working life compared to if they had a Level 3 education (equivalent to A levels).*

*Sport and Exercise Science Education. Impact on the UK Economy (2019).

A BSc (Hons) Sports and Exercise Science from Lancaster University will open doors to a career in the sports industry or beyond. It could lead to employment in the private and public sectors, including the NHS, local authorities, national sporting associations, sports governing bodies, education, professional sports clubs, public sports and recreation facilities, and the community.

### Potential roles

(some may involve additional study):

- **Exercise physiologist**
  (average base pay £32,955**)
- **Sports psychologist**
  (average base pay £42,267**)
- **Strength and conditioning coach**
  (average base pay £26,797**)
- **Personal trainer**
  (average base pay £28,757**)
- **Performance analyst**
  (average base pay £35,735**)
- **Sports nutritionist**
  (average base pay £37,235**)
- **Sports Scientist**
  (average base pay £34,112**)
- **Healthcare Scientist**
  (average base pay £30,564**)

Whatever your career aspirations may be, or even if you’re still not quite sure, we’re here to support you reach your goals. Tutorials and workshops on career planning are integral parts of your degree. You will undertake a module in employability skills, giving you excellent preparation for applying to graduate-level jobs and graduate schemes, and our dedicated Careers Service team are here to help you every step of the way. From CV writing to interviews and assessment centre preparation, they are able to offer you tailored and personalised support. What’s more, they offer lifelong careers support to our graduates so, if you need us, we will always be here to help.

**All salaries taken from glassdoor.co.uk and correct at 5th June 2022.

### Placements

A placement or internship is a great way to gain work experience and a valuable addition to your CV. Erin undertook her placement with Burnley F.C., working alongside their Sports Science team.

“I'm currently in third-year and on a placement with Burnley F.C. This came about because one of our lecturers works really closely with the football club academy and was able to get two places for students to work with them over the Season. We had to put an application in and were interviewed and I was one of the successful applicants. Over the summer holiday, the placement was full-time (four or five days a week) and is now one or two days a week through term-time, and I do it alongside my studies. We work with the under-18s and under-23s, helping the Sports Science team. We do everything from hydration testing to load monitoring and data analysis. It’s been an amazing experience. It’s been so cool to see how a Premier League football club works from the inside.

### Personally, I’m really interested in data analysis so I do their post-match and post-training data analysis, exporting from their trackers and importing into the monitoring system. Some players have to hit certain numbers (an injury prevention system), and if they don’t hit their high speed running or sprint distances, we run some top-up exercises with them, but we help out wherever we’re needed. In the morning we might check fatigue markers, or help out in the gym, it’s an eclectic mix of things we’ve learned. We do get to go to matches, which is great, but the training is where we get to put what we’re learning into practice.

It’s just a brilliant experience to be learning from the Sports Scientists at a Premier League side*, for me especially because my ultimate goal is to work in elite women’s football.*

*Erin’s placement was over the 2021/22 season.
World-class facilities

Health Innovation One
Lancaster Medical School, of which Sports and Exercise Science is an intrinsic part, is housed in Health Innovation One. This £42m building was opened in 2020 and as well as being home to the Medical School and the Faculty offices, brings together small and medium-sized enterprises (SMEs) working in the health innovation space. It’s a place to study, meet, socialise, network, and a space to host events like our Sports Science Communication days. It is a five-minute walk from the Sports Centre and the Human Performance Laboratory.

Strength and Conditioning Room
Our purpose-built Strength and Conditioning Room provides a workout space full of high specification conditioning equipment. You’ll have the opportunity to train, or train others to a high level of performance in year one module Exercise Prescription. You can utilise this high specification equipment to train participants whilst working towards your personal trainer qualification, which is integrated into the first year.

Life Science Laboratories
We have invested over £4 million in new life science laboratories. In your first year, you will use these during the practical elements of Molecules of Life and Cell Structure and Function, taught by colleagues from the Faculty’s highly ranked Division of Biomedical Science.

For more information visit lancaster.ac.uk
For more information visit lancaster.ac.uk

Research with Impact

You will be taught by Lancaster Medical School’s research-active academics with expertise in sports and exercise science, plus specialists ranging from bioscientists and clinicians, to sports nutritionists and public health experts.

