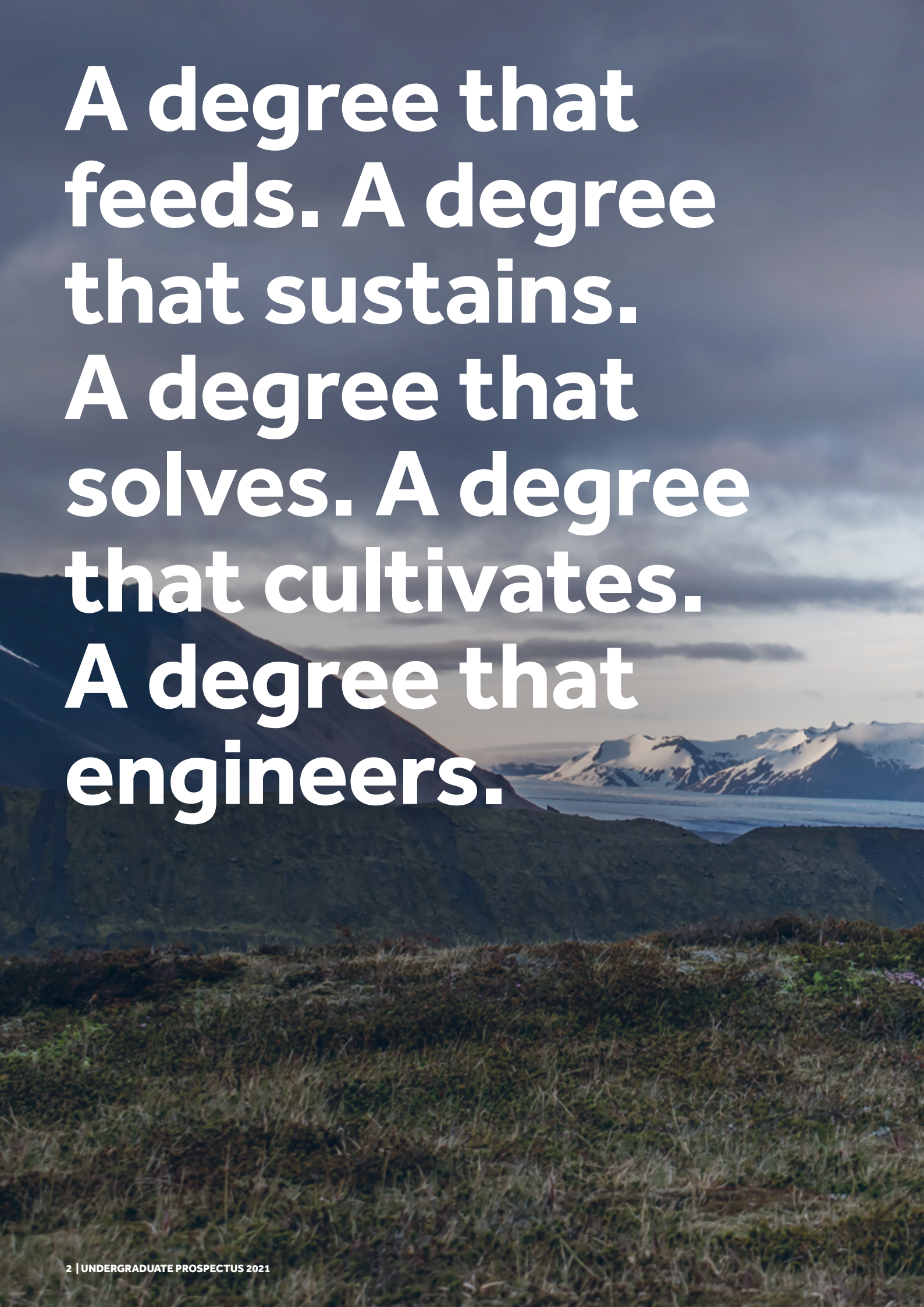
Harper Adams University

A DEGREE THAT MATTERS.

2021 Undergraduate Prospectus



A degree that feeds. A degree that sustains. A degree that solves. A degree that cultivates. A degree that engineers.

If it matters to the world, it matters to us

Discover
degrees that matter

Open Days 2020

21 March
13 June
10 October
14 November
harper.ac.uk/open

HAE
5th-6th July 2020

The Harper Adams Experience

is a two-day residential event for 16-17 year olds and that gives you a chance to:

– Try out course-related activities
– Enjoy a fun-filled evening with our ambassadors
– Meet new friends
– Have important questions answered by our current students

It is designed to help you decide if Harper Adams University is right for you and give you a taste of university and student life.

Get more information and sign up at:
harper.ac.uk/hae

Contents

What we believe

What we offer

What we teach

Our

The world needs new talent. There are problems to solve and we are developing the skills and technology to tackle them. Here at Harper Adams we're taking on global challenges such as food security, sustainable technologies and natural resource management. Harper Adams graduates are, right now, helping businesses and communities, the rural sector and the world to flourish. Find the degree that matters to you and you could be joining them.

We believe passionately in what we do at Harper Adams and our students share our common agenda. With 7.7 billion people to feed (a figure expected to rise to 9.6 billion by 2050) and a planet to protect, the stakes could scarcely be higher.

mission

Our task is to equip people to find creative, sustainable solutions to the economic and environmental challenges facing the world, both now and in the future. A global outlook is essential, as is the intelligent use of modern technology.

7.7 billion people

to feed and growing*

*United Nations, 2019

Why choose HAU?

At Harper Adams you will get a degree that matters*, taught from a stunning countryside location, where you will belong to a strong and supportive learning and social community.

***Matters to you, to employers and to our planet.**

Here we offer more than just excellent teaching and focused preparation for the world of employment. A fulfilling university experience involves much more than academic study. It includes social life, sport, clubs and societies, not to mention essentials such as good food and accommodation.

Our facilities provide all of these in abundance. We also pride ourselves on our friendliness and the quality of our student support. Whatever you need to make the most of your undergraduate years, you will find it here.

Number 1 in the UK for student support and job prospects

WhatUni Student Choice Awards 2019

TOP ↑20 University

The Times and The Sunday Times Good University Guide 2020

TEF GOLD teaching award

BEST modern University

(The Times and The Sunday Times Good University Guide 2017, 2018, 2019 and 2020)

RUNNER UP UK University of the Year

(The Times and The Sunday Times Good University Guide 2020)

97.2%

graduate employment

(DLHE, published 2018)

Placement has given me massive confidence in moving forward and applying for jobs after graduating. I did a job that I'd not done before so that also gives you confidence trying out new roles in the future.

Emily Benfield,
Agriculture graduate

The modern world needs a fresh approach

The Harper Adams placement year

Every degree course at Harper Adams includes a placement year. The reason is simple: employers want graduates who have real-world experience as well as knowing their subject inside out.

During that year you'll be addressing challenges, learning new things, meeting people, making decisions, managing money and even staff, planning ahead, using your initiative and taking responsibility.

We see the difference in our students when they get back from placement – they're more confident, focused and ready to take on the world! They know better which path they want to take, and what they need to do in their final year of studies to get there.

You'll choose where you want to work but we're here to guide and help. Every subject area has its own placement manager who works with the placement team to help you find and settle into a role and visits you throughout the year to offer advice and support.

We work with hundreds of employers in the UK and overseas, who advertise through our website, or you can find your own placement job. Most roles are paid; others offer benefits such as accommodation, training or use of a car. Some years in industry are linked to scholarships, which provide funding during study years at the university as well as a paid job for their year in industry. Many students perform so well on placement that they're offered a graduate job after finishing their degree.

Our placement year tuition fee is just £1,850* and most of our students benefit from earning a wage while they gain valuable experience.

harper.ac.uk/finance21

*Fee for 2020/21

your passion in a wide range of lectures and seminars

Discover

Develop

your interests by studying a more refined curriculum

your knowledge on your placement year

Apply

Deliver

your practical expertise through a research project

The students we send out into the workplace each year and the quality of the jobs they secure never fails to amaze us. They work with a myriad of diverse and fascinating businesses, from the small and specialist to global corporations – all over the planet. They go out as students and return as young professionals with a drive and ambition for their future career which is admirable and infectious.

Terry Pickthall,
Agriculture Placement Manager

In the UK, the food and drink industry is the biggest private manufacturing sector – larger than the automotive and aerospace industries combined*.

The UK agri-food sector employs **4.1 million people** – 13% of national employment**. And opportunities are growing as technology advances, consumer preferences change and demand becomes increasingly global.

The benefit of studying at Harper Adams is that our expertise, courses and students span the entire food chain, from field to fork. As such, you will experience the connections of real-life food businesses from day one and develop your network as you progress.

A vast range of food-related companies seek graduates from Harper Adams University, valuing their industry-linked education, rounded experience gained through the placement year, and knowledge developed from the application of relevant science.

Myth: "It's just farming"
We've heard that said about Harper Adams. As you will see when you read our course listings, our subjects are far wider reaching, encompassing the entire food supply chain, plus engineering, animal health, land management and conservation.

But also, there's no such thing as "just farming". Agriculture as a sub-sector employs nearly **half a million people in the UK** in a wide range of roles, from farm management, to animal nutrition, to pharmaceuticals, to farm building design and engineering. You don't need to have grown up on a farm to build a successful career in agriculture. Many of our graduates didn't. Read more on page 15.

Making a difference
Ethical considerations, sustainability, fashion, health and many more factors mean consumer attitudes to and demand for foods is constantly changing. Careers in food don't have to be just about cooking or catering. At Harper Adams you can explore where food comes from, how it is processed, how new products are developed, produced, packaged and marketed. That food blog you've been experimenting with: it could become a food marketing empire. Those attempts to develop free-from cake: they could lead to a leading coeliac-friendly snack bar.

*Food and Drink Federation
**gov.uk 2019

Business of food

There's nothing small or niche about the agri-food industry. Food will save the world...

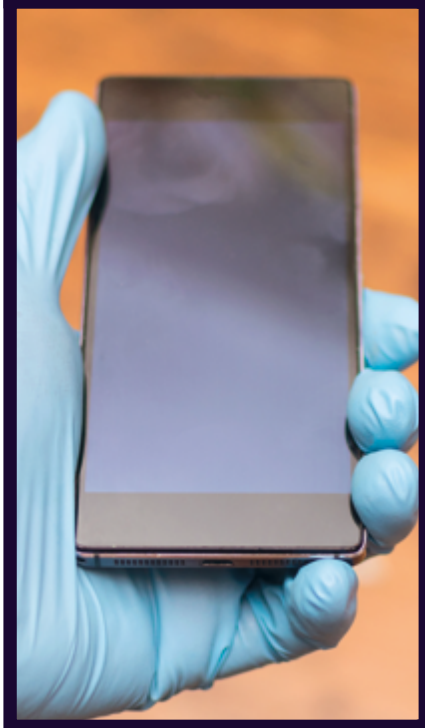
COURSES

Agriculture, page 59

Business and Agri-Food, page 80

Food Technology and Innovation, page 90

A dirty business?



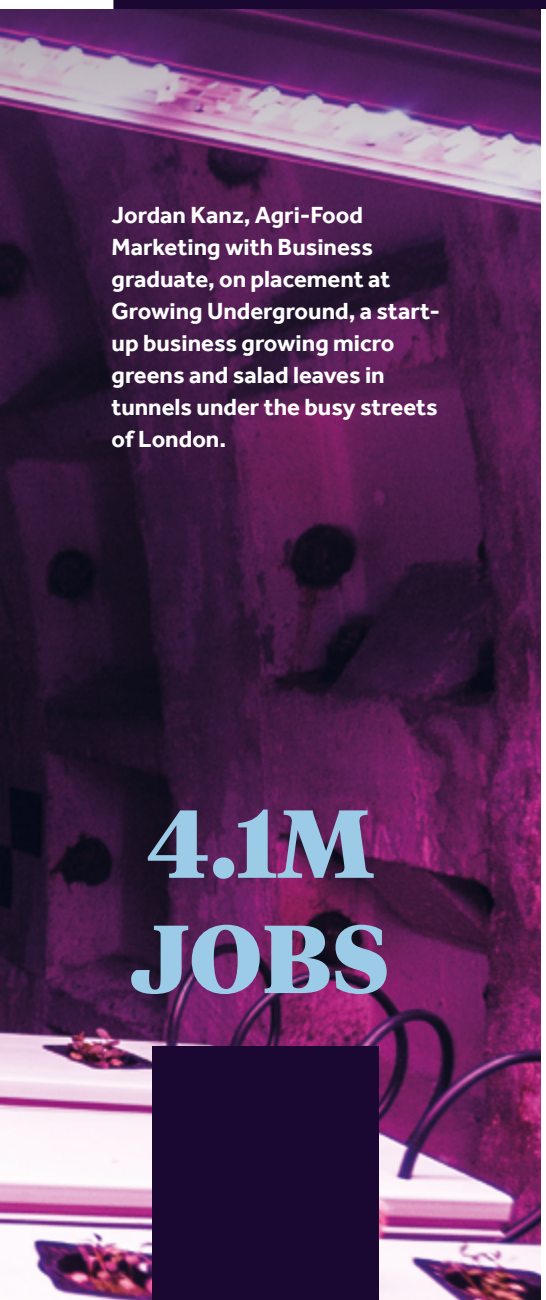
Getting up close and personal with bacteria isn't everyone's cup of tea, but two 2019 food course graduates did just that to complete their final year research, investigating the cleanliness of smart phones and supermarket trolleys.

"Could personal electronic devices could have the potential to transmit foodborne disease?", asked Emma Morgan, who explored potential risks, user attitudes and methods to prevent cross contamination for her honours research project.

She found that two thirds of respondents were unconcerned about transferring bacteria to and from their smartphones, despite only just over one third perceiving their device to be clean.

Reece Smith investigated contamination on shopping trolley handles at a range of supermarkets. Significant E.coli contamination was found on more than half but only one trolley out of 75 showed presence of salmonella. In antibiotic resistance testing, more than half showed presence of drug-resistant bacteria. Reece concluded: "Most of the bacteria found on trolley handles will not affect humans as they will not be a pathogenic strain, however they still act as a means of transmission."

Professor Frank Vriesekoop, who supervised both projects, said: "This work could lead to a better understanding of the relationship between pathogens and contact, and potentially provide some insight into what this means for the food industry."



Jordan Kanz, Agri-Food Marketing with Business graduate, on placement at Growing Underground, a start-up business growing micro greens and salad leaves in tunnels under the busy streets of London.

4.1M JOBS

"Food has profound meaning for humans, allowing people to express their culture, provide comfort and above all it has the power to bring people together."

Rachel Carroll,
BSc (Hons) Food and Consumer Studies

Feed the future... without barriers

The world needs talented, highly-skilled and technologically sophisticated farmers, managers and advisors to ensure this essential and diverse industry is fit for the future. Harper Adams is the best place to develop your talent. Our students don't all come from farming families. What they have in common is a desire to make a difference.

Rory Lomas

Rory Lomas found that being an enthusiastic new entrant to farming worked to his advantage – securing a bursary and careers support exclusive to students from a non-agricultural background.

As part of his John Innes Foundation Bursary bursary package, Rory, BSc (Hons) Agriculture with Crop Management, will be mentored periodically by an independent consultant.

Rory's passion for farming started young and he set about gaining work experience from the age of 12. "We had moved to a village and I marched myself over to the nearest farm, introduced myself and asked to have a look around. I started gaining experience with livestock, mainly with sheep. Later, for three summers I worked harvest jobs and then, before university, I worked for an estate where I was thrown in at the deep end, operating various bits of kit." Rory chose Harper Adams based on recommendations from farmers, on our strong industry connections and our high graduate employment rate.

harper.ac.uk/rolo

I am female in a male-dominated industry; I'm from the city and a non-farming background. That can be tough enough, without adding the gay card. That's why I am delighted to be a part of Agrespect. The growing support and understanding the movement is receiving from the farming industry makes the future look happier, hopeful and more inclusive!

Amie Burke

Amie Burke was a city girl, raised in Birmingham. At 18 she decided to escape the big smoke and started a business degree at Harper Adams. Now she is a Skills Manager for the Agriculture and Horticulture Development Board (AHDB), an Oxford Farming Conference Emerging Leader, and AgRespect champion – promoting and supporting diversity in the countryside through the rural LGBTQ+ network.

"You can apply business to any industry or job role. After growing up in the city, I wanted to move into the countryside: that's how I came across Harper Adams. It opened my eyes to a new world: agriculture and all the incredible opportunities within it.

"I have had quite a diverse career. My first role was with the AHDB – I was recruited as a Business Improvement Manager in the arable sector, working with farmer groups to calculate the cost of producing wheat, barley and oats and identify areas to focus on.

"Later, as an Account Manager with AB Agri, a large organisation that is part of Associated British Foods (Primark, Hovis, Twinnings, Frontier etc.), I worked with sustainability assessors and agricultural managers at Sainsburys to produce 3,000 on-farm carbon footprint assessments, data insights and producer discussion groups.

"Within two years, I was promoted to the International Audit team and spent two years travelling the world, completing sustainability audits for companies such as Coca-Cola and Heineken.

"I made the tough decision to change career again and returned to AHDB, now working to improve skills across the supply chain."

Anybody can succeed in agriculture, regardless of their barriers or background. I sincerely hope this award encourages other young people to pursue their career ambitions and seize the endless opportunities modern agriculture has to offer.

Matthew Rollason,
Agricultural with Animal Science graduate, on receiving silver in the Student of the Year category at the British Farming Awards. Matt was not from a farming background

Access to Agriculture: helping you to succeed from a non-farming background

To study Agriculture at Harper Adams you are required to have least ten weeks' work experience on a commercial farm (but up to four weeks of other relevant experience is acceptable).

This is important to ensure applicants have an understanding of the type of industry that they are committing to, to help contextualise and underpin teaching in the early stages of the course; and to help to ensure that students have some basic practical skills prior to entering their placement year.

In recognition of the difficulty that this presents for some students from non-farm or non-rural backgrounds, we have developed the Access to Agriculture programme that will be offered to selected BSc Agriculture and Extended FdSc Agriculture applicants if, at interview, we can see that you face real barriers to obtaining work experience.

The programme allows participants to gather their work experience during their first year at the university, which is supported by a dedicated tutor and access for free or at reduced rates to courses provided through our Land Based Skills Programme. For full information see **harper.ac.uk/a-2-a**.

For details of other programmes to help you access study at Harper Adams please see pages 30-31.

Become your

This is where like-minds come together, in an uplifting location that inspires innovation; where entrepreneurial spirit and sustainability are the lifeblood of activity; and where students are recognised and nurtured as individuals, but engage and connect with each other and the wider world to form powerful networks. At Harper Adams you'll have the opportunity to thrive and carve out not just a career, but an entire business.

Emily McGowan

Fancy launching a business before you have even completed your studies? Inspired by her work on placement at Mudwalls Farm, Warwickshire, Emily McGowan went home to County Down and set up Millbank Farm Shop in summer 2019. She then returned to Harper Adams for her final year of study.

Emily's shop offers a **'greener shopping experience'** with the first refill and reuse system in Northern Ireland.
harper.ac.uk/emily21

Josh Dowbiggin

To fund his degree, Agriculture graduate Josh Dowbiggin established his own Hereford stud business, marketing imported embryos and semen online. His **"innovation** and **entrepreneurialism**, excellent stockmanship and **people skills"** resulted in him winning the Farmers Weekly Agricultural Student of the Year accolade.
harper.ac.uk/jdow

Emma Buckley

"Buckley's bees was born out of absolute passion and an evidence-based belief in the amazing value of the honey bee and the good they do in the world." Buckleysbees.com
Emma Buckley runs a blossoming business that combines honey production with vital education.

Agri-Business graduate Emma always knew she wanted to set up her own business. Her love of bees was inherited from her father, David, a successful beekeeper for more than 53 years. With her dad's experience, and her passion to raise awareness of the honey bee and how vital they are to agriculture, Emma set up Buckley's Bees to promote apiculture – the skill of bee-keeping – to younger generations. "A lot of people don't realise how important bees are to us. That was one of the main driving points for myself and for the business. Your supermarket shelves wouldn't have half the amount of food on them without bees." says 26-year-old Emma, who reigns over 40 bee colonies in Cheshire.
harper.ac.uk/emmabee21

own boss

Zoe Harrison

Butterbelle founder and former food student Zoe Harrison's success in devising, developing, launching and growing her own business has been so impressive that she has returned to the university as a guest lecturer and "entrepreneur in residence". Butterbelle began in Zoe's home, where she would make nut butter for her friends, experimenting with carefully chosen natural ingredients. At Harper, Zoe perfected the recipes and began supplying local shops while also completing her placement year working for the Catering Department.