Dr Bob Lauder
Director of Sports Science
Senior Lecturer
Bob’s research is focused on markers of long-term joint disease and dysfunction arising from damage and ageing. Joints, especially the knee, can be subject to damage which is more common in some athletes as a consequence of injury. However, while some injuries can be resolved, others can lead to osteoarthritis up to 20-years after the injury; his research has been to identify those at risk of this long-term pathology.

Dr Tim Barry
Teaching Fellow
Tim’s interests are focussed on applied sport. He has presented at the World Congresses of Science and Medicine in Cricket on the role of spinal shrinkage and curvature as risk factors for injury in fast bowlers. He is also researching the use of new LIDAR technology to measure change of direction in Premier League footballers. His Sport Science consultancy business helps sport clubs develop strategies for research and development.

Dr Sarah Powell
Teaching Fellow
Sarah is interested in science communication and public engagement. How best to communicate sports and exercise science research to youth athletes, parents, school children and the public. Her work includes the role science communication plays in raising public awareness, understanding and interaction with sports and exercise science, and how these benefit both sports performance and public health.

Dr Michelle Swainson
Lecturer in Physiology
Dr Chris Gaffney
Lecturer in Integrative Physiology
Director of Admissions
Chris’s research seeks to understand the basic physiology and chemical reactions (metabolism) that underpin disease, health, and athletic performance. His research encompasses molecular work using cells and the model organism C. elegans; through to human-based trials. His current work investigates the impact and mechanisms of physiological stress imparted by ageing, surgery, and spaceflight.

Dr Philip Nagy
Teaching Associate
Philip’s work lies in sport and exercise biomechanics. His specific interests focus on the application and synergy of biomechanics in identifying athletes at increased risk of injury, used to inform injury prevention and reconditioning practices. He has worked with a range of athletic populations including cricket fast bowlers, soccer players, and most recently, female classical dancers.

Dr David Tod
Lecturer in Sports Psychology
David has worked as a sport psychologist in professional sports including football, rugby, golf, and with Olympic athletes. These experiences inform his teaching in sport and exercise psychology where he enjoys helping students learn how to help athletes and clients. David’s research focuses on professional development, and he explores what makes an effective sport and exercise scientist.
For more information visit lancaster.ac.uk

We caught up with recent graduate Jo Wootton to find out what she enjoyed most about studying Sports and Exercise Science at Lancaster and what tips she would give to those currently applying.

Looking back at your time at Lancaster, what was your favourite part of the course?

My favourite part of the course was definitely getting so much lab time all throughout the three years as I learn so much better in a hands-on capacity and so this made my studies so much more engaging and enjoyable for me. I also loved studying the sports medicine module in my second year as this was so specifically geared towards what I want to pursue as a career and gave me a great taste of what kind of work I might get to do later in life.

What initially got you interested in sports and exercise science and what motivated you to study it to degree level?

I've always loved playing sports throughout my childhood and school life and as I got older I got more and more interested in the science and specifics behind each sport at an elite level and so when I knew that there was a University degree which allowed me to further this knowledge and interest in a variety of areas, I knew that I wanted to pursue it as my degree.

What advice would you give to somebody who is considering studying Sports and Exercise Science?

Definitely give it a go as it is a subject that is so widely applicable to everyday life. You don’t need to be an elite sports person to study Sports and Exercise Science it really is open to everyone with an interest in the area, it also gives so many possibilities to enter the area of public health or to go into sports and so leaves your options really open for whatever specialism you find an interest in. I have loved my time at Lancaster and would recommend it to anyone thinking about applying, particularly to the Sports and Exercise Science course as the academic staff are so welcoming and helpful throughout your time and genuinely care about each student they have and want each of us to perform to our best ability.

Jo is currently studying a Master’s in Exercise Science and Kinesiology at the University of Michigan (USA) and hopes to specialise in Biomechanics and Human Movement.
Emily has continued to play football at both university and regional level throughout her studies. We caught up with her to ask about balancing her studies with her sporting career.

What got you interested in Sports and Exercise Science?
I started playing football when I was eight and so have been involved in the sporting world since childhood and have had a personal interest in the science behind sport for just as long.