To ensure she could juggle the rest of her degree with the fledgling business, Zoe made Butterbelle the basis of her final year project. She was soon working around the clock crushing nuts, travelling throughout the country promoting and selling her products and winning awards: taking the top spot at the Rural Business Awards in the Best Rural Food and Drink Business category and being voted runner up in the Observer Food Monthly Awards' Ethical Food category in 2019.

She has also proven an inspiration! After meeting Zoe at the University's Field to Fork festival, Belle Parish enrolled as a Harper Adams student and is employed by Butterbelle part time. "I'd love another placement student," says Zoe, "It's a great way to build experience and bring new talent into your business."

Zoe now assists in teaching a range of entrepreneurship and business modules across food technology and business degrees, to share her wealth of industry knowledge. "It feels like I'm back home," she says.
harper.ac.uk/belle21

Kiron Philips

Kiron Phillips had always wanted to graduate feeling like he added value to his life. Having decided that our offer of an industry placement year and inspiring rural location was exactly what he'd been looking for, he embarked upon a Business Management with Marketing degree.

Setting up his own vodka brand was a challenge, but Kiron found that his course and placement year were geared towards helping him achieve his dream. Having now established RK VODKA as a luxury vodka brand, Kiron has found that his ambitions have changed from simply running his own business to creating unique ideas and watching them come to life. **"My biggest advice would be to make the most of your university opportunities,"** says Kiron, "The people you meet, the information you gain, and the life experience are all going to be vital in your life post university."

RK Vodka is going from strength-to-strength and has featured in Tatler and GQ magazines.
harper.ac.uk/rkvod

Why did you choose your course?
"I started the BSc (Hons) Rural Enterprise and Land Management course without fully knowing what I wanted it to really lead to," says Jack. "I had an idea in the back of my mind that I wanted to manage a historic rural estate, possibly for the National Trust or for a private client."

Where has it taken you?
"As it happens, I'm now doing what I had originally intended to do. I am an estate manager for a private estate of 15,000 acres. It is a serious responsibility but great opportunity too. As the manager of the Powis Castle Estate, I have a team of 40 employees, operate a multi-million pound turnover business and control a very diverse and interesting estate in a lovely part of the world. I can honestly say I have a key to a castle – because the estate also owns Ludlow Castle which I manage. Built shortly after the Norman Conquest but now ruined, we have 100,000 visitors a year.

Tell us about your job highlights
"I recently led the team to replace the roof of the 12th century chapel there that had fallen-in some 300 years earlier. Otherwise, having an office that overlooks amazing gardens open to the public and a daily commute through an historic deer park is pretty special."

What advice would you give to future students?
"Work on your people management and personal interaction skills as much as your technical knowledge. This is a people business and the ability to communicate properly is key.

"We are in a very dynamic industry. There will be huge opportunity in the future for people entering the industry now and it's there for the entrepreneurs to shape. Traditional land management skills will always be needed alongside innovative and alternative demands for our skills."

Jack spent the first 15 years of his career, after graduating in 2003, undertaking estate management and private client work as a partner of a national firm of property consultants.

Realise

Megan Lewis

"The course's strong environmental component should stand me in good stead."

Megan Lewis managed to channel her passion for animals and the environment into her studies and eventually land her dream job.

Megan graduated with a first class degree in Wildlife Conservation in 2017, before gaining a distinction in an Entomology MSc.

She now works as a Farm and Environment Assistant at CLM, a leading firm of farm business consultants and land agents operating across southern England. "Given the planned shift away from direct farm subsidies towards those supporting 'public goods', the course's strong environmental component should stand me in good stead," she said.

Megan spent her placement as a volunteer ranger for the National Trust in Pembrokeshire – busy with everything from monitoring habitats and fixing fences to assisting with tree-felling and engaging with visitors.

"Jobs such as ours are incredibly varied and graduates might be involved in anything from dealing with planning permission issues and farm consultancy to business restructuring and ecology, so we look for people, such as Megan, who can think on their feet and multi-task," Kevin Jay, Director of CLM.

harper.ac.uk/megan21

Master of the REALM

38 year old Jack Tavernor has realised an early ambition – and now runs a 15,000 acre estate spanning parts of England and Wales.

your dreams

Daniel Willis

"I came to Harper Adams after quitting the drab office lifestyle. I'd been working in for seven years in order to pursue my passion for the countryside, which was ignited by getting my Harris hawk," says environmental management graduate Daniel Willis. His ambition is to work within the Forestry or Botany professions in Canada.

Engineer

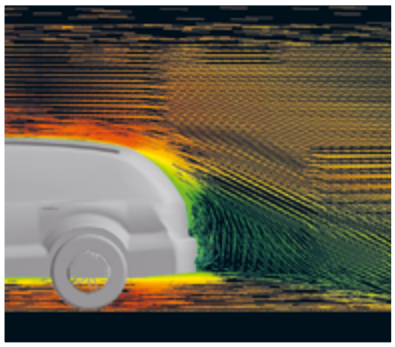
Put simply, engineers solve problems. As a student at Harper Adams your learning will stretch beyond controlled classroom or workshop tasks. You will identify and address issues; develop and test solutions and push boundaries on campus, on placement and in conjunction with industry partners. The results can be life changing.

Reduce chemical use

Four Harper Adams masters engineering students undertook a design project to develop a spraying system for global agriculture company Syngenta, with an objective to improve spray accuracy, and therefore spare the environment from unneeded chemicals. The team came up with an ingenious, commercially viable solution that impressed the company. "The project brought together all of our study and skills from previous years but the expertise and connections at Harper were a great help," they said.
harper.ac.uk/reduce21

Protect the land

Soil health is one of the biggest challenges facing today's agriculture, as an ever-growing population applies more pressure to the global food production chain. While bigger and heavier equipment can increase the volume of crops harvested, it also compacts soil, making it less suitable for farming. In his final year, Agricultural Engineering Masters graduate James Vining worked on a new mechanical system that changes the way tyres move across the land, to reduce soil damage. "It could prove to be part of the important aim of maximising efficiency while maintaining maximum soil health," he said.
harper.ac.uk/soil21



Set the pace

A new men's cycling land speed record was set in 2019 using a bike tethered behind a custom-built Porsche with a large slipstreaming canopy fixed to the back to protect rider Neil Campbell from the wind and help him reach 174.3mph. Harper Adams graduate, former Bentley engineer and now lecturer, James Croxford, used 3D models of the car and a virtual wind tunnel to develop the all-important canopy that made the feat possible.
The team is now targeting the all-time world record of 220mph and James plans to involve Harper Adams engineering students.
harper.ac.uk/cycle21

an impact

Advance sporting safety

Agricultural Engineering graduate and award winner Neil Montgomery's honours research project, 'An analysis of the effect of roll cage design on the feasibility of extricating injured crew members from rally cars', has contributed towards the development of better practices for paramedics and motorsports teams.
harper.ac.uk/rollcage21

Break records

Guy Martin drove the tractor that set the World's Fastest Tractor record in 2019, but a group of Harper Adams graduates and a current student were part of the team that made it happen! Guy worked with a team from JCB to create the Fastrac 2 that powered into the Guinness World Records book as the world's fastest tractor by reaching a speed of 131.191mph. The project manager was alumnus Alex Skittery, who said: "My agricultural engineering degree from Harper really did help me get the job done. The great thing about Harper is that you don't just spend loads of time learning about things in the lecture theatre, you learn how to apply knowledge to the real world."
harper.ac.uk/fastest21

Break down barriers

From a young age Ellie Payne was very practically minded, interested in how vehicles worked and in solving real world problems. She says "no other university except Harper Adams" had a course that offered all three plus the chance to work in the industry while she studied. Ellie was one of the founding members of Stellar Harper Engineers and continues to encourage more women to get into STEM careers, "If you are doing something you love you'll feel the satisfaction throughout. Harper helps you to find the bit you love."
harper.ac.uk/stellar21

Imagine the future

Imagine machines that can talk to each other to ensure efficient working.

Imagine the two of them, and more, carefully making their way from shed to field, without bumping into each other or people or animals.

Imagine seeds drilled with precision, guided by satellites; plants will be sprayed with minimal treatments, thanks to being applied exactly where and when they are needed.

Imagine cattle monitored by smart watches, with data gathered used to improve herd health.

Imagine sheep being led across the field by a drone, because they know it will take them to food.

Drones will rise above the whole operation, providing a vital bird's eye view, taking pictures, readings and grain sampling. They might even, one day, be legally used to spray crops.

But farmers won't be out of work or idle. They will be scientists, programmers, data analysers, economists.

When it comes to animal care, hands will always be required. But for crops? We've already proven they can be produced without setting foot in the field.

harper.ac.uk/handsfreefarm

The Hands-Free Hectare: a world-first

In 2017, the Hands-Free Hectare team achieved a world-first, using automated machines to grow an arable crop remotely, without operators in the driving seats or agronomists on the ground.

Jonathan Gill, mechatronics researcher, said: "There's been a focus in recent years on making farming more precise, but the larger machines the sector has been using are not compatible with this method of working. They're so heavy that they're damaging farmers' soils.

"We believe the best solution is for farmers to manage fleets of smaller, autonomous vehicles. These will be able to go out and work in the fields, allowing the farmer to use their time more effectively and economically.

"But it's going to take new talent entering the industry to develop the technology. We hope that this project has helped to inspire some people and shown them the range of interesting and innovative jobs that are available now in agriculture."

And now it's a Hands-Free Farm

After taking the Hectare through two successful cropping cycles, to national and international acclaim, the project has attracted funding and partnerships to broaden it out across a 35-hectare farm at Harper Adams.

Martin Abel, from partner Precision Decisions, added: "We're looking to solve problems such as fleet management and swarm vehicle logistics and navigation. "We're moving away from the perfect hectare and to real world situations. The fields will be irregular, there'll be obstacles, undulating land and pathways."

Kit Franklin, Senior Agricultural Engineering Lecturer, said "We want the farm to become a testbed for agricultural innovation. Once the farm's established, we'll be encouraging companies to come and test and evaluate their technologies.

It's also great that the project will remain on the University campus so that students will be able to learn from it, watch our progress and see how dynamic and innovative the agricultural engineering industry is."

Protect precious resources

If you're interested in tackling some of the most urgent challenges facing mankind, then an environment-related degree from Harper Adams will put you in a position to make a real difference. You will learn about sustainable management practices, the impact of domestic and international policies, and how changes in the environment and land use affects wildlife, society and the economy. And the countryside will be your classroom.

You will put theory into practice in the rural and urban habitats and communities surrounding our campus. You'll also develop highly transferable job skills such as teamwork, problem-solving and managing people and projects.

Almost everybody is concerned about climate change and the environment these days and rightly so. Pollution, population growth, climate change and habitat loss are posing grave challenges everywhere. An environmental degree can help you go on and work with any number of powerful environmental organisations – lobbying groups, third sector organisations and charities, or publicly funded bodies like The Environment Agency, Forestry Commission, Natural England or the Marine Management Organisation.

At Harper Adams, we will give you the skills and qualifications you need to go out and start protecting planet Earth.

Georgina Reith, 21, from Chesterfield, Derbyshire, looked into the public perception of rewilding in the UK for her Honours Research Project (HRP), part of her BSc (Hons) degree in Countryside Management.

Rewilding is the reintroduction of animal species, which used to be native but have since disappeared, in the hope it will help with the management of the countryside. It's increasingly being used globally as a conservation tool.

"There are already projects reintroducing species into the UK, such as beavers, sea eagles and pine martens" said Georgina.

"One of the greatest rewilding success stories is the reintroduction of wolves into Yellowstone Park in America. They were reintroduced in 1995 and since then the elk numbers have declined, beaver numbers have increased and willow is surviving longer.

"I found the topic of rewilding interesting after studying it during a module on countryside management course and decided to use my HRP as an opportunity to look into it further.

"Due to the decision for the UK to leave the EU, a government enquiry has been investigating the future of the natural environment, and elements of rewilding have been discussed as part of the future strategy.

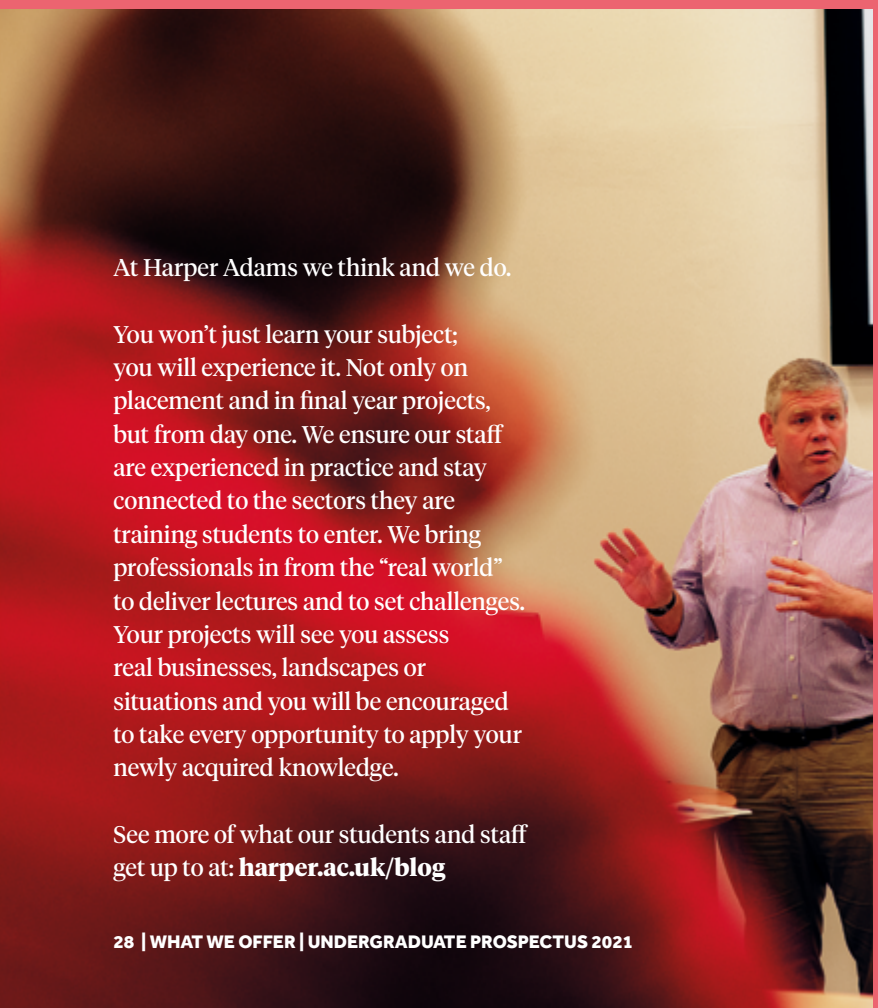
"There's no scientific evidence saying what will definitely happen if these species are reintroduced and there's also no firm evidence of the additional opportunities that can come out of it, for example, an increase in tourism.

"For my project, I want to see how the public's perception of rewilding compares with that of conservation organisations. Animals that could be reintroduced into the UK include elk, lynx, wolves and goshawks."

Staff experience is key for our veterinary nursing programmes. The **veterinary nursing** team comprises 12 Registered Veterinary Nurses and five Veterinary Surgeons. All have worked (and many still do work) in practice and have developed specialisms and particular areas of interest - from exotic species health to equine intensive care.

Agriculture with Farm Business Management students have worked with local farms and NatWest's agricultural team to develop management plans - with the bank helping to assess the students' performance and provide feedback. Land and property management students undertake similar exercises looking at rural estates – experience this first-hand at one of our land and property taster days: **harper.ac.uk/events**

Let experience be your guide



At Harper Adams we think and we do.

You won't just learn your subject; you will experience it. Not only on placement and in final year projects, but from day one. We ensure our staff are experienced in practice and stay connected to the sectors they are training students to enter. We bring professionals in from the "real world" to deliver lectures and to set challenges. Your projects will see you assess real businesses, landscapes or situations and you will be encouraged to take every opportunity to apply your newly acquired knowledge.

See more of what our students and staff get up to at: **harper.ac.uk/blog**

Field trips are key across all degrees, but for final year wildlife and **environment** students, the Anglesey residential is a definite highlight as they immerse themselves in their passion. HAS University of Applied Sciences in the Netherlands, and surrounding businesses and communities add value to business and **food** course trips and engineers pursue every opportunity to see the latest kit in action, including at Agritechnica, Europe's largest trade fair of its type.

Harper Business Plus is an extra-curricular programme of talks, trips and workshops that give business students, in particular, a chance to broaden and to apply their knowledge. In 2019 this included a rare visit and talk from Amazon UK's regional director for customer fulfilment.

It's amazing how much you can learn through common interests.

Genevieve Kiero Watson,
Zoology with Entomology

Entomology matters

Harper Adams offers the UK's only undergraduate entomology course (Zoology with Entomology, see pages 76-77) as well as a range of postgraduate entomology programmes.

In the words of E.O. Wilson, the world's leading expert on ants, insects are "the little things that run the world".

"Harper Adams offered what others didn't: the opportunity to gain skills through practical work, laboratory experiments and lectures – the best decision I ever made." Christina Faulder, Research Entomologist.

Humans have identified around 5,500 species of mammal and 10,500 of birds. The comparable figure for insects is more than a million.

Entomology is the study of these fascinating creatures. Their importance to economics and biodiversity is hard to overstate. If bees were to become extinct, for example, it is often said that we'd all be dead within five years.

Some insect species spread diseases, while others pollinate flowers, break down dead organisms to release nutrients and are essential sources of food for other animals.

Insects have also evolved solutions to many physical and chemical problems that we can learn from. And they are an excellent model for studying the molecular basis of life. More species of insect have had their genomes sequenced than any other group of multicellular organisms.

Working with insects will never get boring.

Katrina Dainton,
Entomology graduate

Harper & Keele

VETERINARY SCHOOL

Combining the extensive resources of Harper Adams University and Keele University, the Veterinary School is uniquely structured and will help you graduate with the required skills to be immediately effective first-opinion practitioners in the rapidly changing modern veterinary and animal welfare industries.

You will study a five-year programme leading to a Bachelor of Veterinary Medicine and Surgery degree.

During your studies, you will be able to benefit from Harper's long-standing reputation in animal sciences and access to Harper's farm and companion animal facilities, alongside Keele's experience of running a leading UK medical school and significant recent investment in facilities such as state-of-the-art teaching laboratories.

Applications for 2021 will be accepted from May 2020. Visit **harperkeelevetschool.ac.uk**.

The BVetMS degree has been developed to the standards expected for accreditation by the Royal College of Veterinary Surgeons. Formal accreditation approval will be sought after the first cohort completes their studies, in line with the arrangements for any new veterinary degree programme in the UK.

Six reasons to choose the Harper & Keele Veterinary School

1.

A vet school for the times

Vets today need broad skill sets. In each year, 90 of the credits in the new course focus on the core clinical skills, but the remaining 30 credits focus on broadening competencies in veterinary public health, professional skills, communication, ethics, well-being and business practice. The curriculum at the Harper & Keele Veterinary School has been designed to enhance the confidence, capability and resilience of the veterinary graduate.

2.

A diverse profession for a diverse world

The Harper & Keele Veterinary School is committed to encouraging a more diverse cohort of young people to take up veterinary degrees and is developing pathways to support this.

3.

Combined resources

The Harper & Keele Veterinary School is unique in that it provides students with access to resources from two universities.

4.

Combined excellence

Between them, Harper Adams and Keele have 186 years of experience in delivering education in animal and human health and well-being.

5.

Located in the heart of England

A major advantage of the Harper & Keele Veterinary School's twin location is easy access to the wide variety of veterinary practices in the region.

6.

Live at one university but enjoy the social life of two

Both universities have thriving sports clubs and societies and there are extensive opportunities to get involved with other social activities. Students with well-being and learning needs will be supported by specialist teams at both sites and by dedicated personal tutors. Both universities are highly regarded for the quality of support services on offer to students.

New resources

In addition to the existing Veterinary Services Centre, veterinary nursing training facilities, companion animal collection house and commercial farm with all mainstream livestock enterprises, Harper Adams is creating a new veterinary education centre to support the Vet School. It will serve students across the veterinary professions: medicine, nursing and physiotherapy.

Recognising potential

Our pledge to help you to access higher education

Harper Adams University is committed to bringing fresh talent into the industries we serve, regardless of background. As a result, we have developed a range of measures and initiatives to give everyone the best chance to access our undergraduate degree programmes.

Contextualised offers

The main feature of Access to Harper is our contextualised offer scheme. A contextualised offer is an offer that is reduced by one grade or more from the standard entry requirement, made to applicants whose education might have been hampered by personal circumstances. These include attending a low achieving target school, living in an area where it is unusual to go to university or which is disadvantaged and being a care leaver. We have also introduced reduced entry requirements for those applicants who are over 21 years of age and further initiatives to make the application process easier for those applicants who need it. Read more at **harper.ac.uk/access**.

Eligibility

Your application will routinely be checked to see if you qualify for a contextualised offer and you will be advised if this is the case in our offer communications. Eligibility for some of our accessibility measures can be checked on our website at **harper.ac.uk/access**. You can also ask about your eligibility by calling admissions on:

T: 019521 815000
E: admissions@harper-adams.ac.uk

Our admissions team is happy to discuss your situation in confidence.

Candidates with outstanding potential

We make a small number of Unconditional Offers to those whose applications show outstanding

potential. For those who meet the requirements of our contextual offer scheme, we adjust the basis on which we judge outstanding applicants' eligibility for an Excellence and Opportunity Scheme offer.

Financial support

We are also able to provide financial support towards the costs of attending an interview if you are a UK resident who is in receipt of free school meals or has been a care leaver, where you have applied for one of our courses that require an interview (a standard requirement for Agriculture, Engineering, Veterinary Physiotherapy and the Extended Degree Programmes).

Further support

Access to Agriculture Programme – available for Extended Degree Programme as well as BSc Agriculture courses. See page 15.

The engineering team is making more telephone advice and interview sessions available, as an alternative to in-person sessions.

Care leavers holding offers to study at Harper Adams will receive details of a named contact person to help with their transition to university and of the Care Leavers Covenant.

Our Disrupted Studies Policy allows applicants who have faced additional problems during the course of their studies to submit information to help us make additional considerations at confirmation if they miss their offer. This would be beyond any extenuating circumstances submitted to the exam board by their school/college.

All applicants with a strong application will receive additional consideration at confirmation if they do not exactly meet the conditions of their offer (subject to places being available).

For more information about support with interview costs, or any of our further initiatives please contact:

Admissions

T: 01952 81 5000
E: admissions@harper-adams.ac.uk

Study skills
Develop skills such as note taking, report writing, referencing, revision and exam techniques in a drop-in lunchtime workshop, online through the library website, or make an appointment with the Academic Guidance team. Our maths tutor can help all students with basic numeracy and gives more targeted support to engineering students in need of advanced maths skills.

Learner and disability support
The Learner Support Service is available to all students who feel they need support, whatever your learning needs or disability, to ensure you get the most from university life. For instance, we provide help to apply for Disabled Students' Allowance, to find the right accommodation on or off campus; and provide dyslexia screening, assessments, study resources and advice.

Maths support
Mathematics support is available for students on an individual and small group basis with the support tutor. The support is particularly aimed at helping first year students who are taking mathematical modules as part of their Harper courses; these include statistics modules and the engineering students' mathematics and mechanics modules. Help is also available for general numeracy, arithmetic and general accounting. Statistics advice is also given for students in later years of their courses, including dissertation support.

English language
We provide free English language classes, study advice and individual support for students whose first language is not English.

Careers service
The service provides both undergraduate and postgraduate students with advice and information to help them to identify and achieve their personal goals. You are welcome to use the services at any stage of your studies. First year students are encouraged to make contact early. The Careers Resource Area contains a vacancy board and useful handouts. The careers service has a dedicated online vacancy page including summer, Easter and part-time vacancies as well as graduate openings.

Placement support
Placement Officers work alongside dedicated Placement Managers to support students in their preparations for placement employment. They are also a point of contact, in addition to each student's assigned Placement Visiting Tutor whilst on placement. Read more about the placement year on page 10.

Information services
The information services team develops and delivers digital information and learning opportunities for students and staff across the campus. This involves the continual improvement of University systems to make them pertinent to each and every individual's requirement. All students are offered training in the use of the University computer systems starting with the use of the virtualised desktop. The initial training covers the basic use of the system and e-mail and bespoke training is provided on request to student groups. The University is registered as a Microsoft Academy and offers training and examinations to gain recognised qualifications.

Land-based skills programme
We offer a range of subsidised land-based skills courses to students. These include:
- Tractor driving
- Forklift truck/telehandler operation
- Animal transport
- Chainsaw operation
- Safe use of pesticides
- First Aid at Work
- ATV operation
- Coppice restoration
- Trailer handling
- Fencing
- Brushcutter operation
- Charcoal making
- Milk recording software
- Stockmanship

Get support when it's needed

Harper's buildings are often as interesting on the outside as the activity that's going on inside. Living walls, biodiverse roofing, local green larch exteriors and lime-rendered straw bale construction help to form our infrastructure. There are traditional bricks and mortar too – we have been here since 1901 – but our outlook to the future and the world is reflected throughout our estate. These pages show some of the unique facilities that support the ideas and innovations coming out of Harper Adams.

University Farm
Not many universities have their own commercial farm on campus. At Harper Adams, our 635-hectare University farm is at the heart of what we do, enabling students to learn and innovate 'in the field'.
Our livestock holdings include **390 dairy cows** and **280 followers** managed in a leading-edge dairy unit, **230 sows**, **70,000 hens**, **two sheep flocks** and a beef unit.

Jean Jackson Entomology Building
The Jean Jackson Entomology Building houses the University's entomology teaching and research portfolio. Lime-rendered straw bale construction forms the tutorial room and the whole building is aligned for the best solar gain. The roof structure can carry a green, living layer of plants to provide insulation and biodiversity in a joint initiative with the Harper Adams Crops Department who are researching the technical properties of different green roof substrates.

Engineering facilities
The more traditional workshops are complemented by the:

- **Agricultural Engineering Innovation Centre**, home to the National Centre for Precision Farming and featuring "clean" engineering labs, plus a lecture theatre into which heavy machinery can be driven
- The **Soil Hall**, the largest covered field demonstration area in the UK
- Multiple in-field test plots
- The **Agri-EPI Centre Midlands Innovation Hub** and smart dairy research facility (see right hand page)

Other resources include:

- An off-road vehicle demonstration track
- A JCB design suite
- A Z Corporation 3D printer
- Machinery hall

Workshops dedicated to:

- Electronics and mechatronic
- Metal fabrication
- Vehicle and machine assembly
- Maintenance

Campus

learning

Computers and online learning
There are PCs all over campus, including 24-hour computer rooms. Audio-visual equipment and support are available, and our virtual learning environment, The Learning Hub, gives you access to online learning materials and activities including the library catalogue and online journals.

Bamford Library
Our beautiful library has 43,000 books in stock, a growing e-book collection, around 2,000 print and 44,000 electronic journals, and much more besides. Support is available from a team of librarians and assistants.

The Weston Building
Opened in 2013, the Weston Building features a 260-seat lecture theatre, a 24-hour computer room, IT classrooms and seminar rooms, and a large exhibition/social space.

Science facilities
Our extensive laboratory complex is a fantastic resource for our science-based courses. It features 16 well-equipped laboratories and a team of highly qualified technicians on hand to help with teaching and research. Other science-related facilities include a large experimental glasshouse, animal production buildings, a metabolism room, aquaculture research facilities, an automatic weather station and a laboratory for anaerobic fermentation.

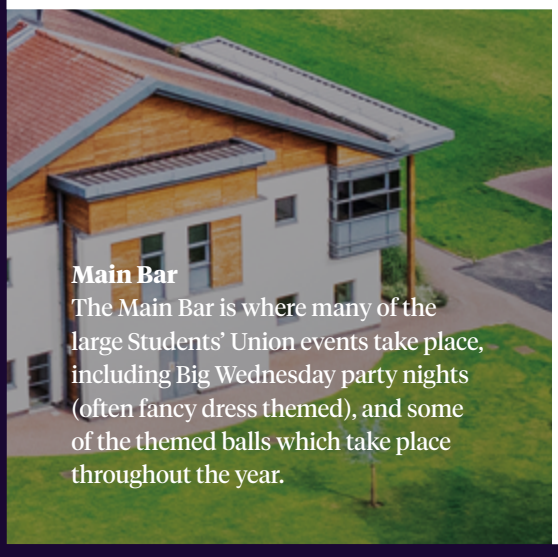
Midlands Agri-Tech Innovation Hub
This new building, created as part of the national Agricultural Engineering Precision Innovation (Agri-EPI) Centre, has been designed to host a range of activities from traditional engineering robotics to automation, laser technology and sensor development. It also accommodates research and development projects for consortia that will include both industry and academic partners.

More than £45m invested in facilities on the campus over the last ten years

- Single site campus in a beautiful rural location
- All facilities in very close proximity
- Commercial farm on-site
- Access to computer rooms 24/7
- Library open 24/7

Campus

Faccenda Student Centre
Our student hub houses several essential services under one roof, including the Students' Union, Careers Service, Student Service, and Learner and Disability Support. It also boasts a fitness suite, dance studio, the Graze Café, Feed Store shop and a great deal of social space including the ground floor chill out zone where students can relax between lectures.



Main Bar
The Main Bar is where many of the large Students' Union events take place, including Big Wednesday party nights (often fancy dress themed), and some of the themed balls which take place throughout the year.

The Welly Inn
The Welly Inn provides a great hideaway for students, be it a quick pint after studying, a pub quiz or comedy evening organised by the Students' Union. The Welly has a pool table and a full wall projector screen – great for sports and movie nights. The couches and corner booths provide a great alternative to the Main Bar, whilst allowing you to be part of the buzz. There is also a cash machine located at the entrance of The Welly.

Kaldi Café
Located adjacent to the Bamford Library and ideal to use as a break from studying. Hot and cold drinks, sandwiches, paninis and toasties. Open 9:30am-4pm Monday-Friday term time only.

Harper Gym
A well-equipped fitness suite that is being continually improved year on year. Membership available from the Students' Union.

Health Care
When you arrive, you will be asked to register with the local doctors' surgery. This is to ensure you have access to prompt treatment should you require it. Surgeries are held on campus every weekday lunchtime. During university holidays you can be seen by your home doctor as a temporary resident.

Wi-Fi
Free Wi-Fi available to all students. Use your student log-in to access Eduroam across campus.

Parking
Parking is free throughout campus.

IT services
Helpdesk is located on the first floor of the library.

Laundry
Students in Boughey, Bradford, Flatt Road, Gloucester, Harris or Pitchside self-catering (Darwin A&B, Darby, Jebb and Silcock) are provided with a laundry service as part of the package. If you live in Princess Royal, Jerman or Leverhulme there is no laundry service provided. However there is a self-service launderette, located beneath the clock face between Jerman and Leverhulme halls. This service is available to use by all students.

The Feed Store
On-site shop located in Faccenda with a range of groceries, drinks and snacks. Open 7 days.

Costa Coffee
Located in the Agri-Tech Innovation Hub on the south side of campus. Open 8:30am-3:30pm Monday-Friday.

Graze Café
Hot and cold food, made to order baguettes, homemade meals using produce from the Harper Farm. Open 8am-3pm Monday-Friday and 8am-2pm weekends.

Dining Hall
Located inside QMH, this light and airy dining room serves three meals per day to catered students. There is always a choice of three main courses along with healthy options and salad bars. Monday-Friday Breakfast 7:30am-9am, Lunch 12pm–1:30pm and Dinner 6pm-7:30pm (Wednesday 5pm-6:30pm).

living

Your wellbeing

While you're expanding your mind, we're here to look after it.

Starting university is a big step. But we're here to support you, whatever you need. Whether you need support with disabilities or learning difficulties, have money worries or are experiencing homesickness, just let us know and we'll do everything we can to help.

We have a dedicated Student Advisor, based in the Faccenda Advice Zone, who is able to offer first line advice or refer you to one of our specialist support teams, all in the same building.

We also have a dedicated Student Wellbeing Officer, who works closely with other staff, including Learner Support colleagues, Course Tutors and the wider Student Services team to ensure a holistic approach to student support and success.

Details of all of the available help and support is available in the student handbook.

Arriving at Harper
New students arriving in September are eased gently into university life to get their university experience off to the best start. The University and the Students' Union work together to programme Welcome Week and Freshers Festival: a range of experiences and inductions throughout your first two weeks.

Emotional and mental health
Our wellbeing team can help if you are feeling anxious or depressed, or just need a friendly ear. The Student Wellbeing Officer is your first port of call if you are experiencing personal or emotional problems that are affecting your student experience. You may be referred to our BACP registered counsellor or the student mental health and wellbeing advisor (RGN).

Student wardens
As well as out-of-hours Residence Officers, each hall has one or two live-in wardens. These final year students are trained in first aid, fire safety, drugs awareness and student support. There's a rota system so help will be available around the clock.

Accommodation
The Student Services team can give you advice on which accommodation will best suit your needs, getting used to living independently and settling into your home-away-from-home. Learn more about accommodation on pages 40-41.

Chaplaincy
Our team of chaplains are here to listen to students and staff of all faiths or none, whatever worries or issues you may have. Students and staff can reflect or pray in the multi-faith quiet room and there are places of worship for most faiths and religions in the local area.

Healthcare
A GP offers appointments, Monday – Friday, in our campus clinic. Out of hours care can be sourced through the ShropDoc advisory service or NHS 111.

Financial support
If you find yourself struggling financially talk to us. You may be entitled to help from the Access to Learning Fund (ALF), which can help both undergraduate and postgraduate students in financial hardship with living and course-related costs such as travel, accommodation, books and childcare. Most awards don't have to be paid back. Occasionally we may instead offer a short term interest free loan.

Once you have applied for ALF through Student Services the University will look at your needs and decide how much you are entitled to. The money can be paid in a lump sum or in instalments and will be on top of your other student finance. You must have already taken out the full student loan available to you.

Students can also receive financial help through scholarships. The University's Development Trust is a charity that works with industry and alumni to offer exclusive scholarships to current Harper Adams students. More than **£450,000 of scholarships** are offered each year; most include financial help, some also offer paid placement opportunities.

International students
Overseas students have an induction before the start of the academic year to introduce them to life in the UK and at the University. We can help you arrange visas, get study or personal support, find part-time work or further study opportunities, careers advice and any other issues you might have. The Planet Harper international society organises days out and social events on campus.

Community charter. Harper Adams University is committed to protecting its students' rights to live and learn in a safe environment.

Our charter, detailed in the student handbook, explains the expectations we have of all members of the University community. Principals include mutual respect, supporting development, maintaining a safe community, embracing inclusivity, diversity and equality, encouraging and supporting wellbeing, fairness and transparency. For our Students' Union support services see pages 44-47.

A home from home

Finding the right place to live is an important part of settling into university life. Our safe, rural location is a community where students are surrounded by a friendly faces and helping hands. Lots of students live on campus, within walking distance of all our facilities.

All rooms in halls are equipped with a bed, mattress, desk, chair, shelving, wardrobe (with shelves), bedside table and a bin. International residents are usually self-catered and enjoy the benefit of a communal kitchen (equipped with refrigerator, cooker, microwave, kettle and toaster) as well as a dining/social area.

Eligibility:

Firm offer (conditional or unconditional) Harper Adams as 1st choice

Accepted offer on UCAS

Unable to apply if Harper Adams is an insurance choice

Applying for accommodation:

Shortly after you accept your course offer on UCAS we will send you an invite (via email) to apply for your accommodation online.

Deferred students need to reapply for accommodation the year they are planning to join us, even if they have applied before.

Room type and pricing:

Annual charge includes catering, cleaning and laundry (as appropriate) as well as heating, lighting, internet and Endsleigh standard room contents insurance. Residents benefit from out of hours support, 24h security and on-campus parking.

Limited number of shorter (36 weeks) letting period might be available on request for self-catered accommodation only – students expected to vacate in full during Easter vacation period and the university will be unable to provide storage.

ROOM TYPE	HALL	CATERED MONDAY-FRIDAY (TERM TIME ONLY)	ANNUAL CHARGE (UG 40 WEEKS)
Catered en-suite (single room and laundry)	Harris, Gloucester	Yes 3 meals per day	£6,480
Catered standard (single room, wash basin, shared facilities and laundry)	Boughey Bradford Ward	Yes 3 meals per day	£5,680
Catered single – uni houses (single room, shared facilities and laundry)	Flatt Road Newtown Poultry Dive	Yes 3 meals per day	£5,280
Catered shared – uni houses (shared room, shared facilities and laundry)	Flatt Road Newtown Poultry Dive	Yes 3 meals per day	£4,200
Self-catered en-suite (single room with self-service laundry)	All Self-Catered Halls (Pitchside and Courtside)	No	£4,800

Accommodation in second year and beyond:

Students live off campus in Newport or adjacent villages of Edgmond, Adeney and Tibberton. Rent average £60-£80 exc. bills or £80-£95 inc. bills.

Plenty of accommodation is available. The majority is in houses of four and five in residential areas. There are also lodgings and some small flats available.

First year students are not encouraged to sign up for accommodation off campus until at least after Christmas, after we have done our housing forum and details of properties available are published.

Year 0 students (Extended Foundation degree) do not automatically qualify for accommodation on campus in the following year, but requests will be considered subject to availability.

Prefer to live off campus?

We are able to assist with finding suitable accommodation off-campus. The earlier you tell us, the better.

In the summer months, rooms and student houses may be available, which can be circulated to those who express interest as well as details for students wanting to rent with other students.

There is no shortage of student rooms/houses available off campus all year round, although lodgings and smaller flats are more limited.

Easy access to timetable information and staff availability to support you managing your time.

Saving you money and protecting the planet with more environmentally friendly paper.

Switched to coursework-based assessments rather than time – constrained exams where possible. Plus majority are online submissions to save time and paper!

Where your views matter. Students and their experiences are at the heart of everything we do. We try hard to pre-empt needs, but also listen to feedback when it comes in. Here are just some of the steps we have taken over the last year to make Harper a better place.

Your Harper

New breakout space in the Faccenda student centre with beanbags, a kettle, microwave, games and puzzles. Perfect for time out – especially for commuting students. The Students' Union is also creating a new social space.

Library now open 24/7 and offers new, improved electronic tools to help you search for resources, access course reading lists and get support. And layout improvements have been made to enhance and protect quiet study spaces.

24/7

Practising what we preach

Sustainability isn't just embedded across the University's curriculum. It's at the heart of everything we do, from reducing food miles and plastic waste, to generating our own heat and power, to providing habitats for wildlife. #sustainableharper

Waste-ing away
Harper Adams has signed the national Step up to the Plate pledge to reduce food waste. Efforts include trying not to over cater, allowing free seconds (and thirds and fourths...) at the end of catered students' food service, getting the most from ingredients and investigating ways to recycle food.

Cup it out
Harper Adams University is on track to cut out use of single-use paper cups. Catering has introduced reusable coffee cups on a £1 deposit-return basis and all take away drinks are served in them unless customers bring their own. The Students' Union is also working to reduce plastic waste in its bars and at events.

Box clever
The Catering Department introduced charges for takeaway boxes to encourage customers to bring their own containers. Crockery is available when eating in, but takeaways are served into your own container or come with a 20p surcharge.

Food metres not miles
Food miles? No! We measure our impact in food metres, with meat in particular travelling only across the campus from the University farm. This was showcased beautifully during National Sausage Week 2019 when the Catering Department produced a selection of homemade sausages using lamb, beef and pork.

95 per cent of pork consumed on campus is from our own pig unit. Our Texel Cross Suffolk Mule lambs are raised on the Chetwynd Deer Park, less than two miles away. Further ingredients are locally sourced in support of businesses close to Harper Adams.

For example a nearby farm supplies the University with Katie and Cox's Orange Pippin apples: handpicked and delivered straight to campus, free from any polishing processes.