Out of all the universities you considered, what was it that made you decide that Lancaster was the right place for you?
The university and department were very welcoming, they gave the best first impression. I also really loved the campus and the city. I liked that Lancaster is a smaller city but still has fun sides to it.

Do you feel supported by your academics and peers in your football and studies?
I feel very supported. There’s about 30 people on my entire in my year group and we know all the lecturers personally. We also know each other really well, so it’s kind of like, not to be cheesy but we’re like a family.

Most of my friends play football so it’s very easy to socialise alongside training. It’s a nice break away from academic study. My timetable hasn’t been too harsh and lecturers have been willing to accommodate for sporting commitments.

Do you find that your studies benefit your training at all?
In a way they do. I’m more aware of how I need to fuel and rest my body for competitions.

What are your career ambitions?
I’d either like to become a physical therapist and work with people post-surgery or work in elite football on performance analysis.
A day in the life

Ben is in his third year studying BSc Sports and Exercise Science. We asked him what a typical day in first-year might look like and for any advice he has.

No two days were the same but a typical one would start early for me because I wanted to head down to the gym for 7am and get it out of the way before the day started properly. I lived in County College in first year which was probably a ten-minute walk from the gym and the Human Performance Laboratory (which are in the same building). I might have a morning class down there, but especially in first year, I would have lectures in the Biosciences building which is up on the main campus. Depending on the day, I’d have one or two lectures in the morning which would take me through to lunchtime. Then we (the Sports and Exercise Science class) would descend on one of the college bars for lunch and to play some pool or table tennis before afternoon practicals and laboratory work. Those could last anywhere up to four hours depending on what we were doing. First year Biosciences classes were really good but they were tough, especially for those of us that hadn’t done A Level Biology but they were really important to get us talking in that scientific language.

In my first year, I typically had six to eight hours a day of contact time, but everything was usually done by five. After that, I might hang out with classmates for a bit but then I’d go home to get some food before heading to American Football training. I probably trained three times a week in first year. Training would be done by ten, and that was the day.

I do have some advice to give to incoming first years: You often find out what your coursework will be pretty early on, and so, when you do find out, start it. Even if it’s just writing the intro, or doing some reading around the topic, because time goes faster than you think it will and so just start it as soon as you can.

Also, print off the lecture slides. There’s usually loads of information on the slides and it can be difficult to get it all down in your notes, but if you have them printed off before the lecture then you can just annotate them as you go.

Finally, get involved in a society. For me, it’s been American Football but it doesn’t have to be a sport. It just gives you friends and it’s great to be a part of something. I have a friend who goes to the Baking Society, so it can be literally anything!

Meet our students:

For more information visit lancaster.ac.uk
For more information visit lancaster.ac.uk
BSc (Hons) Sports and Exercise Science:

Year Two

In your second year, you begin to tailor your degree to your own interests or career aspirations by choosing to study an optional module in either Exercise Medicine (health performance) or Sports Medicine (athletic performance).

Core modules

Biomechanics II
Explore in more depth how muscle performance affects our daily life, whether this is being able to walk to the shops or to achieve a personal best in a competition. You will learn how to assess performance in both laboratory and field settings, and how to interpret the data in a meaningful way.

Current Debates in Sports and Exercise Science
Using an evidence-based approach, discuss and debate current issues and ‘hot topics’ across sport and exercise science. Work collaboratively to present, defend and critique during live debate showing your critical thinking and presentation skills.

Physiology and Metabolism
Focus on the measurement and evaluation of physiological responses to exercise and related environments. You will delve deeper into energy systems and metabolic processes and find out more about the determinants of exercise performance, fatigue and recovery.

Research Methods and Statistics
Gain the knowledge and skills necessary for research, including how to identify different types of data and how to select appropriate statistical tests. You will explore approaches to the analysis of different types of information, including text and questionnaire responses. This valuable experience is essential for a successful career in sports science and is highly translational to alternative careers where statistical analysis is required.

Optional modules

Choose either Exercise Medicine or Sports Medicine.