Bee our guest
Approximately one in three mouthfuls of food and drink require pollination – so our staff and students have been working to care for one of nature's most efficient pollinators: the solitary bee, producing 25 bee hotels using waste wood and installing them across the University estate.

Step it up
Our award-winning £4m Sustainable Transformation Energy Project (STEP) uses three renewable energy approaches. A substantial photovoltaic array, a gas-powered CHP system and a 1MW woodchip biofuel heating system generate 75% of our electricity and 80% of our heat. It is helping to reduce our energy costs and has put the university on track to meet our carbon emissions target by saving 550 tonnes of carbon in the first year of operation.

Read more about our sustainable practices at **harper.ac.uk/sustainable.**

Downtime

The Harper Adams Students' Union (SU) is run by students for students.

The SU executive team are annually elected full-time Student Officers who assist in the running of the organisation on behalf of the student body. The SU is one of the main foundations of the University, it enables the student voice to be heard and creates a united student body. Weekly meetings take place between the SU and the Academic Standards Committee in order to voice student opinions.

The Union offers a wide range of activities and events throughout the year, including Christmas ball, hobgoblins, Wednesday nights, arts and crafts, dog walking, cooking classes etc.

If sport is your thing, you'll be happy at Harper. Sports offered on campus include:

– Rugby
– Football
– Shooting
– Hockey
– Netball
– Basketball
– Pilates
– Yoga
– Dance
– Fencing

Sports facilities include:

– Football, rugby, hockey and cricket pitches
– Floodlit match pitch and astro-turf all weather pitch
– Multi-use games areas for basketball, tennis and five-a-side
– Heated outdoor swimming pool
– Shooting ground
– Multi-gym
– Sports hall and fitness studio
– Squash courts
– Bowling green

There are also clubs for:
– Motorsport
– Off-roading
– Rowing
– Clay shooting
– Running
– Field sports
– Equestrian
– Biking
– Taekwondo and many more

Non-sporting activities include clubs for:
– Welsh
– Irish
– International
– Christian
– LGBTQ+ students

There are also societies for:
– Debating
– Conservation
– Dance
– Gaming
– Music
– Outdoor pursuits

If there isn't already a club for your own hobby and you have enough people interested, the SU can support you to set one up.

Not only does the SU benefit the student body at Harper Adams, it also positively impacts the lives of other individuals through the aid of our RAG and marrow teams. Last year the RAG team raised £30,000 for various charities through many different events throughout the year, including RAG week, RAG Lost and the RAG mystery tour.

Our place in the world

Newport

The nearest town to Harper Adams, Newport, is a thriving market town dating back to the 12th century. Its distinctively wide main street is home to independent and high street shops, picturesque cobbled streets, award-winning floral displays, a wide range of cafes, and restaurants, supermarkets and utilities.

Telford

Telford is one of the UK's fastest growing and most successful new towns, yet its roots stretch back for hundreds of years. Here you will find plenty of local history in its thriving market towns.

At its heart, in the modern town centre, is the ultramodern Southwater development featuring a state-of-the art library, IMAX cinema, ice rink, ten pin bowling, bingo and Telford Town Park with its 162 hectares of green space, numerous play areas and its aerial ropes and mini golf adventure course. Its many restaurants, café and bars offer a selection of cuisines from around the world including rustic and traditional English, Indian, Thai, Japanese, Italian, Portuguese and Mexican. The Place theatre, in Oakengates, has a packed programme of shows and events.

Shrewsbury

Shrewsbury's castle, abbey and cobbled streets are a vivid reminder of the county town's history – it is one of England's finest medieval towns, and birthplace of Charles Darwin.

Today, with its magnificent floral displays, independent shops and boutiques sitting alongside high street stores, café, bars, restaurants and the delightful Quarry Park, it is the perfect place to while away a relaxed day.

A half-hour drive from Shrewsbury you can explore the historic market town of Church Stretton, at the heart of the South Shropshire hills on the English/Welsh border known as The Marches. It is the first town in Shropshire to be awarded 'Walkers are Welcome' status (places which have something special to offer for walkers other than simply being a fantastic place to come and enjoy the great outdoors) and holds its own annual Walking Festival in June. Church Stretton is also an official Fairtrade town.

Distance from

Manchester
Approx 1 hr by car

Liverpool
Approx 1 hr by car

Birmingham
1hr by car

London
1.5hrs from Stafford (fast train)

Nearest railway stations

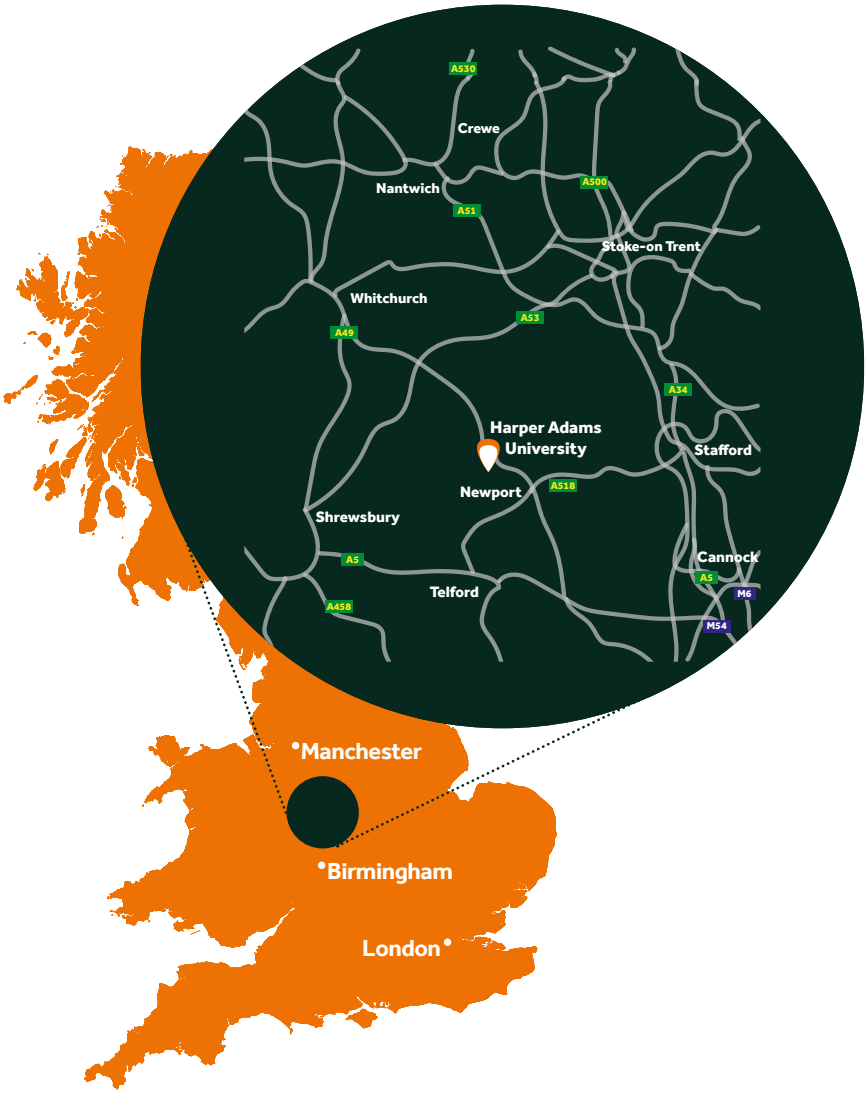
Stafford
15 miles

Telford
10 miles

Shrewsbury
16 miles

Bus stops

519 Shrewsbury – Newport bus stops at the campus gates Newport Bus interchange is 2.8 miles from campus.



Ironbridge Gorge

Don't miss the opportunity to visit the incomparable Ironbridge Gorge. Along with such monuments as the Acropolis, the Taj Mahal and the Great Wall of China, the beautiful and historic Gorge has been classified as a World Heritage Site since 1986.

The area made a unique contribution to the birth of the Industrial Revolution in the 18th century, which had a worldwide impact, and its fascinating history can be explored through the ten award-winning museums spread along the valley beside the River Severn, spanned by the world's first iron bridge, erected in 1779. Walking, cycling, canoeing, bus – there are so many ways to enjoy Ironbridge's stunning scenery and history. A short drive from Ironbridge you will find the picturesque market town of Much Wenlock, and the sixteen-mile escarpment of Wenlock Edge, probably Britain's best fossil-rich, natural feature.

Stafford

The county town of Staffordshire, Stafford is well served by rail and road.

Its shopping centre features a variety of high street and independent shops, an art gallery, museum in the Ancient High House, cafes, bars, restaurants, cinema, theatre and an attractive park. Within a short drive of the town you can explore its castle, marina, Trentham Estate's gardens and Monkey Forest, Uttoxeter racecourse, Shugborough stately home and the bike trails and woodland walks of Cannock Chase.

At first glance Shropshire is full of contradictions – birthplace of the Industrial Revolution yet it's an unspoilt rural idyll. Two of the most beautiful medieval towns in England, yet one gave birth to every skyscraper in the world (not forgetting one of the greatest thinkers of all time, Charles Darwin). The other set the pace for the country's Slow Food movement – if that in itself isn't a contradiction. And a small market town became the very inspiration for the modern Olympics.

Shropshire Tourism

Finance and funding

Before you apply, or even make your choice of degree, you're going to need to know about the practical side of things: the cost, the process and the funding options available to you. You've come to the right place.

At Harper Adams, we are well aware that finding the answers can seem daunting, and we are always on hand to help. There is masses of information available on our website – go to **harper.ac.uk/howtoapply** – and you can telephone or email our friendly, experienced support teams at any point for advice about any aspect of university life.

E: admissions@harper-adams.ac.uk
T: 01952 815 000

Scholarships
Harper Adams offers, through its Development Trust, a range of scholarship opportunities for students who have secured places on our degree programmes. Some scholarships are funded by donations from private individuals, some come from charitable trusts and others are sponsored by companies, many of which also offer a paid placement year role to the successful student(s).

In 2018/2019 scholarships worth a total of £452,000 were shared between more than 130 students.

Financial support
Students who find themselves struggling financially once they are here might be entitled to help from the Access to Learning Fund (ALF), via Student Services. The ALF can help both undergraduate and postgraduate students in financial hardship with living and course-related costs such as travel, accommodation, books and childcare. Most awards don't have to be paid back. Occasionally we may instead offer a short term interest free loan. Once you have applied for ALF through Student Services the university will look at your needs and decide how much you are entitled to. The money can be paid in a lump sum or in instalments and will be on top of your other student finance. You must have already taken out the full student loan available to you.

Part-time work
Many students find work in the local area but we also have opportunities on site: on the farm, in the catering team, Student Union bar staff and student ambassadors.

Loans

MEANS TESTED MAINTENANCE LOANS

Household income	England Loan	Wales Loan	Wales Grant*	Scotland Loan	Scotland Bursary	Northern Ireland Loan
-£18,370	£8,994	£1,125	£8,100	£5,750	£2,000	£3,475 maximum
£20,999	£8,994	£1,125	£8,100	£5,750	£2,000	
£21,000	£8,994	£1,125	£8,100	£5,750	£1,125	
£24,000	£8,994	£1,125	£8,100	£5,750	£500	
£25,000	£8,994	£2,278	£6,947	£5,750	£500	
£34,000	£8,994	£2,278	£6,947	£4,750		
£35,000	£7,661	£4,017	£5,208	£4,750		
£41,540	£7,661	£4,017	£5,208	£4,750		
£45,000	£6,377	£5,756	£3,469	£4,750		
£55,000	£5,093	£5,756	£3,469	£4,750		
£59,200	£5,093	£8,225	£1,000	£4,750		
£62,212+	£4,168	£8,225	£1,000	£4,750		

Costs are the same for all UK students. However, the amount you can borrow, when you start to repay, and levels of interest all differ dependent on where you live. You may be eligible to apply for Disabled Students' Allowances (DSA) if you have a disability, including a long term health condition, mental health condition or specific learning difficulty, such as dyslexia. This does not have to be repaid.

* Grants and bursaries are gifts and do not need to ever be repaid

Costs

A full list of anticipated Harper Adams University costs for each course is documented in the Fees and Charges Brochure, available from the 'Key Information' page on the website: **harper.ac.uk/apply/keyinfo21**

This includes other course-related costs e.g. kit list and anticipated costs of trips.

The Fees and Charges Brochure also includes information on how and when to make payments.

UNDERGRADUATE FEES AND OTHER COSTS AT HARPER ADAMS UNIVERSITY

University fee (for tuition, facilities and services)	£9,250 per year
Placement year university fee (tuition and services)	£1,850
Accommodation	Up to £6,480 per year
Refundable room deposit	£300
Student Union fee (optional)	Up to £175 per year

Applying

Applications to undergraduate degrees are via UCAS.

Your school or college should be able to give you guidance on the application process. If you have left school/college or are a mature entrant, you should visit **UCAS.com** for information on applying.

The UCAS application facility opens in September and all 'on-time' applications must be submitted by 15th January. Any applications submitted after this date will be classed as 'late' and institutions are not obliged to consider them. However, where we still have places available, we guarantee to review late applications.

Entry requirements

Entry requirements are specific to each course, for more information on entry requirements please visit the specific page for the course you wish to study.

Minimum age requirements

To study on a degree or foundation degree course at Harper Adams you must normally be 17 by the start date of the course in the year of your entry and must turn 18 no later than the 1st May during the first year of study. Students must abide by regulations set out by the University for students under 18 years of age, which includes a requirement for under 18 year old students to reside in on-campus accommodation for their first year.

Responding to your application

We aim to give you a decision on your applications as soon as we can. Please bear in mind that around UCAS deadlines (October for Vet School applications and January for other courses) we will be handling a high number of applications so response times will be slower than at other times. Sometimes we can't make a decision straight away – perhaps because we need to check the information you have provided, because information is missing, or because you need to have an interview with a course tutor.

Interviews

Some of our course areas require applicants to attend an interview before an offer can be made. Interviews take place at regular intervals during our applicant afternoons.

If you are invited, please ensure that you inform the Admissions Office if you are able to attend or not by answering the specific questions on your invitation email. Please also make sure that you complete and return the vocational log if you were asked to.

The interview will also give you opportunities to explore the course further and ask questions of the teaching and professional services staff.

Offer holder day

If you are not being interviewed, once we offer you a place (whether conditional or unconditional) we will invite you to an offer holder day at which you can explore the course further, meet potential future course mates and ask any questions you might have of the teaching and professional services staff. These events are important to help you make your decision.

International Students

If you are a non-EU student planning to study a full time undergraduate degree you will:

- Apply through UCAS – we do not accept direct applications, all International applications are checked in the same way as those for Home students
- Need a Tier 4 student visa. Those who need a Tier 4 visa will be subject to additional entry requirements as determined by UK Visa and Immigration (UKVI). The latest Tier 4 guidance is available at: **gov.uk/tier-4-general-visa**. To comply with UKVI regulations, those candidates who are potentially suitable will be required to have an interview via an online web-based system such as Skype

Still want to see and hear more? Visit us! Find out when our next open event is and book your place.
harper.ac.uk/open

Hungry

Now that you have read about life at Harper Adams, keep turning the pages to delve into the detail of each of our courses. Or visit our harper.ac.uk to find information relevant to your situation and interest.

Think you could imagine yourself living, learning and loving life here? Visit **harper.ac.uk/applying** to explore the next steps.

For a full run-down of accommodation options, pricing, application process and local area information, visit **harper.ac.uk/accommodation**.

Jobs matter. The one you get after your degree, the ones you do during placement and the ones that help you fund your way through university. We've collected everything job related into one place at **harper.ac.uk/careers**.

Don't just read the prospectus or the website, hear from real students by chatting to them at **harper.ac.uk/speakstudent**.

Your Students' Union is here for you. Learn more about how it works, what it offers and how you can get involved – from setting up a new club to standing to represent fellow students, visit **harper.ac.uk/studentunion**.

Read all of the course information and still want to know more? Our online listings include contact time, full module details, methods of assessments, examples of placements, key stats and more, visit **harper.ac.uk/courses21**.

Considering coming to Harper Adams outside of the UK? Hear from current and former international students, learn about language and visa requirements and download information in a selection of other languages from **harper.ac.uk/international**.

Or see what our students have been up to, whether at work or at play. Our blogs show all the latest activity on and off campus and can be filtered by course area or other topics of interest, just visit **harper.ac.uk/blog**.

for more?

More ways to keep up with us:

– Read the latest news from Harper Adams **harper.ac.uk/news**

– Keep up-to-date with the latest stories through our social media:

@HarperAdamsUni

@harperadamsuni

@HarperAdams

Sustainability
Biodiversity
Animal Welfare
Robotics
Soil Productivity
Drone Technology
Food Security
One Health
Climate Change

Agriculture

Animal & Veterinary Sciences

Applied Biology

Business Management

Managing the Environment

Engineering

Food Technology & Innovation

Land & Property Management

Degrees that matter

AGRICULTURE

ANIMAL SCIENCES AND VETERINARY PROFESSIONS

APPLIED BIOLOGY

BUSINESS MANAGEMENT

FOOD TECHNOLOGY AND INNOVATION

ENGINEERING

LAND, PROPERTY AND ENVIRONMENT

Agriculture

The modern farm manager must manage an increasingly diversified business and embrace a range of responsibilities for enhancing the environment, integrating production within the food chain and maintaining rural communities. As a Harper Adams agriculture student, you will gain a thorough understanding of modern agricultural production systems and the underlying scientific and technological principles, graduating equipped to manage a sustainable agricultural business in the complex and dynamic rural economy.

All agriculture students share a common first year, studying the same modules, before continuing with agriculture or focusing on a specialism; this allows students to change course during the first year. You will learn from lectures, tutorials, laboratory sessions, practical classes on the University farm designed to demonstrate principles in practice, external visits, guest speakers, self-study and a placement year in industry.

Several commercial scholarship opportunities, linked to placement, are available to apply for, with sponsoring companies paying a significant amount towards the tuition fees of successful applicants.

BSc (Hons)
UCAS code D400

96 – 112 UCAS points

Year 1
– Skills for the Agricultural Professional
– Animal Production Systems
– Crop Production Systems
– Bioscience for Agriculture
– Environmental Science for Agriculture
– Assessment of the Farm Business
– Agri-Food Marketing
– Agricultural Mechanisation and Buildings

Year 2
– Grass and Forage Production and Utilisation
– Wastes, Manures and Renewables
– Farm Business Management and Economics
– Research Methods
– Farm Animal Nutrition
– Farm Animal Production Science
– Soil Management and Crop Nutrition
– Crop Protection and Technology

Year 3
Placement year

Year 4
– Honours Research Project **(30 credits)**
– People Management Skills
– Sustainable Animal Production Systems
– Sustainable Crop Production Systems
– Agricultural Business Development
– Farm Animal Health
– Applied Crop Protection

Modules are 15 credits unless otherwise stated.

Applicants to agriculture programmes need 10 weeks' practical experience on a commercial farm. If this would prove difficult for you, you might be eligible for the Access to Agriculture Programme (see page 14).

***For more information on Extended Foundation Degrees please refer to page 102.**

harper.ac.uk/agric21

FdSc
UCAS code D405

72 – 88 UCAS points

Year 1
– Skills for the Agricultural Professional
– Animal Production Systems
– Crop Production Systems
– Bioscience for Agriculture
– Environmental Science for Agriculture
– Assessment of the Farm Business
– Agri-Food Marketing
– Agricultural Mechanisation and Buildings

Year 2
Placement year

Year 3
– Professional Project
– Sustainable Livestock Production Systems
– Integrated Crop Management Systems
– Farm Animal Science
– Crop Production Science
– Farm Business Management
– Managing People

Options
– Farm Animal Nutrition
– Crop Protection and Technology
– Professional Services in Farm Business Management
– Farm Machinery Technology and Management

Similar in approach to the BSc (Hons) degree but over three years, with placement in year 2 and you will complete a Professional Project rather than an Honours Research Project in your final year. Following the completion of the FdSc Agriculture programme, subject to performance, you can top-up to a Pass Degree or a full Honours Degree in Agriculture or one of the specialist routes.

Extended Foundation Degree*
UCAS code D407
harper.ac.uk/agefdp

One-year top up degree available
UCAS code D404
harper.ac.uk/agtopup

Careers

Employability of agriculture graduates is excellent, and there are many diverse career opportunities in all sectors of the food chain. The applied nature of our courses, teaching methods and close links with industry give you the academic, technical and employment skills which are highly sought after by employers.

As an agriculture graduate you may go on to manage farms either at home or elsewhere, for example:
– Velcourt
– Sentry Farming
– Beeswax Farming
– Intercrop

Alternatively, you may opt for a career in the support industries:
– Frontier Agriculture
– NFU

or advisory services:
– Savills
– DEFRA
– ADAS

Studying agriculture also develops the skills needed for other graduate careers such as:
– Accountancy
– Teaching
– Journalism
– The civil service

FACTS training

Subject to academic performance in specific modules and undertaking an appropriate placement, students passing the BSc (Hons) Agriculture programme will be eligible to undertake the Harper Adams FACTS training courses free of charge following successful completion of their degree.

Students studying general Agriculture study a broad range of livestock, crop production and science, and business management modules, together with some marketing and mechanisation. In the first part of the course the focus is on practice i.e. what goes on on the farm, and basic biological and environmental science. Areas of study include animal and crop production systems, bioscience and environmental science for agriculture, an introduction to farm business management and marketing and agricultural mechanisation.

The later parts of the course focus on the applied scientific and business principles that underpin farm practice, and the application of practice and principles to case studies to solve real problems. Areas of study include farm animal production science and nutrition, farm animal health and welfare, soil management and crop nutrition, crop protection, farm business management and economics, business development, people management, and sustainable animal and crop production systems. All students undertake an Honours Research Project in their final year in a subject area of interest to them.

Agriculture with Crop Management

Efficient crop production remains key to sustained and effective use of rural resources. However, over recent years crop management systems have undergone considerable change. The emphasis has shifted away from purely commercial objectives, and modern crop managers must increasingly justify inputs and assess the impact of their activities on the environment. These new demands are complex and require highly skilled and knowledgeable individuals to manage them successfully. Harper Adams has extensive academic and industry experience and is actively involved in applied crop research and consultancy, including the delivery of professional training to industry. This ensures that courses are vocationally relevant and up-to-date.

After the common first year, in your second year you will start to specialise in crop science and agronomy, studying areas such as soil management and crop nutrition, crop protection, crop physiology and fresh produce production, whilst continuing to study more general aspects of agriculture, such as grass and forage production, waste management and farm business management and economics. In the final part of the course, your specialisation becomes complete and the focus is on crop management, studying areas such as sustainable crop production, advances in agronomy, crop breeding, post-harvest technology and a research project focused on crop management.

BSc (Hons)
UCAS code D410

96 – 112 UCAS points

Year 1
- Skills for the Agricultural Professional
- Animal Production Systems
- Crop Production Systems
- Bioscience for Agriculture
- Environmental Science for Agriculture
- Assessment of the Farm Business
- Agri-Food Marketing
- Agricultural Mechanisation and Buildings

Year 2
- Grass and Forage Production and Utilisation
- Wastes, Manures and Renewables
- Farm Business Management and Economics
- Research Methods
- Soil Management and Crop Nutrition
- Crop Protection and Technology
- Crop Growth and Management
- Fresh Produce

Year 3
Placement year

Year 4
- Honours Research Project **(30 credits)**
- People Management Skills
- Sustainable Crop Production Systems
- Applied Crop Protection
- Advanced Agronomy
- Plant Breeding
- Post Harvest Technology

One-year top up degree available

UCAS code D499

harper.ac.uk/agcroptop21

FACTS training

Subject to academic performance in specific modules and undertaking an appropriate placement, students passing the BSc (Hons) Agriculture with Crop Management programme will be eligible to undertake the Harper Adams FACTS training courses free of charge following successful completion of their degree.

Careers

The applied nature of the course and practical experience gained during the placement period will give you skills the industry needs. You could choose from a variety of careers, working for a multi-national company or small rural business as an agronomist, technical representative or trainee arable manager, amongst others.

Dan Hawes

You might think world-changing research rests solely with PhD researchers and academic staff – but you can make a valuable contribution as an undergraduate too.

Dan Hawes, BSc (Hons) Agriculture with Crop Management, investigated the impact of the English grain aphid on ancient varieties of wheat and proved which varieties were most resistant to the pests, "With no recent research in this area, the results have been interesting, showing a few stand-out varieties for both experiments," said Dan, who was invited to present his work to the Royal Entomological Society.

Supervisor Dr Tom Pope said: "Dan's work is of immediate interest to wheat growers but is also of interest to the scientific community working in this area."

Modules are 15 credits unless otherwise stated.

Applicants to agriculture programmes need 10 weeks' practical experience on a commercial farm. If this would prove difficult for you, you might be eligible for the Access to Agriculture Programme (see page 14).

harper.ac.uk/agric21

BSc (Hons)
UCAS code D4D3

96 – 112 UCAS points

Year 1
- Skills for the Agricultural Professional
- Animal Production Systems
- Crop Production Systems
- Bioscience for Agriculture
- Environmental Science for Agriculture
- Assessment of the Farm Business
- Agri-Food Marketing
- Agricultural Mechanisation and Buildings

Year 2
- Grass and Forage Production and Utilisation
- Wastes, Manures and Renewables
- Farm Business Management and Economics
- Research Methods
- Farm Animal Nutrition
- Farm Animal Health
- Farm Animal Production Science
- Animal Biotechnology and Genetics

Year 3
Placement year

Year 4
- Honours Research Project **(30 credits)**
- People Management Skills
- Sustainable Animal Production Systems **(30 credits)**
- Advances in Animal Production Science
- Animal Improvement and Bioethics
- Food Animal Processing and Manufacture

One-year top up degree available

UCAS code DD4H

harper.ac.uk/aganimaltop21

Careers

The applied nature of this course helps you to develop skills that are in demand within the livestock sector and ancillary industries. Career opportunities are excellent, with students finding employment both on farms as livestock enterprise and farm managers and in the ancillary sector in commercial and technical positions, or you could go on to postgraduate study.

60%

OF UK AGRICULTURAL OUTPUT DERIVED FROM LIVESTOCK SECTOR
DEFRA 2017

> **I wish to work towards maximising the overall efficiency of livestock whilst maintaining high welfare standards and educating farmers on appropriate management practices.**

Nancy-May Thorne,
BSc (Hons) Agriculture with Animal Science,
Aviagen Scholar 2019

The temperate climate of the UK is ideally suited to pastoral farming and animal production is essential to the rural economy, with around 60 per cent of UK agricultural output derived from the livestock sector (DEFRA 2017). In addition to the science and technology associated with modern animal production, livestock specialists need to understand the animal welfare, food quality and environmental issues facing the industry. They must also be able to evaluate and apply advances in biotechnology to ensure a sustainable future for livestock farmers and a competitive market for animal products. Harper Adams has a long history in applied livestock research, close links with industry, and highly qualified and experienced staff.

After the common first year, in your second year you will start to specialise in the area of animal science, studying areas such as farm animal production science, farm animal nutrition, farm animal health and welfare and biotechnology, whilst continuing to study more general aspects of agriculture, such as grass and forage production, waste management and farm business management and economics. In the final part of the course, your specialisation becomes complete and the focus is on animal science, studying areas such as sustainable animal production systems, advances in animal science, animal breeding and bioethics, animal product processing and a research project-focused on animal science.

Agriculture with Farm Business Management

The agricultural industry is changing rapidly and in recent years advances in technology have led to an abundance of food production in the western world. This, together with changes in the support mechanisms for agriculture, has affected farm incomes, the countryside, rural communities and the public purse.

Increasingly farmers are looking to diversify their businesses and find alternative uses for rural land. There is an increasing demand for highly skilled practitioners with an understanding of the options available and the business management skills to lead on these developments.

After the common first year, in your second year you will start to specialise in the area of farm business management, studying areas such as farm business management and economics, farm business operation and planning and market and supply chain considerations, whilst continuing to study more general aspects of agriculture, such as animal and crop production science, grass and forage production and waste management.

BSc (Hons)
UCAS code D498

96 – 112 UCAS points

Year 1
- Skills for the Agricultural Professional
- Animal Production Systems
- Crop Production Systems
- Bioscience for Agriculture
- Environmental Science for Agriculture
- Assessment of the Farm Business
- Agri-Food Marketing
- Agricultural Mechanisation and Buildings

Year 2
- Grass and Forage Production and Utilisation
- Wastes, Manures and Renewables
- Farm Business Management and Economics
- Research Methods
- Animal and Crop Production Science
- Farm Business Operation and Planning
- Marketing and Brand Management for the Agri-Sector
- Professional Services in Farm Business Management

Year 3
Placement year

Year 4
- Honours Research Project **(30 credits)**
- People Management Skills
- Sustainable Agricultural Production Systems
- Applied Farm Business Management Case Study
- Farm Business Strategy
- Implementation, Operation and Control of Business Plans
- Business Diversification

One-year top up degree available

UCAS code D441

harper.ac.uk/agfarmtop21

Modules are 15 credits unless otherwise stated.

Applicants to agriculture programmes need 10 weeks' practical experience on a commercial farm. If this would prove difficult for you, you might be eligible for the Access to Agriculture Programme (see page 14).

*For more information on Extended Foundation Degrees please refer to page 102.

harper.ac.uk/agric21

Careers

Career opportunities exist managing large integrated farm business or in farm business consultancy and accountancy.

Working on placement on such a wide variety of tasks has meant I have been able to get great experience, as well as being able to find out for myself those areas I am most interested in. There are some huge opportunities available to students and graduates looking to a career in the agricultural industry.

Chris Gill,
BSc (Hons) Agriculture with Farm Business Management

BSc (Hons)
UCAS code D492

96 – 112 UCAS points

Year 1
- Skills for the Agricultural Professional
- Animal Production Systems
- Crop Production Systems
- Bioscience for Agriculture
- Environmental Science for Agriculture
- Assessment of the Farm Business
- Agri-Food Marketing
- Agricultural Mechanisation and Buildings

Year 2
- Grass and Forage Production and Utilisation
- Wastes, Manures and Renewables
- Farm Business Management and Economics
- Research Methods
- Crop Production Science
- Farm Machinery Technology and Management
- Hydraulic and Electrical Power for Agriculture
- Soil Use and Farm Infrastructure

Year 2
Placement year

Year 4
- Honours Research Project **(30 credits)**
- People Management Skills
- Sustainable Crop Production Systems
- Science Technology and Information Systems for Agriculture
- Team Enterprise Project
- Measurement and Control
- Crop Protection and Technology

FdSc
UCAS code D493

72 – 88 UCAS points

Year 1
- Skills for the Agricultural Professional
- Animal Production Systems
- Crop Production Systems
- Agricultural Science
- Rural Skills
- Assessment of the Farm Business
- Agri-Food Marketing
- Agricultural Mechanisation and Buildings

Year 2
Placement year

Year 3
- Professional Project
- Crop Production Science
- Integrated Crop Management Systems
- Farm Business Management
- Managing People
- Farm Machinery Technology and Management
- Hydraulic and Electrical Power for Agriculture
- Soil Use and Farm Infrastructure

Similar in approach to the BSc (Hons) degree but over three years, with placement in year 2 and you will complete a Professional Project rather than an Honours Research Project in your final year. Following completion of the FdSc Agriculture with Mechanisation programme, subject to performance, you can top up to a Pass Degree or a full Honours Degree in Agriculture with Mechanisation.

Extended Foundation Degree*

UCAS code D407

harper.ac.uk/agefdp

One-year top up degree available

UCAS code D495

harper.ac.uk/agmechtopup

Careers

The skills you will develop will be useful throughout the industry, whether managing large, highly mechanised farms, running a successful contracting business or working in the agricultural machinery sector. Harper Adams graduates have a long history of successfully finding employment within all of these areas of work.

> **I want to work in the fresh produce and vegetable industry, with a focus on the technology we will see introduced to help meet demand. As well as picking up an interest in vertical farming, a principal I have recently been introduced to, I also would like to see and aid the use of more 'green' power in the industry, allowing businesses within the rural economies to capitalise on this change, while providing education to the general public about what we do and why.**

Tom Austin,
FdSc Agriculture with Mechanisation

The first part of the course provides a general introduction to agriculture in terms of animal and crop production, underpinning biological and environmental science, an introduction to farm business management and marketing and agricultural mechanisation. In the second part of the course you start to specialise in the area of mechanisation studying areas such as farm machinery technology, hydraulics and electrics, and mechanisation aspects of soils and farm infrastructure. The mechanisation aspects are studied alongside more general aspects of agriculture such as waste management, crop production and science and farm business management. In the final year the specialisation is developed further, studying areas such as machinery technology and information systems, measurement and control systems, applied mechanisation projects in association with industry, and a research project with a mechanisation focus. In the final year students study mechanisation modules alongside crop production and crop protection modules. The principles of mechanisation are developed in an applied way without the use of complex mathematics.

Animal Sciences and Veterinary Professions

Here at Harper I've seen a great emphasis upon practical skills. I set traps late at night and collected them early the next morning to be greeted by three great crested newts, a highly protected and endangered species. In the evening I went torching, searching for these newts with our lecturer and found another 10 newts! Despite being surrounded by monoculture, Harper has quite a range of wildlife including this endangered species! A great asset for learning which is utilised by Harper.

Jack Everist,
BSc (Hons) Wildlife Conservation and Environmental Management

Animal Sciences and Veterinary Professions

Our degrees can take students to every imaginable animal-related career including:

- Carer
- Keeper
- Behaviourist
- Nutritionist
- Physiotherapist
- Scientist
- Nurse
- Biologist
- Conservationist
- Surgeon
- Educator and many more

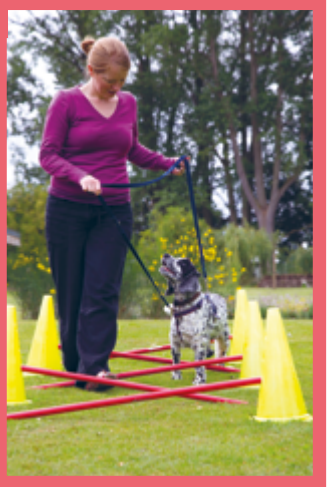
From protecting cherished household pets, to ensuring the highest standards of farm animal welfare, to preventing the spread of disease between wildlife and people, the study of animal and veterinary sciences is vital to human health and wellbeing.

At Harper Adams, or as a student of the Harper & Keele Veterinary School, you'll be taught by a large team of experts from across the above fields, all ably supported by laboratory and farm technicians. The department also works closely with the University's agriculture and livestock experts. Class sizes are small, and staff have an open-door policy, so you'll receive personalised guidance and advice.

Animal Behaviour and Welfare (Clinical and Non-Clinical routes)

Do you long to find out why animals behave the way they do and what this can tell us about their welfare? Do you care passionately about the welfare of animals but realise that applying scientific principles is likely to achieve better results than responding in a purely emotional way? Then this subject is for you.

These degrees enable those interested in the behaviour and welfare of companion and farm animals to study at degree level without covering the broader animal health sciences in detail. You will examine animal biology as it relates to the behaviour and welfare of animals and have the opportunity to study ecology in relation to animal habitats.



Modules are 15 credits unless otherwise stated.

*For more information on Extended Degrees please refer to page 102.

harper.ac.uk/animals21

BSc (Hons) Animal Behaviour and Welfare (Clinical)
UCAS code D390

88 – 104 UCAS points

Year 1
- Academic Skills Development
- Fundamentals of Physiology
- Companion Animal Management
- Large Animal Management
- Introduction to Animal Health
- Introduction to Animal Welfare, Behaviour and Ethics
- Adaptive Biology
- Introduction to Ecology

Year 2
- Behavioural Methodology
- Companion Animal Studies
- Farm Animal Science
- Principles of Animal Behaviour and Welfare
- Law and Professional Practice for Clinical Animal Behaviour
- Animal Ethics
- Philosophy of Zoos
- Research Methods (Animals)

Year 3
Placement year

Year 4
- Honours Research Project **(30 credits)**
- Diagnosis and Treatment of Behavioural Problems **(30 credits)**
- Applied Clinical Animal Behaviour
- Integrated Health Management
- Applied Companion Animal Health, Welfare and Behaviour
- Advances in Farm Animal Health, Welfare and Behaviour

BSc (Hons)/BSc Animal Behaviour and Welfare (Non-Clinical)
UCAS code D391

88 – 104 UCAS points

Year 1
- Academic Skills Development
- Fundamentals of Physiology
- Companion Animal Management
- Large Animal Management
- Introduction to Animal Health
- Introduction to Animal Welfare, Behaviour and Ethics
- Adaptive Biology
- Introduction to Ecology

Year 2
- Behavioural Methodology
- Companion Animal Studies
- Farm Animal Science
- Principles of Animal Behaviour and Welfare
- Animal Ethics
- Philosophy of Zoos
- Research Methods (Animals)

Options
- Introduction to Small Business Management
- Wildlife Identification and Conservation
- Equine Science

Year 3
Placement year

Year 4
- Honours Research Project **(30 credits)**
- Integrated Health Management
- Applied Clinical Animal Behaviour
- Applied Companion Animal Health, Welfare and Behaviour
- Advances in Farm Animal Health, Welfare and Behaviour

Options
- International Perspectives on Animal Conservation
- Animal Improvement and Bioethics
- Advances in Equine Science

Extended Degree*
UCAS code XD04
harper.ac.uk/animaledp21

One-year top up degree available
UCAS code D328
harper.ac.uk/abwtop21

Careers

This course prepares graduates for careers involving animal behaviour and also in animal welfare and management. Welfare organisations are expanding, and nutrition and pharmaceutical companies have careers suitable for graduates with a sound welfare education. Many graduates move into higher education as lecturers or researchers and others choose further postgraduate study.

Accreditation

The clinical route has been validated by the **Association for the Study of Animal Behaviour (ASAB)** accreditation committee as delivering the academic elements necessary for an individual to achieve ASAB certification as a clinical animal behaviourist (CCAB).

The non-clinical route (see route map in the left column) does not lead to the CCAB qualification but does include a choice of optional modules.

93%
STUDENT SATISFACTION
NSS 2019

BSc (Hons)
UCAS code D730

88 – 104 UCAS points

Year 1
- Academic Skills Development
- Fundamentals of Physiology
- Applied Anatomy and Physiology
- Companion Animal Management
- Large Animal Management
- Principles of Animal Health
- Laboratory Techniques
- Introduction to Animal Welfare, Behaviour and Ethics

Year 2
- Animal Disease Science
- Companion Animal Studies
- Farm Animal Health
- Farm Animal Nutrition
- Equine Science
- Research Methods (Animals)
- Principles of Animal Behaviour and Welfare

Options
- Introduction to Small Business Management
- Philosophy of Zoos
- Animal Ethics

Year 3
Placement year

Year 4
- Honours Research Project **(30 credits)**
- Integrated Health Management **(30 credits)**
- Applied Companion Animal Health, Welfare and Behaviour
- Advances in Farm Animal Health, Welfare and Behaviour

Options
- Advances in Animal Production Science
- Animal Improvement and Bioethics
- Advances in Equine Science

One-year top up degree available
UCAS code D740
harper.ac.uk/welfare21

Careers

There are opportunities in animal health with companies associated with the development and marketing of animal health products or nutritional products and special diet formulations. Knowledge of both animal health and nutrition equips graduates for careers in this area. There are further opportunities in quality assurance, or you might consider a career in animal welfare and the management of collection animals or in the pet care industry.

Studying the biology of animals and disease is crucial because in order to manage animals in the interests of their welfare, you need to have a good understanding of the underpinning sciences, such as how their bodies work, what is needed to maintain health and what happens in the case of disease. This is a multi-disciplinary course incorporating a variety of applied science and animal management modules. It looks at normal body structure and functioning, mechanisms to enhance health and welfare and develops students' abilities to synthesise solutions to a range of animal-related problems. Companion (pet) animals and farm livestock are given equal weighting on the course. There are also opportunities to choose optional modules. This allows you to specialise or gives you the flexibility to study over a wide area.

Animal Health and Welfare

Animal Production Science

This four-year course aims to provide students with an understanding of recent developments in animal science, the underlying scientific principles, and how these can be applied to animal production systems. This is a strongly science-based course, combining the study of pure and applied sciences as they relate to farm animals. It is ideal for those who enjoy studying science and how scientific principles can be used to prevent disease and improve the health and welfare of farm animals, and who want to learn more about the biology of farm animals and how food animals are produced on farms. The course also includes some study of how modern technologies can be used to maintain and improve health.