Exercise Medicine
Learn about the role exercise plays in the management of risk factors associated with heart disease, such as high blood pressure. Discover how exercise can delay issues with bone health, such as load-bearing activities for osteoporosis. Gain insights into the pathophysiology, medications and exercise prescription across a wide range of conditions. Develop an adapted physical activity programme and engage with real-life patients to understand real-life drivers and challenges.

Sports and Exercise Psychology
Understand and apply needs analysis tools and methods to provide evidence-based psychological profiles and recommendations for interventions. Learn the technical, theoretical and applied skills to examine a range of athlete psycho-emotional profiles and needs and develop interventions to support athletes and exercise participants to thrive. Examine the role of the sports psychologist and the entire athlete consultancy process.

Professional Practice II
Increase your employability through a range of professional development opportunities in both sport and health domains. For example, act as a sports scientist for a University sports team. You will start to build a portfolio and develop your professional profiles that will set you up well for applying for jobs upon graduation.

Sports Medicine
Develop your knowledge of the injuries and pathologies present within elite sport, and examine prevention and treatment strategies for these conditions. Assess sports injuries and how to monitor athletes who may be at risk through overtraining or other underlying pathologies. Examine the performance benefits, and long-term consequences, of ergogenic aids, and the growing use of therapeutic use exemptions (TUEs) within sport.

We keep our degrees under constant review, and also regularly introduce new modules. In any academic year, the modules offered and course structure may differ slightly from that presented here.
BSc (Hons) Sports and Exercise Science:

**Year Three**

In your third year, you will make a unique contribution to sports and exercise science research and undertake a research project on a topic of your choosing. You will also finalise your professional practice programme by delivering sports and exercise science-based communication to a public audience.

Core modules will cover advanced concepts within sports and exercise science. You will choose two modules, from a choice of three, in the subjects of physiology, biomechanics and psychology.

You will also have the opportunity to select an optional module in areas such as maximising elite performance or optimising health outcomes.

**Research Project**

A crucial part of your degree is your final year project, during which you'll have the opportunity to work with SaES researchers to undertake your own research project. You'll be guided in doing this, and you'll be able to apply all of the knowledge and skills you've developed so far. It will allow you to build on your research and time-management skills, as well as your presentation and team-working skills. You may find yourself analysing warm-up strategies to prevent injury, developing effective training and nutritional approaches for high-performing athletes, or assessing the effects of exercise for enhancing cardiovascular health.

**Advanced Physiology**

Explore how the body responds in challenging environments and in response to other stressors such as disease. Study how physiology is disrupted in extreme environments which might include thermal stress, altitude, G-force, or during spaceflight and what can be done to mitigate any effects on exercise performance in extreme environments. We will also explore how exercise can be used as an effective therapy to improve patient prognosis in different disease states.

**Biomechanics III**

Take an in-depth look into the mechanics of force generation and how we can increase the quality of our measurements, as well as a more advanced approach into applied biomechanics work, through e.g. strength diagnosis. You will enjoy the 'hands-on' approach used, the ability to contribute on aspects of how you will be assessed as well as taking ownership of a project answering an interesting question.

**Applied Sport, Exercise and Performance Psychology**

Critically explore principles of Sport, Health and Performance psychology theory and practices in different applied contexts including sport, business and military environments. Gain insights into real-world applications of psychological processes, techniques and tools. Examine how sports, health and business organisations can thrive in times of adversity and change. Consider the nature of Health Care professionals’ training pathways and learn how to measure psychological processes to support best practice in a range of professions.

**Maximising Elite Performance**

This module has a strong applied, sport performance-related focus and covers topics that require the input of multiple sports and exercise science disciplines. You will have the opportunity to obtain an understanding of how a team of professionals work together to achieve maximum performance. You will gain an understanding of the challenges facing the sports and exercise scientists working in the field, and will be introduced to innovative ways of communicating with colleagues and athletes.

**Optimising Health Outcomes**

Equip yourself with the knowledge and skills required in an ever-growing employment field, to optimise health outcomes. You will apply aspects of public health, exercise medicine and learn how to implement real-life tools in the design and evaluation of health interventions for the general public and patient groups.

**Professional Practice III**

In this highly engaging module you will discover and develop skills in science communication: informing, educating and raising awareness of sports and exercise sciences with the public. The skills, knowledge and values gained will deliver sports and exercise science communication to a science communication to a public audience.