BSc (Hons)
UCAS code D301

104–120 UCAS points

Year 1
- Academic Skills Development
- Fundamentals of Physiology
- Applied Anatomy and Physiology
- Animal Production Systems
- Introduction to Animal Welfare, Behaviour and Ethics
- Principles of Animal Health
- Laboratory Techniques
- Biological Molecules and Genetics

Year 2
- Animal Disease Science
- Farm Animal Health
- Principles of Animal Behaviour and Welfare
- Farm Animal Nutrition
- Applied Biotechnology
- Farm Animal Production Science
- Research Methods (Animals)

Options
- Introduction to Small Business Management
- Animal Product Processing
- Companion Animal Studies

Year 3
Placement year

Year 4
- Honours Research Project **(30 credits)**
- Sustainable Animal Production Systems **(30 credits)**
- Animal Improvement and Bioethics
- Advances in Animal Production Science
- Advances in Farm Animal Health, Welfare and Behaviour

Options
- Farm Assurance and Quality
- Applied Companion Animal Health, Welfare and Behaviour
- Advances in Equine Science

Modules are 15 credits unless otherwise stated.

harper.ac.uk/animals21

Careers

There are a wide range of career opportunities available to animal production science graduates in animal nutrition, animal health, advisory roles and technical sales. Your in-depth knowledge of farm animal health and production systems will qualify you for careers such as animal health and welfare inspector or you may choose to work in the animal feed industry.

90%
GRADUATE EMPLOYMENT
DLHE 2018

91%
STUDENT SATISFACTION
NSS 2019

BVetMS
UCAS code D100

For students sitting A-levels the requirements are AAB, with a Grade A in Biology or Chemistry. For the full entry requirements see harperkeelevetschool.ac.uk.

Year 1
- Animal Management for Health and Production (45 credits)
- Veterinary Anatomy and Physiology (45 credits)
- Animal Behaviour and Welfare
- Professional Skills and Academic Practice

Year 2
- Comparative Anatomy and Physiology (45 credits)
- Animal Health Sciences (45 credits)
- Veterinary Epidemiology and Population Medicine
- Communication and Professional Skills

Year 3
- Veterinary Pathology (45 credits)
- Preparation for Clinical Practice (45 credits)
- Veterinary Public Health and State Veterinary Medicine (20 credits)
- Law, Ethics and Professional Practice (10 credits)

Year 4
- Clinical Medicine and Surgery (90 credits)
- Business and Professional Skills
- Inter-professional Collaboration or Research A

Year 5
- Clinical rotations with support tutorials at both sites (105 credits)
- Elective or Research Project B

Work experience

The primary aim of gaining work experience prior to your vet school application is to ensure that candidates understand the varied and sometimes challenging nature of veterinary work and the commitment required to be a successful student and have a long and fulfilling career. This is best achieved by spending time with vets in practice and alongside others working with animals in a variety of settings.

Suggested experience to aim for (suggested but not required – see **harperkeelevetschool.ac.uk** for more information):
- Two weeks in one or more veterinary practices, ideally covering both large and small animal work
- Up to four weeks in a mixture of non-clinical placements which could include any of: farms (cattle, sheep, pigs, poultry, dairy and lambing experiences are very useful), stables, kennels, catteries etc. veterinary or medical laboratories and pathology services
- A day at an abattoir

harperkeelevetschool.ac.uk

A five-year programme leading to a Bachelor of Veterinary Medicine and Surgery degree, offered by the Harper & Keele Veterinary School harperkeelevetschool.ac.uk.

Students will benefit from Harper's long-standing reputation in animal sciences and access to the Harper Adams farm and companion animal facilities, alongside Keele's experience of establishing a leading UK medical school and significant recent investment in facilities such as state-of-the-art teaching laboratories.

This new undergraduate degree in Veterinary Medicine and Surgery (BVetMS) provides the opportunity for a new and exciting curriculum, the core requirements of which are prescribed by the RCVS. The clinical training will follow a distributed model of delivery and a range of approved third-party veterinary practices have agreed to provide clinical placements.

As is the norm with veterinary schools, the teaching week is intensive for the students, who can expect around 28 hours per week of contact time. Students also need to complete extra mural studies gaining hands-on practical experience, and so the total study year ranges from 35-45 weeks a year across the five-year programme.

Extensive use is made of the farm and companion animals on site at Harper Adams as well as state-of-the-art laboratory facilities and clinical skills rooms at both Harper and Keele.

Small group teaching facilitates the development of confidence in practical skills. The curriculum will incorporate case studies from early in the first year. In the final two clinical years of the programme, vets from referral centres provide keynote lectures, tutorials and practical classes, based on their current and ongoing experience in practice providing our students with real world experience and knowledge for their future careers. Clinical teaching takes place not only in a hospital setting with the unusual or difficult cases, but also in practices where management of the everyday case is the primary focus.

Due to the vocational nature and focus of the students, all modules have been created for the programme and are exclusive to it.

Registered Veterinary Nurses (RVNs) work alongside veterinary surgeons in order to provide a high standard of care for animals. Veterinary Nurses normally work within a veterinary surgery or veterinary hospital and are involved in a wide range of care and treatment. They provide skilled supportive care for sick animals as well as undertaking minor surgery, monitoring during anaesthesia, medical treatments and diagnostic tests under veterinary supervision. RVNs also play an important role in the education of owners on good standards of animal care.

All of our veterinary nursing degree courses are designed to equip students with the day one skills and competences required by the RCVS in order to practise as a Registered Veterinary Nurse (RVN). Subjects will include veterinary physiology, professional skills of the veterinary nurse, companion animal management, anaesthesia and surgery, medical nursing, diagnostic imaging and disease diagnosis.

Students on these courses share a common curriculum for the first two years, studying the same modules, before spending their third year on placement. In the final year all courses will share a number of common subjects such as anaesthesia, critical care and surgical techniques. The specific Honours pathways will then allow students to focus on their chosen field of study.

100%
GRADUATE EMPLOYMENT
DLHE 2018

BSc/BSc (Hons) Veterinary Nursing
UCAS code D314

96 – 112 UCAS points

Year 1
- Companion Animal Management
- Fundamentals of Physiology
- Infection Control in the Veterinary Practice
- Introduction to Animal Health
- Principles of Veterinary Nursing
- Professional Skills of the Veterinary Nurse
- Veterinary Physiology
- Working as a Veterinary Professional

Year 2
- Anaesthesia and Surgery
- Animal Medicines
- Clinical Research Methods
- Principles and Application of Diagnostic Imaging
- Medical Nursing
- Nursing Support for Disease Diagnosis
- Professional Practise
- Philosophy of Zoos

Year 3
Placement year

Year 4
- Anaesthesia, Critical Care and Surgical Techniques
- Career Progression
- Companion Animal Life Care
- Exotic Animal Nursing and Health
- Honours Research Project **(30 credits)**

Options
- Complementary Therapies
- Equine Nursing and Health
- Large Animal Nursing and Health

BSc/BSc (Hons) Veterinary Nursing with Companion Animal Behaviour
UCAS code D313

96 – 112 UCAS points

Year 1
- Companion Animal Management
- Fundamentals of Physiology
- Infection Control in the Veterinary Practice
- Introduction to Animal Health
- Principles of Veterinary Nursing
- Professional Skills of the Veterinary Nurse
- Veterinary Physiology
- Working as a Veterinary Professional

Year 2
- Anaesthesia and Surgery
- Animal Medicines
- Clinical Research Methods
- Principles and Application of Diagnostic Imaging
- Medical Nursing
- Nursing Support for Disease Diagnosis
- Principles of Animal Behaviour and Welfare
- Professional Practise

Year 3
Placement year

Year 4
- Anaesthesia, Critical Care and Surgical Techniques
- Career Progression
- Diagnosis and Treatment of Behavioural Problems **(30 credits)**
- Honours Research Project **(30 credits)**

Options
- Companion Animal Life Care
- Complementary Therapies
- Equine Nursing and Health
- Exotic Animal Nursing and Health

BSc/BSc (Hons) Veterinary Nursing with Small Animal Rehabilitation
UCAS code D310

96 – 112 UCAS points

Year 1
- Companion Animal Management
- Fundamentals of Physiology
- Infection Control in the Veterinary Practice
- Introduction to Animal Health
- Principles of Veterinary Nursing
- Professional Skills of the Veterinary Nurse
- Veterinary Physiology
- Working as a Veterinary Professional

Year 2
- Anaesthesia and Surgery
- Animal Medicines
- Clinical Research Methods
- Principles and Application of Diagnostic Imaging
- Medical Nursing
- Musculoskeletal Dysfunction
- Nursing Support for Disease Diagnosis
- Professional Practise

Year 3
Placement year

Year 4
- Anaesthesia, Critical Care and Surgical Techniques
- Career Progression
- Rehabilitation of the Veterinary Inpatient **(30 credits)**
- Honours Research Project **(30 credits)**

Options
- Companion Animal Life Care
- Complementary Therapies
- Equine Nursing and Health
- Exotic Animal Nursing and Health

BSc/BSc (Hons) one-year top up
UCAS code DN32
harper.ac.uk/vntop21

Careers

Veterinary nursing is a career with lots of job satisfaction and there is a strong demand for registered veterinary nurses. Although the majority of RVNs work in general practice there are increasing opportunities for specialisation into different areas, such as patient rehabilitation and companion animal behaviour.

Block release

To obtain the nursing qualification a minimum of 1800 hours is spent working in a registered veterinary nurse training practice, both as short block release and during the sandwich year. This hands-on experience complements the academic study at Harper Adams.

Accreditation

Royal College of Veterinary Surgeons (RCVS)

Our Veterinary Nursing graduates achieve 100% employability and have an excellent reputation in the sector.

Susan Howarth, Veterinary Nursing Programme Manager

100%
STUDENT SATISFACTION
NSS 2019

Modules are 15 credits unless otherwise stated.

harper.ac.uk/vetnurse21

Veterinary Bioscience

If you enjoy studying science and would like to learn how scientific principles can be used to prevent disease and improve the health of animals, Veterinary Bioscience is the course for you. You will learn about the biology of a range of animals, including farm, companion and equine species, in order to know what is best for their overall health.

The honours degree is a highly vocational, four-year programme covering the useful and relevant sciences underpinning animal health. Time spent in the laboratory will be balanced with the study of live animals. Basic health sciences such as anatomy, physiology, immunology, nutrition and molecular biology are learned alongside sciences specific to animal disease – epidemiology, microbiology, parasitology and pharmacology.

The Extended Degree Veterinary Bioscience can serve as an entry route to BSc (Hons) Veterinary Bioscience, BSc (Hons) Veterinary Nursing or BSc (Hons) Veterinary Physiotherapy (Pathway 1) or to the Bachelor of Veterinary Medicine and Surgery degree at the Harper & Keele Vet School (Pathway 2).

BSc (Hons)/BSc
UCAS code D300

104 – 120 UCAS points

Year 1
– Academic Skills Development
– Fundamentals of Physiology
– Applied Anatomy and Physiology
– Companion Animal Management
– Large Animal Management
– Principles of Animal Health
– Laboratory Techniques
– Biological Molecules and Genetics

Year 2
– Animal Disease Science
– Companion Animal Studies
– Farm Animal Health
– Farm Animal Nutrition
– Applied Biotechnology
– Animal Medicines
– Research Methods (Animals)

Options
– Introduction to Small Business Management
– Equine Science
– Animal Product Processing

Year 3
Placement year

Year 4
– Honours Research Project **(30 credits)**
– Integrated Health Management **(30 credits)**
– Advances in Animal Production Science
– Animal Improvement and Bioethics

Options
– Advances in Farm Animal Health, Welfare and Behaviour
– Applied Companion Animal Health, Welfare and Behaviour
– Advances in Equine Science

Modules are 15 credits unless otherwise stated.

*For more information on Extended Degrees please refer to page 102.

harper.ac.uk/animals21

Extended Degree Programme*
UCAS code XD03

harper.ac.uk/extended21

Pathway 1

The extended degree in Veterinary Bioscience (Veterinary Science Pathway 1) provides a preparatory year for students hoping to progress to Bioveterinary, Veterinary Nursing or Veterinary Physiotherapy degrees.

For full details visit **harper.ac.uk/extended21**

Pathway 2

The extended degree in Veterinary Bioscience (Veterinary Science Pathway 2) provides a preparatory year for students hoping to transfer to the Bachelor of Veterinary Medicine and Surgery (BVetMS) degree.

For full details visit **harper.ac.uk/extended21**

I chose to study this degree due to having a significant interest in the animal sector, the pharmaceutical industry and in order to progress my research skills in this area.

Studying modules regarding both small and large animals at Harper Adams has enabled a broad scope of knowledge with both the on-site farm and companion animal house to provide practical skills and experience.

Lauren Hall,
graduate

Veterinary Physiotherapy

This programme will provide the knowledge and skills for you to become a veterinary service professional and work closely with veterinary surgeons. Physiotherapy following veterinary referral can help animals recover from a variety of conditions such as back pain, sprains, strains, fractures and sporting injuries. It can also be used following orthopaedic, neurological or general surgery, as well as improving biomechanics and athletic ability.
As such its use within the veterinary field is increasing. Animals can undergo a wide range of treatments including manual techniques, electrotherapies and exercise therapy.

In the first year you will study modules that provide the underpinning knowledge you need to work with animals. You will also study some physiotherapy techniques including massage and hydrotherapy. In the second year you will be studying the underpinning science required to work as a veterinary physiotherapist, including anatomy, biomechanics and locomotion and musculoskeletal injuries. You will also learn physiotherapy skills including the electrotherapeutic modalities and exercise prescription. Your final year will include clinics plus the honours research project.

Your placement year, working either in vet practices alongside veterinary physiotherapists, vet hydrotherapy centres or equine yards, for example, is augmented by further clinical placement during your fourth year, when you will work alongside an experienced veterinary physiotherapist, to hone your competences in preparation for your chosen career.

BSc (Hons)
UCAS code D31A

128 UCAS points

Year 1
- Skills for the Veterinary Physiotherapy Professional
- Introduction to Veterinary Physiotherapy
- Fundamentals of Physiology
- Applied Anatomy and Physiology
- Principles of Animal Health
- Companion Animal Management
- Large Animal Management
- Introduction to Animal Welfare, Behaviour and Ethics

Year 2
- Clinical Research Methods
- Evidence Based Rehabilitation
- Musculoskeletal Dysfunction
- Anatomy for Veterinary Physiotherapy
- Locomotion and Biomechanics
- Equine Science
- Introduction to Small Business Management
- Principles of Animal Behaviour and Welfare

Year 3
Placement year

Year 4
- Honours Research Project **(30 credits)**
- Canine Clinical Practice **(20 credits)**
- Equine Clinical Practice **(20 credits)**
- Clinical Practice **(20 credits)**
- Veterinary Physiotherapy Professional Practice

Options
- Advances in Equine Science
- Farm Animal Health
- Applied Companion Animal Health, Welfare and Behaviour

Modules are 15 credits unless otherwise stated.

*For more information on Extended Degrees please refer to page 102.

harper.ac.uk/vetphys21

Careers

Veterinary physiotherapists work alongside veterinary surgeons and veterinary nurses within vet practices and hospitals in the treatment of animals. A number of veterinary physiotherapists work closely with the equine sports industry within racing or other sporting disciplines. Others work independently, setting up their own businesses working with horse and dog owners.

Accreditation

- **Animal Health Professions' Register**
- Recognised by the **National Association of Veterinary Physiotherapists** for membership

> I grew so much as a person during my placement. It really helped me with my personal and professional skills. Learning how to work independently and with a team as well as putting skills that I'd learnt at university into practice was great. I came away with a much more professional mind-set and I felt really motivated and positive about the future.

Sarah Marlor, Veterinary Physiotherapy graduate and owner of Stretch and Collect in Lincolnshire

100%
GRADUATE EMPLOYMENT
DLHE 2018

BSc (Hons)
UCAS code CD14

64 – 72 UCAS points

Year 1
- Skills for the Environmental Scientist
- Introduction to Ecology
- The Natural Environment and Climate Change
- Introduction to Wildlife Conservation in the UK
- Environmental Survey Technologies and Field Skills
- Introduction to Animal Welfare, Behaviour and Ethics
- Adaptive Biology
- Contemporary Countryside and Environmental Issues

Year 2
- Research Methods for Environmental Scientists
- Environmental Quality and Protection
- Planning and Development
- Wildlife Identification and Conservation
- Pollution, Ecology and Brownfield Reclamation
- Philosophy of Zoos
- Principles of Animal Behaviour and Welfare

Options (study 1 from 2)
- Conservation Biology
- Introduction to Entomology

Year 3
Placement year

Year 4
- Honours Research Project **(30 credits)**
- Environment and Geography Field Course
- Environmental Assessment and Management
- Applied Ecology for Management
- International Perspectives on Animal Conservation

Options
- Geographical Information Systems and Land Use
- Ecosystems and Environmental Resource Management
- Developing and Managing Environmental Projects

BSc
UCAS code OD05

64 – 72 UCAS points

Year 1
- Skills for the Environmental Scientist
- Introduction to Ecology
- The Natural Environment and Climate Change
- Introduction to Wildlife Conservation in the UK
- Environmental Survey Technologies and Field Skills
- Introduction to Animal Welfare, Behaviour and Ethics
- Adaptive Biology
- Contemporary Countryside and Environmental Issues

Year 2
- Environmental Quality and Protection
- Planning and Development Wildlife Identification and Conservation
- Pollution Ecology and Brownfield Reclamation
- Philosophy of Zoos
- Principles of Animal Behaviour and Welfare
- Conservation Biology

Year 3
Placement year

Year 4
- Degree Review Project
- Applied Ecology for Management
- International Perspectives on the Management of Animal Populations
- Environmental Assessment and Management
- Environment and Geography Field Course

Options
- Geographical Information Systems and Land Use
- Ecosystems and Environmental Resource Management

Extended Degree*
UCAS code XD07
harper.ac.uk/wildlife21

Careers

The breadth and flexibility of this industry-accredited course mean our students go on to careers in a wide range of areas associated with wildlife conservation and the sustainable management of the environment.

Graduates can expect to find employment in a diversity of sectors revolving around:
- Ecological and planning consultancies
- Wildlife advisory roles
- Safari parks and nature reserve rangers
- Wardens for zoos and animal sanctuaries
- NGOs such as wildlife trusts who employ staff with expertise in the surveying of, management and assessment of wildlife populations

Accreditation

BSc (Hons): **Chartered Institute of Ecology and Environmental Management (CIEEM).**

This course provides comprehensive training in modern wildlife management techniques. You will develop a coherent understanding of the scientific methodology behind effective management techniques for our wild flora and fauna, and gain hands-on experience in the techniques of collecting, analysing and interpreting data for the conservation of wildlife and natural resources. Key features include residential field trips to underpin and contextualise what you learn; a range of other field trips and visits to relevant local and national organisations to provide real life experience and to meet professionals in their field of work; strong focus on animal behaviour and the relationship between species and the environment; and focus on the practical application of theory to give you the skills to succeed in your chosen career.

95%
GRADUATE EMPLOYMENT
DLHE 2018

92%
STUDENT SATISFACTION
NSS 2019

If the environmental aspects of this course are of interest, please also see Environmental Land Management on page 98.

harper.ac.uk/wildlife21

Zoologists are scientists who study animals, from the largest mammals to the smallest insects. Understanding them and their communities gives an insight into both human and animal life and how they can be sustained in the face of global challenges, from climate change to food security. Here at Harper Adams, you'll study whole organisms, not just species at the molecular level. You'll look at animals' physiology, behaviour, and how they interact with other species and their environments, in order to preserve important habitats and manage wildlife in light of climate change.

Zoologists help protect endangered species and wildlife from the dangers of habitat loss, disease, invasive species, and climate change, and to protect and learn more about human life in the process.

BSc (Hons)/BSc Applied Zoology
UCAS code Z001

104 UCAS points

Year 1
- Academic Skills Development
- Introduction to Ecology
- The Natural Environment and Climate Change
- Environmental Survey Technologies and Field Skills
- Fundamentals of Physiology
- Adaptive Biology
- Introduction to Animal Welfare, Behaviour and Ethics
- Principles of Animal Health

Year 2
- Research Methods for Environmental Scientists
- Animal Biotechnology and Genetics
- Animal Ethics
- Aquatic Ecosystems
- Principles of Animal Behaviour and Welfare
- Wildlife Identification and Conservation
- Philosophy of Zoos
- Conservation Biology

Year 3
Placement year

Year 4
- Honours Research Project **(30 credits)**
- Geographical Information Systems and Land Use
- Environment and Geography Field Course
- Management of Captive Aquatic Systems
- Applied Companion Animal Health, Welfare and Behaviour
- Population and Community Ecology
- International Perspectives on the Management of Animal Populations

BSc (Hons) Zoology with Entomology
UCAS code Z002

104 UCAS points

Year 1
- Academic Skills Development
- Introduction to Ecology
- The Natural Environment and Climate Change
- Environmental Survey Technologies and Field Skills
- Fundamentals of Physiology
- Adaptive Biology
- Introduction to Animal Welfare, Behaviour and Ethics
- Principles of Animal Health

Year 2
- Research Methods for Environmental Scientists
- Animal Biotechnology and Genetics
- Animal Ethics
- Aquatic Ecosystems
- Principles of Animal Behaviour and Welfare
- Wildlife Identification and Conservation
- Introduction to Entomology
- Insect Life History Strategies

Year 3
Placement year

Year 4
- Honours Research Project **(30 credits)**
- Geographical Information Systems and Land Use
- Environment and Geography Field Course
- Management of Captive Aquatic Systems
- Population and Community Ecology
- Invertebrate Pests and Beneficials
- Insect Conservation

This is the only undergraduate degree in the UK that allows you to specialise in entomology.

BSc (Hons) Zoology with Environmental Management
UCAS code Z003

104 UCAS points

Year 1
- Academic Skills Development
- Introduction to Ecology
- The Natural Environment and Climate Change
- Environmental Survey Technologies and Field Skills
- Fundamentals of Physiology
- Adaptive Biology
- Introduction to Animal Welfare, Behaviour and Ethics
- Principles of Animal Health

Year 2
- Research Methods for Environmental Scientists
- Animal Biotechnology and Genetics
- Animal Ethics
- Aquatic Ecosystems
- Principles of Animal Behaviour and Welfare
- Pollution, Ecology and Brownfield Reclamation
- Wildlife Identification and Conservation
- Environmental Quality and Protection

Year 3
Placement year

Year 4
- Honours Research Project **(30 credits)**
- Geographical Information Systems and Land Use
- Applied Ecology for Management
- Environment and Geography Field Course
- Environmental Assessment and Management
- Applied Companion Animal Health, Welfare and Behaviour
- Management of Captive Aquatic Systems

Extended Degree*
UCAS code XD05
harper.ac.uk/extended21

Careers

With an applied zoology degree, you could become a zoologist or research scientist. You may find yourself improving agricultural crops and livestock, conserving endangered species and habitats, or developing and testing new drugs. Or you may work in disease and pest control, in field trials, animal welfare and education, or perhaps developing policies and regulations.

Lecturers are always ready to answer questions. If you question an idea, they have an answer, as they are actively researching the subject so you can get involved in the discussion too.

Keir Flowerdew, BSc (Hons) Zoology with Entomology

Modules are 15 credits. unless otherwise stated.

***For more information on Extended Degree Programmes please refer to page 102.**

harper.ac.uk/zoo21

Applied Biology

From solving real world environmental problems to developing food, animal and human medicines, applied biology is one of the broadest sciences you can study, leading to the widest choice of careers. On our farm, in our laboratories and on placement, you'll study the molecular, cellular and whole organism activities of micro-organisms, plants and animals. You'll graduate with the in-depth knowledge and practical skills for a rewarding career in, for instance, research and development, biotechnology, pharmaceuticals, food or environmental science.

Applied Biology will suit students who enjoy:
- Getting stuck into science in the field and the lab
- Being creative and curious
- Thinking independently
- Solving problems and being analytical

And who are interested in:
- Science that relates to the real world
- Living organisms
- Biological theories and practices

Applied Biology

BSc/BSc (Hons) Applied Biology
UCAS code AB01

104 – 120 UCAS points

Year 1
- Academic Skills Development
- Fundamentals of Physiology
- Plant Physiology and Microbiology
- Introduction to Ecology
- Animal Production Systems
- Crop Production Systems
- Biological Molecules and Genetics
- The Natural Environment and Climate Change

Year 2
- Research Methods (Animals)
- Farm Animal Production Science
- Crop Growth and Management
- Wildlife Identification and Conservation
- Pollution, Ecology and Brownfield Reclamation
- Project and Event Management

Options
- Aquatic Ecosystems
- Introduction to Entomology
- Environmental Quality and Protection
- Wastes, Manures and Renewable

Year 3
Placement year

Year 4
- Honours Research Project (30 credits)
- Advances in Animal Production Science
- Advances in Plant Science
- Commercial Aspects of Applied Biology
- Environment and Geography Field Course

Options
- Population and Community Ecology
- International Perspectives on the Management of Animal Populations
- Sustainable Crop Production Systems
- Applied Ecology for Management

Modules are 15 credits unless otherwise stated.

harper.ac.uk/bio21

BSc/BSc (Hons) Applied Biology with Biotechnology
UCAS code AB03

104 – 120 UCAS points

Year 1
- Academic Skills Development
- Fundamentals of Physiology
- Plant Physiology and Microbiology
- Introduction to Ecology
- Animal Production Systems
- Crop Production Systems
- Biological Molecules and Genetics
- The Natural Environment and Climate Change

Year 2
- Research Methods (Animals)
- Farm Animal Production Science
- Crop Growth and Management
- Wildlife Identification and Conservation
- Project and Event Management
- Pollution, Ecology and Brownfield Reclamation
- Applied Biotechnology
- Food Biotechnology and Food Processing

Year 3
Placement year

Year 4
- Honours Research Project (30 credits)
- Advances in Animal Production Science
- Advances in Plant Science
- Commercial Aspects of Applied Biology
- Environment and Geography Field Course
- Plant Breeding
- Animal Improvement and Bioethics

Careers

A degree in Applied Biology can open doors to a vast range of careers, from food product development through to pharmaceuticals. You might work in environmental monitoring, or industries connected to agriculture. Maybe you will develop a life sciences research career or move straight into biotechnology project management. Whichever direction you choose to go in, the applied nature of this programme means you will be ready to hit the ground running as soon as you graduate.

All Applied Biology students share a common first year, learning about physiology, microbiology, ecology, biological molecules and genetics, as well as animal and crop production systems. You'll start to specialise in your second year, in order to acquire a sound understanding of the theories of plant biology, animal biology, microbiology, and ecology, and to identify, develop, and predict how these can be used for both commercial and conservation purposes. Choosing from a range of optional modules in Year 2 and Year 4 will allow you to customise your studies.

Business Management

98%
GRADUATE EMPLOYMENT
DLHE 2018

Harper Adams means business. We think big and have a global outlook.

Our degrees in this subject area offer a variety of routes into the heart of the global supply chain. You'll be taught by industry professionals who'll help you to analyse and solve problems, manage finance, identify new markets and think like entrepreneurs. And you won't just learn in the classroom. The one-year placement will set you apart from others, giving you a deeper insight into the business world.

No matter what career path you ultimately take, the business skills you acquire will prove invaluable. Business skills and knowledge are the vital links in the supply chain, the glue that holds every profession, every sector together. Even if your future doesn't lie in food or agri-business, it's a great example of how to manage a complex business operation and supply chain.

Business Management with Marketing

BSc (Hons)
UCAS code N2NM

88 – 104 UCAS points

Year 1
– Professional Skills Development
– Creativity and Enterprise
– The Organisation in its Environment
– Business Communication Technology
– Marketing Principles
– Business Data Analysis
– Logistics and Distribution
– Introduction to Economics

Options
Language I (French, German or Spanish)

Year 2
– Group Market Research Project
– Financial Decision Making
– International Marketing
– Economic Policies
– E-Business
– Marketing Communications
– Project and Event Management
– Sales and Customer Service

Options
Language II (French, German or Spanish)

Year 3
Placement year

Year 4
– Honours Research Project (30 credits)
– Consumer Behaviour
– New Product Development
– Supply Chain Management
– Strategic Management
– Leadership and People Management
– Management Consultancy

BSc
UCAS code OD02

72 – 88 UCAS points

Year 1
– Professional Skills Development
– Creativity and Enterprise
– The Organisation in its Environment
– Business Communication Technology
– Marketing Principles
– Business Data Analysis
– Logistics and Distribution
– Introduction to Economics

Options
Language I (French, German or Spanish)

Year 2
– Group Market Research Project
– Financial Decision Making
– International Marketing
– Economic Policies
– E-Business
– Marketing Communications
– Project and Event Management
– Sales and Customer Service

Options
Language II (French, German or Spanish)

Year 3
Placement year

Year 4
– Degree Review Project
– New Product Development
– Supply Chain Management
– Strategic Management
– Leadership and People Management

Options
– Management Consultancy
– Consumer Behaviour

Extended Degree*
UCAS code N2NN
harper.ac.uk/bmmtop21

Careers

Graduates have entered a variety of careers in:
– Marketing
– Accountancy
– Consultancy
– Sales
– Recruitment
– Publishing
– Purchasing
– Web design
– Event management
– Financial services
– Self-employment

Accreditation

The programme is accredited by the **Chartered Institute of Marketing (CIM)**, the leading professional body for marketers worldwide.

Modern business is a dynamic environment in which to work. Customer wants and needs constantly change. The technology managers rely on is also changing at an ever-faster pace. New products and services are launched into already crowded markets on a regular basis. Such an environment can be challenging but a qualification in Business Management with Marketing prepares you for the rigours of modern business life, enabling you to exploit the exciting opportunities available.

The courses develop a range of transferable skills such as communication, analytical and critical thinking, problem solving and creativity, to name a few. You will develop an understanding of how a business operates with an emphasis on management and marketing. You will be able to draw up a business plan, develop a marketing strategy, plan and deliver an event and provide recommendations to a local business via a management consultancy project.

98%
SATISFACTION WITH THE LEARNING COMMUNITY OF STAFF AND STUDENTS
NSS 2019

Modules are 15 credits unless otherwise stated.

*For more information on Extended Degrees please refer to page 102.

harper.ac.uk/business21

Agri-Business

The agricultural sector faces a number of significant challenges in the future from climate change to floods and droughts, an ever-increasing world population and changes in policy. All of these factors contribute to a sector that needs graduates who possess well-developed business skills combined with a thorough understanding of the agricultural business sector to respond to these constraints. The course will provide you with underlying knowledge related to the agricultural sector, with modules on crops and animals in the first year supported by a range of business modules, which will progress in subsequent years to give you an all-round view and understanding of the sector.

BSc (Hons)
UCAS code DN41

88 – 104 UCAS points

Year 1
- Professional Skills Development
- Business Data Analysis
- Marketing Principles
- Animal Production Systems
- Crop Production Systems
- Agri-Food Marketing
- Assessment of the Farm Business

Options
- Logistics and Distribution
- Issues in Global Food Production
- Language I (French, German or Spanish)

Year 2
- Group Market Research Project
- Business Communication Technology
- Farm Assurance and Quality
- Farm Business Management and Economics
- Professional Services in Farm Business Management
- Sales and Customer Service

Options
- Marketing Communications
- Fresh Produce
- Integrated Crop Management Systems
- Sustainable Livestock Production Systems
- Language II (French, German or Spanish)

Year 3
Placement year

Year 4
- Honours Research Project
- (30 credits)
- Leadership and People Management
- Supply Chain Management
- International Agri-Business
- Strategic Management

Options
- Economic Policies
- Management Consultancy
- Animal Product Processing
- Farm Business Operation and Planning

One-year top up degree available
UCAS code DN4H
harper.ac.uk/business21

BSc
UCAS code OD04

72 – 88 UCAS points

Year 1
- Professional Skills Development
- Business Data Analysis
- Marketing Principles
- Animal Production Systems
- Crop Production Systems
- Agri-Food Marketing
- Assessment of the Farm Business

Options
- Logistics and Distribution
- Issues in Global Food Production
- Language I (French, German or Spanish)

Year 2
- Group Market Research Project
- Business Communication Technology
- Farm Assurance and Quality
- Farm Business Management and Economics
- Professional Services in Farm Business Management
- Sales and Customer Service

Options
- Marketing Communications
- Fresh Produce
- Integrated Crop Management Systems
- Sustainable Livestock Production Systems
- Language II (French, German or Spanish)

Year 3
Placement year

Year 4
- Degree Review Project
- Leadership and People Management
- Supply Chain Management
- International Agri-Business
- Strategic Management

Options
- Economic Policies
- Management Consultancy
- Animal Product Processing
- Farm Business Operation and Planning

One-year top up degree available
UCAS code DN4N
harper.ac.uk/business21

Careers

There are opportunities for graduates in many areas of the agricultural sector including:
- Farm inputs and outputs
- Commodity trading
- Sales
- Marketing
- Research
- Finance
- Consultancy

Accreditation

The programme is accredited by the **Chartered Institute of Marketing (CIM).**

My placement has made me more confident for the future because it let me apply my skills to the real world as I progressed through university.

Courteney Mee,
BSc (Hons)
Agri-Business

Modules are 15 credits unless otherwise stated.

harper.ac.uk/business21

Agri-Food Marketing with Business

BSc (Hons)
UCAS code DN4S

88 – 104 UCAS points

Year 1
- Professional Skills Development
- Business Data Analysis
- Marketing Principles
- Animal Production Systems
- Crop Production Systems
- Agri-Food Marketing
- Business Communication Technology

Options
- Logistics and Distribution
- Issues in Global Food Production
- Language I (French, German or Spanish)

Year 2
- Group Market Research Project
- Marketing Communications
- Food Marketing
- Farm Assurance and Quality
- Financial Decision Making
- Introduction to Economics
- International Marketing

Options
- Sales and Customer Service
- Fresh Produce
- Language II (French, German or Spanish)

Year 3
Placement year

Year 4
- Honours Research Project (30 credits)
- Leadership and People Management
- Supply Chain Management
- Consumer Behaviour
- Strategic Management
- Retail Environment and Operations
- Development of Food Products and Sensory Evaluation
- Animal Product Processing
- International Agri-Business

One-year top up degree available
UCAS code DNK5
harper.ac.uk/business21

BSc
UCAS code OD03

72 – 88 UCAS points

Year 1
- Professional Skills Development
- Business Data Analysis
- Marketing Principles
- Animal Production Systems
- Crop Production Systems
- Agri-Food Marketing
- Business Communication Technology

Options
- Logistics and Distribution
- Issues in Global Food Production
- Language I (French, German or Spanish)

Year 2
- Group Market Research Project
- Marketing Communications
- Food Marketing
- Farm Assurance and Quality
- Financial Decision Making
- Introduction to Economics
- International Marketing

Options
- Sales and Customer Service
- Fresh Produce
- Language II (French, German or Spanish)

Year 3
Placement year

Year 4
- Degree Review Project
- Leadership and People Management
- Supply Chain Management
- Consumer Behaviour
- Strategic Management

Options
- Retail Environment and Operations
- Development of Food Products and Sensory Evaluation
- Animal Product Processing
- International Agri-Business

One-year top up degree available
UCAS code DNL5
harper.ac.uk/business21

Careers

The careers of agri-food business graduates span the whole food supply chain, from agricultural merchants and pharmaceuticals companies to food manufacturers, distributors, retailers and traders. A combination of business and marketing skills plus technical awareness, make graduates attractive to organisations in the agri-food sector.

The transferable nature of the commercial skills developed enables graduates to work in:
- Government
- Trade and overseas development organisations
- Banks
- Specialist market research agencies and consultancies

Many have also found that this qualification equips them to set up and successfully run their own food, farm or rurally-based enterprise.

Accreditation

The programme is accredited by the **Chartered Institute of Marketing (CIM).**

There is an ever-increasing demand for food, with the UK relying on both imports and exports to feed itself and drive economic growth. Behind the supermarket shelves lies a globalised supply chain that is sensitive to economic and environmental events, for example too much or too little rain can reduce or devastate harvests.

This dynamic complexity, together with more demanding consumers and concerns about food safety and security, local sourcing and carbon footprints, make this an exciting and challenging employment sector.

To deal with these issues, this course develops skills across business, agriculture and food disciplines, producing well-qualified graduates who are sought after in the agri-food sector. It is built around a balanced programme of marketing, business, agriculture and food development so that you fully understand the concept of field to fork.

90%
STUDENT SATISFACTION
NSS 2019

"The course looks at all of the elements of the food supply chain from field to fork, combining my passion for food with my interest in agriculture."

Max Randall,
M&S scholar

Engineering

The great thing about Harper is that you don't just spend loads of time learning about things in the lecture theatre, you learn how to apply knowledge to the real world.

Alex Skittery,
graduate

Engineering

98%
GRADUATE EMPLOYMENT DLHE 2018

Engineers are the ultimate problem solvers – but the UK does not have enough of them. Addressing the engineering skills gap is key to the Government's industrial strategy, in which it is recognised that the country will need an additional 186,000 skilled recruits each year until 2024.

At Harper Adams, we are developing our own solution to this national challenge. Our degrees train new practitioners with more than just engineering knowledge. We turn out graduates who have the skills, knowledge, resilience and self-confidence to start making a difference from day one on the job. In response to feedback from employers that many engineering graduates lack the necessary business skills and professional behaviours, we have built these aspects into every one of our engineering courses, from the outset.

Our course structure, which includes a compulsory year in industry and professional projects that tackle real, relevant issues, is proven to work. 98 per cent of our graduates are in work six months after graduating, with 85 per cent in 'graduate level' roles, with salaries to match, according to the most recent Destination of Leavers from Higher Education survey (DLHE 2016/17). All engineering courses are accredited by the **Institution of Agricultural Engineers**, on behalf of the **Engineering Council**. They are challenging and rewarding and open the doors to a wide variety of careers.

All first-year students will start with the same teaching and learning and then progress to one of three specialist pathways, all offered at BEng (Hons) and MEng levels. The latter is one year longer, at five years in duration and adds a Master's research project plus additional specialist modules tailored to your chosen route. MEng graduates are eligible for initial registration for Chartered Engineering status.

Extended degrees

While we don't offer specific extended degree pathways for the engineering programmes, some students will be eligible for progression to year 1 of an engineering degree after completing one of the University's extended degree programmes. See page 102 for information and chat to us about this option during an open day.

This subject has a mechanical engineering core with a specialism in the design and development of agricultural machinery and systems. It covers everything from the principles of the design of agricultural machines, soil/implement interaction and irrigation and drainage, through to advancing technologies in the fields of precision farming, agricultural robotics and renewable energy.

You will cover not just theory and technical skills but also put your knowledge into practice in real-world scenarios, develop research and business techniques and build your experience and confidence as a professional engineer. Industry figures have helped us to develop a comprehensive curriculum combining core engineering subjects with the latest industrial techniques. Much of our teaching is project-led and is designed to develop the professional skills that you will use as a graduate engineer.

100%
STUDENT SATISFACTION
NSS 2019

BEng (Hons)
UCAS code H330

96 – 120 UCAS points

You will also need to demonstrate your passion to engineer and provide evidence of prior success.

Year 1
- Communication for Engineers
- Mathematical Tools and Techniques for Engineers
- Problem Solving
- Fundamentals of Mechanical Science – Dynamics
- Fundamentals of Mechanical Science - Materials Under Load
- Materials and Materials Processing
- Fundamentals of Measurement
- Fundamentals of Actuation

Year 2
- Fundamentals of Agricultural Engineering
- Global Agricultural Production
- Engineering Design
- Applied Mechanical Science – Materials Under Load
- Applied Mechanical Science – Dynamics and Control
- Manufacturing and Operations Management
- Experimental Design and Analysis
- Electronic Control Systems

Year 3
Placement year

Year 4
- Honours Engineering Project
- Agricultural Machinery Design
- Advanced Stress Analysis (Industry-Based)
- Strategic Management
- Group Engineering Project

Options
- Power Systems
- Competitive Production Management
- Mechatronics Design and Control

Modules are 15 credits unless otherwise stated.

harper.ac.uk/eng21

MEng
UCAS code H335

136 UCAS points

You will also need to demonstrate your passion to engineer and provide evidence of prior success.