We keep our degrees under constant review, and also regularly introduce new modules. In any academic year, the modules offered and course structure may differ slightly from that presented here.
BSc (Hons) Sports and Exercise Science: Teaching, learning and assessment

Your learning will take place in various environments such as lectures, classroom-based workshops and seminars, computer-based sessions with specialist software, and in life science laboratories and our Human Performance Laboratory.

You will engage in lectures, interactive workshops, online forums and even a focus group with patients.

You will be taught by Lancaster Medical School’s research-active academics with expertise in sports and exercise science, plus specialists ranging from bioscientists and clinicians, to sports nutritionists and public health experts. Guest speakers will also contribute.

A broad range of assessment methods will be used throughout the degree. In your first year, your knowledge and skills will be assessed by online weekly tests, often multiple-choice, which will help you to spot any gaps in your learning and to feel good about the knowledge that you have already secured.

Written assignments might include the production of a dietary analysis report or a critical review. You will also participate in online forums, group presentations and debates where you will present your side of the argument with a partner. Traditional written exams are also used to test knowledge.

In your third and final year, you will make a unique contribution to sports and exercise science research and undertake a research project on a topic of your choosing. You will also finalise your professional practice programme by delivering a sports and exercise science-based event.

BSc (Hons) Sports and Exercise Science: Entry requirements for 2023 entry

A level: ABB

Required Subjects:

A level grade B in one science from the following: Applied Science, Biology, Chemistry, Further Mathematics, Life and Health Sciences, Mathematics, Physical Education, Physics, Psychology, Sports Science.

International Baccalaureate: 32 points overall with 16 points from the best 3 Higher Level subjects, including one science subject at Higher Level grade 6

BTEC: Distinction, Distinction, Merit in Sport and Exercise Science

GCSE: Mathematics grade B or 5, English Language grade C or 4

IELTS: 6.5 overall with at least 6.0 in each component. For other English language qualifications we accept, please see our website: www.lancaster.ac.uk/study/international-students

We keep our degrees under constant review, and also regularly introduce new modules. In any academic year, the modules offered and course structure may differ slightly from that presented here.

For more information visit lancaster.ac.uk
Open Days

Open Days are your opportunity to come and meet us in person.

As you go through the process of deciding what you want to study and what kind of university you want to study at, at some point you do need to go and visit them. There is no substitute for coming to visit our beautiful campus, to check out our award-winning accommodation and generally get a feel for the place. You’ll find us to be a welcoming, inclusive community with a fully accessible campus.

Dates:
2 July 2022
16 July 2022
17 September 2022
15 October 2022

Campus Tours

Outside of the Open Days, we organise regular campus tours to give you a flavour of life at Lancaster. You can book onto Open Days and Campus Tours at www.lancaster.ac.uk/visitus

Offer holder events

If you get an offer to study at Lancaster University, you will be invited to come to an Offer Holder event day. These are very different to Open Days, where the focus is more on getting a general feel for the University. If an Offer Holder event has one purpose it is to give a snapshot of what it is actually like to be a student studying at Lancaster University. So, your Offer Holder event might comprise a laboratory practical, a real lecture, a seminar or a tutorial. It will be hosted not only by our academic team, but by our students. Who knows, you might well end up meeting your fellow first-year students for the very first time.

Visiting us

Lancaster is very well served by road, rail and air networks and is nearby to major cities such as Manchester and Liverpool. More information about visiting the University can be found at www.lancaster.ac.uk/travel

Please note: Visits to campus for Open Days, Campus Tours, and Offer holder events may be subject to restrictions if government guidance changes. Please visit www.lancaster.ac.uk/visitus for up to date information.

Disclaimer

The information provided in this brochure relates primarily to 2023/4 entry to the University and every effort has been taken to ensure the information is correct at the time of printing in June 2022. The University will use all reasonable effort to deliver the course as described but the University reserves the right to make changes after going to print. You are advised to consult our website at www.lancaster.ac.uk/study for up-to-date information before you submit your application.

Further legal information may be found at: www.lancaster.ac.uk/compliance/legalnotice

Photography

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