Year 1
- Communication for Engineers
- Mathematical Tools and Techniques for Engineers
- Problem Solving
- Fundamentals of Mechanical Science – Dynamics
- Fundamentals of Mechanical Science – Materials Under Load
- Materials and Materials Processing
- Fundamentals of Measurement
- Fundamentals of Actuation

Year 2
- Fundamentals of Agricultural Engineering
- Global Agricultural Production
- Engineering Design
- Applied Mechanical Science – Materials Under Load
- Applied Mechanical Science – Dynamics and Control
- Manufacturing and Operations Management
- Experimental Design and Analysis
- Electronic Control Systems

Year 3
Placement year

Year 4
- Agricultural Machinery Design
- Mechatronics Design and Control
- Management of New Product Development
- Advanced Stress Analysis (Industry-Based)
- Strategic Management
- Group Engineering Project

Options
- Power Systems
- Competitive Production Management
- Advanced Materials

Year 5
- Masters Engineering Project **(60 credits)**
- Advanced Decision Making
- Emerging Technologies

Options
- Systems Simulation
- Noise Vibration and Harshness and Human Machine Interaction
- Advanced Power Systems

Careers

Our agricultural engineering graduates are employed as professional engineers in:
- Design and development
- New product testing
- Manufacturing and equipment production
- Managerial and leadership roles

I chose to study at Harper Adams University as the combination of its excellent partnerships with industry and their cutting-edge facilities, IT systems and software made it stand out. Mechanisation and electronics continue to be my preferred specialisms because the advances in these areas, such as precision farming and autonomous machinery, will be the future for agriculture.

Alan Mobbs,
MEng
Agricultural
Engineering

Automotive Engineering (Off-Highway)

These courses have a mechanical engineering core with a specialism in the design and development of vehicles that operate off-road.

You will cover not just theory and technical skills but also put your knowledge into practice in real-world scenarios, develop research and business techniques and build your experience and confidence as professional engineers. Industry figures have helped us to develop a comprehensive curriculum combining core engineering subjects with the latest industrial techniques. Much of our teaching is project-led and is designed to develop the professional skills that you will use as a graduate engineer.

BEng (Hons)
UCAS code H336

96 – 120 UCAS points

You will also need to demonstrate your passion to engineer and provide evidence of prior success.

Year 1
- Communication for Engineers
- Mathematical Tools and Techniques for Engineers
- Problem Solving
- Fundamentals of Mechanical Science – Dynamics
- Fundamentals of Mechanical Science – Materials Under Load
- Materials and Materials Processing
- Fundamentals of Measurement
- Fundamentals of Actuation

Year 2
- Off-Highway Vehicle Systems
- Off-Highway Vehicle Mobility
- Engineering Design
- Applied Mechanical Science – Materials Under Load
- Applied Mechanical Science – Dynamics and Control
- Manufacturing and Operations Management
- Experimental Design and Analysis
- Electronic Control Systems

Year 3
Placement year

Year 4
- Honours Engineering Project
- Vehicle Dynamics
- Advanced Stress Analysis (Industry-Based)
- Strategic Management
- Group Engineering Project

Options
- Power Systems
- Competitive Production Management
- Mechatronics Design and Control

Modules are 15 credits unless otherwise stated.

harper.ac.uk/eng21

MEng
UCAS code H337

136 UCAS points

You will also need to demonstrate your passion to engineer and provide evidence of prior success.

Year 1
- Communication for Engineers
- Mathematical Tools and Techniques for Engineers
- Problem Solving
- Fundamentals of Mechanical Science – Dynamics
- Fundamentals of Mechanical Science – Materials Under Load
- Materials and Materials Processing
- Fundamentals of Measurement
- Fundamentals of Actuation

Year 2
- Off-Highway Vehicle Systems
- Off-Highway Vehicle Mobility
- Engineering Design
- Applied Mechanical Science – Materials Under Load
- Applied Mechanical Science – Dynamics and Control
- Manufacturing and Operations Management
- Experimental Design and Analysis
- Electronic Control Systems

Year 3
Placement year

Year 4
- Vehicle Dynamics
- Power Systems
- Management of New Product Development
- Advanced Stress Analysis (Industry-Based)
- Strategic Management
- Group Engineering Project

Options
- Mechatronics Design and Control
- Competitive Production Management
- Advanced Materials

Year 5
- Masters Engineering Project **(60 credits)**
- Advanced Decision Making Emerging Technologies

Options
- Systems Simulation
- Noise Vibration and Harshness and Human Machine Interaction
- Advanced Power Systems

Careers

Career opportunities in this field are outstanding. We have built excellent relationships with engineering companies in the off-highway industries. Our graduates are highly sought-after and are employed in the design and development of the next generation of:
- SUVs
- Defence vehicles
- Construction equipment
- Agricultural vehicles for global companies including:
- Jaguar
- Land Rover
- CNH
- Bentley
- JCB
- Vauxhall
- Caterpillar
- BAE systems

along with specialist organisations such as Supacat and Prodrive.

I did the same as any other mechanical engineering degree but just specialised in the off-highway area. The variety within the course was also a great bonus for me, the course doesn't just cover agricultural sector, it also covers military, SUV and construction sector.

Emma Spalding, Automotive Engineering (Off-Highway) graduate

BEng (Hons)
UCAS code H300

96 – 120 UCAS points

You will also need to demonstrate your passion to engineer and provide evidence of prior success.

Year 1
- Communication for Engineers
- Mathematical Tools and Techniques for Engineers
- Problem Solving
- Fundamentals of Mechanical Science – Dynamics
- Fundamentals of Mechanical Science – Materials Under Load
- Materials and Materials Processing
- Fundamentals of Measurement
- Fundamentals of Actuation

Year 2
- Engineering for Manufacture
- Thermodynamics and Heat Transfer
- Engineering Design
- Applied Mechanical Science – Materials Under Load
- Applied Mechanical Science – Dynamics and Control
- Manufacturing and Operations Management
- Experimental Design and Analysis
- Electronic Control Systems

Year 3
Placement year

Year 4
- Honours Engineering Project
- Competitive Production Management
- Advanced Stress Analysis (Industry-based)
- Strategic Management
- Group Engineering Project

Options
- Power Systems
- Advanced Materials
- Mechatronics Design and Control

MEng
UCAS code H301

136 UCAS points

You will also need to demonstrate your passion to engineer and provide evidence of prior success.

Year 1
- Communication for Engineers
- Mathematical Tools and Techniques for Engineers
- Problem Solving
- Fundamentals of Mechanical Science – Dynamics
- Fundamentals of Mechanical Science – Materials Under Load
- Materials and Materials Processing
- Fundamentals of Measurement
- Fundamentals of Actuation

Year 2
- Engineering for Manufacture
- Thermodynamics and Heat Transfer
- Engineering Design
- Applied Mechanical Science – Materials Under Load
- Applied Mechanical Science – Dynamics and Control
- Manufacturing and Operations Management
- Experimental Design and Analysis
- Electronic Control Systems

Year 3
Placement year

Year 4
- Competitive Production Management
- Advanced Materials
- Management of New Product Development
- Advanced Stress Analysis (Industry Based)
- Strategic Management
- Group Engineering Project

Options
- Mechatronics Design and Control
- Power Systems
- Leadership and People Management

Year 5
- Masters Engineering Project **(60 credits)**
- Advanced Decision Making
- Emerging Technologies

Options
- Systems Simulation
- Noise Vibration and Harshness and Human Machine Interaction
- Advanced Power Systems

Careers

Harper Adams engineering graduates are highly sought-after within the industry. Mechanical Engineering is one of the broadest of the engineering disciplines and will offer you a wide choice of options. Our graduates are employed are professional engineers in:
- Design and development
- New product testing
- Manufacturing
- Managerial and leadership roles

I chose this course due to the broad range of opportunities available at Harper Adams; partnered with this, my determination will help me to achieve the status of chartered engineer.

Rebecca Websdale,
MEng Mechanical Engineering

This subject is focused on producing high-calibre engineering graduates who are experienced in the application of core mechanical engineering theory and practice to successfully deliver solutions to industry problems.

In addition to learning the principles of machine design and advanced simulation and modelling techniques, students will also gain knowledge of industrial manufacturing and process optimisation – skills highlighted by our industrial partners as highly sought-after.

You will cover not just theory and technical skills but also put your knowledge into practice in real-world scenarios, develop research and business techniques and build your experience and confidence as professional engineers. Industry figures have helped us to develop a comprehensive curriculum combining core engineering subjects with the latest industrial techniques. Much of our teaching is project-led and is designed to develop the professional skills that you will use as a graduate engineer.

Food Technology and Innovation

The multi-billion pound food industry is the second largest employment sector in the world. In the UK it is the largest manufacturing industry, employing over 3.2 million people in more than 100,000 locations. The food industry contains many multi-national companies and therefore offers opportunities for travel or work abroad. It offers valuable and diverse career opportunities with competitive reward packages. Graduates of this course can expect to find employment in areas such as product development, food manufacture, food marketing and buying. In particular, graduates will be provided with an appreciation of the various disciplines they will require within a multi-disciplinary workplace.

All food students share a common first year, studying the same modules. In your second and final years you will focus on your chosen specialism.

With food programmes at Harper having returned a 100 per cent graduate employment rating last summer and now a 100 per cent student satisfaction rating. It's pleasing to know that studying food science and technology subjects in an institution dedicated to advancing the agri-food chain is proving to be the right choice for our students and graduates.

Dr Annette Creedon, Head of the Food Technology and Innovation Department

100%
GRADUATE EMPLOYMENT
DLHE 2018

BSc (Hons)
UCAS code D641

88 – 104 UCAS points

Year 1
- Academic and Professional Skills for the Food Industry
- Introduction to Food Science
- Issues in Global Food Production
- Marketing Principles
- Logistics and Distribution
- Nature of Food
- Introduction to Food Service and Retail
- Wellbeing Through the Lifecycle

Electives (not compulsory)
Language I (French, German or Spanish)

Year 2
- Research Methods
- Farm Assurance and Quality
- Commodity Crop and Fresh Produce Processing
- Animal Product Processing
- Food Product Development and Sensory Evaluation in Supply Chains
- Marketing Communications
- Hygiene and Food Safety
- Food Biotechnology and Food Processing

Electives (not compulsory)
Language II (French, German or Spanish)

Year 3
Placement year

Year 4
- Honours Research Project (30 credits)
- Food Policy and Ethics
- Supply Chain Management
- Food Quality Management
- Food Product Manufacture
- Consumer Behaviour
- Leadership and People Management

Extended Degree*
UCAS code XD09
harper.ac.uk/food21

BSc
UCAS code OD01

64 – 72 UCAS points

Year 1
- Academic and Professional Skills for the Food Industry
- Introduction to Food Science
- Issues in Global Food Production
- Marketing Principles
- Logistics and Distribution
- Nature of Food
- Introduction to Food Service and Retail
- Wellbeing Through the Lifecycle

Electives (not compulsory)
Language I (French, German or Spanish)

Year 2
- Research Methods
- Hygiene and Food Safety
- Commodity Crop and Fresh Produce Processing
- Marketing Communications
- Food Product Development and Sensory Evaluation in Supply Chains

Options
- Farm Assurance and Quality
- Animal Product Processing
- Food Biotechnology and Food Processing

Electives (not compulsory)
Language II (French, German or Spanish)

Year 3
Placement year

Year 4
- Degree Review Project
- Consumer Behaviour
- Food Product Manufacture
- Supply Chain Management
- Food Quality Management

Options
- Leadership and People Management
- Food Policy and Ethics

Modules are 15 credits unless otherwise stated.

*For more information on Extended Degrees please refer to page 102.

harper.ac.uk/food21

Careers

Graduates can expect to find job opportunities in the diverse food industry and associated fields.

You may wish to work in food processing and manufacture, food product development, technical management, quality management, food business management or food retail management. Other options include careers in buying food products, in sales and marketing, or setting up your own business. This course gives you the opportunity to become knowledgeable, skilled, adaptable, versatile and able to take command of your own life and career.

> I was exposed to the industry and people who were passionate about it every day.
>
> **Amy Wickham**, alumna

In western societies consumers are dependent on the agricultural and food processing industries, and the food retail and food service sectors, for the foodstuffs that sustain their lives.

Food is produced by people with specialist know-how and the food industry has a constant need for appropriately qualified graduates.

On this course you will gain a detailed understanding of the food industry, its place in society and relationship to consumers. You will explore the nature of food and how ingredients behave when processed. You will learn how the food supply chain operates, food trends and consumer behaviour.

The course will equip you with the knowledge and skills needed to develop a career in the industry from food processing and manufacture through to food retailing.

100%
STUDENT SATISFACTION
NSS 2019

Food Technology and Product Development

The variety of food and drink available to us is continually increasing in its quality, diversity, and interest. This course will help you develop the skills to be at the heart of the food development process adding value to a complex and exciting food industry. You will learn about the range of ingredients available to the food industry, how these ingredients are sourced and how they react together to form some of our most familiar foodstuffs.

You will learn to develop food that can be transported through a sophisticated supply chain whilst retaining its quality for today's discerning consumer, learn about commercialising products, being able to reconcile the conflict between adding value and the cost of a product, and the importance of a clear business strategy to support this. If you wish, you will be given the opportunity to enter new product development competitions.

BSc (Hons)
UCAS code D633

88 – 104 UCAS points

Year 1
- Academic and Professional Skills for the Food Industry
- Introduction to Food Science
- Issues in Global Food Production
- Marketing Principles
- Wellbeing Through the Lifecycle
- Nature of Food
- Introduction to Food Service and Retail
- Logistics and Distribution

Electives (not compulsory)
Language I (French, German or Spanish)

Year 2
- Research Methods
- Food Creativity, Styling and Photography
- Principles and Practices of Food Sustainability
- Retail Environment and Operations
- Food Product Development and Sensory Evaluation in Supply Chains
- Food Biotechnology and Food Processing
- Hygiene and Food Safety
- Food Marketing

Electives (not compulsory)
Language II (French, German or Spanish)

Year 3
Placement year

Year 4
- Honours Research Project **(30 credits)**
- European Food Innovation and Trade
- Supply Chain Management
- Food Quality Management
- Food Product Manufacture
- Consumer Behaviour
- Food Security and Sustainability

Extended Degree*
UCAS code XD09
harper.ac.uk/food21

Modules are 15 credits unless otherwise stated.

*For more information on Extended Degrees please refer to page 102.

harper.ac.uk/food21

Careers

Students will have the opportunity to develop excellent food industry knowledge in a subject area recognised by the industry for employment in a wide range of food careers both in the UK and abroad. Opportunity for regular travel is significant as many ingredients are sourced from across the globe.

Our graduates have an excellent employability rate and record, many being offered graduate jobs whilst on placement. The high level of skill and specialist knowledge makes graduates from this course uniquely prepared for food technical, auditing and processing roles. Graduates can expect to be involved in the decisions necessary to manufacture, develop and improve food and drink products in a dynamic and fast paced environment. Food technologists are at the centre of product design, formulation, food safety and quality assurance in the food industry.

Working on this project was a real eye-opener, seeing all the work that goes on behind the scenes to deliver a product on the shelf; it was great understanding the process from concept to launch.

Morgan Metcalfe, who developed the summer bacon chop for Waitrose while on placement with Dalehead Foods

BSc (Hons)
UCAS code DB64

88 – 104 UCAS points

Year 1
- Academic and Professional Skills for the Food Industry
- Introduction to Food Science
- Issues in Global Food Production
- Marketing Principles
- Logistics and Distribution
- Nature of Food
- Introduction to Food Service and Retail
- Wellbeing Through the Lifecycle

Options
Language I (French, German or Spanish)

Year 2
- Research Methods (Food, Marketing and Business)
- Hygiene and Food Safety
- Food Product Development and Sensory Evaluation in Supply Chains
- Marketing Communications
- Farm Assurance and Quality
- Food Biotechnology and Food Processing
- Public Health Nutrition
- Psychology of Food Choice

Electives (not compulsory)
Language II (French, German or Spanish)

Year 3
Placement year

Year 4
- Honours Research Project (30 credits)
- Food Policy and Ethics
- Advanced Aspects of Human Nutrition
- Food Quality Management
- Food Product Manufacture
- Food Security and Sustainability
- Supply Chain Management

Careers

This course will help develop graduates who understand how to produce safe and nutritious food as well as the legislation and policies governing production and manufacture.

Graduates can expect to gain employment in technical, quality and product development roles where they will produce healthy foods and foods for those with a specific need.

> I have always been interested in food and how it impacts our bodies. The variety of modules on this course has enabled me to expand my knowledge on a wide range of topics about the food industry and human nutrition.

Kate Westall, graduate

This course has been designed specifically in response to the increasing interest in human nutrition worldwide and especially by the food industry and public health bodies.

It will satisfy the growing need for graduates with an understanding of food production and manufacturing and, importantly, human nutrition.

You will gain an understanding of the relationships between food, nutrition and human health, developing the knowledge and skills to work in food product development, manufacture and retailing. You will become a food professional with the ability to respond to a marketplace which has an increasing interest in food and its impact on health.

You will be able to design and produce healthy foodstuffs as well as deliver healthy eating messages appropriately to consumers of food.

100%
STUDENT SATISFACTION
NSS 2019

Land, Property and Environment

Do you want an exciting and rewarding career?

Careers in land and property management, surveying, heritage assets and environmental management are exciting, challenging and creative. If you'd love to work both independently and with a team and would enjoy a busy and varied role where you're sometimes outdoors as often as in the office, we have a course for you.

Our courses reflect the growing need from industry to respond to government initiatives such as the Agriculture Bill, the 25-year Environment Plan and our international commitments to tackle climate change.

The University has an outstanding reputation in this field and you won't just learn in the classroom; the University estate, including a commercial farm, is a great way to see land management in action, not to mention visits to local farms, estates, factories and interesting properties and guest lecturers from industry.

Rural Enterprise and Land Management (REALM)

BSc (Hons)
Ucas code DNK2

104 UCAS points

Year 1
- Professional Practice Skills Development
- Introduction to Business for Rural Advisors
- Estate Management Law
- Valuation and Estate Management
- Sustainable Crop Production
- Animal Production (Land Management)
- Rural Geography and Economics
- Construction

Year 2
- Land Information and Research Skills
- Taxation
- Agency and Tenancy Law
- Valuation
- Farming Systems and Environment
- Planning and Development
- Compensation and Utilities

Options
- Forestry, Game and Land Management
- Forestry and Forest Products

Year 3
Placement year

Year 4
- Honours Research Project **(30 credits)**
- Strategic Estate Management
- Advanced Landlord and Tenant
- Advanced Valuation
- Farm Business Management for Land Managers
- Global Agricultural Trade Policies

Options
- Sustainable Energy
- International Rural Property Markets
- UK and Global Forest Systems

Modules are 15 credits unless otherwise stated.

harper.ac.uk/land21

Careers

Rural practice chartered surveyors are to be found working in professional firms providing a range of land management services to farmers and landowners; local government, managing country parks and country smallholding estates; the management of rural land and property for bodies as diverse as the RSPB, English Nature, national parks and water and mineral companies; traditional estates as resident land agents; or overseas for a firm of surveyors or advisers. Other careers graduates have chosen include; commodity trading, farm management, law, accountancy and the armed services.

Accreditation

This degree course is accredited by the **Royal Institution of Chartered Surveyors (RICS)** for the Rural Surveying Pathway.

REALM uses rural assets economically to achieve clear business objectives. It is an ideal course for aspiring rural practice chartered surveyors, particularly those with an interest in carrying out professional work for individual clients in areas such as valuation, strategic estate management, agricultural tenancy matters and diversification projects, including those relating to sustainability and renewable energy. The course will suit those with an interest in managing the countryside in a business context.

REALM graduates will be prepared to progress to Registered Valuer Status and are more likely to be employed in the provision of valuations, needed for a wide range of purposes ranging from sales and rent reviews, through to taxation and compulsory purchase. Increasingly, these skills will also be needed for the valuation of natural capital and ecosystems services. In some instances, graduates will also provide auctioneering services.

This course shares a common first and second year with the RPM course as both are aligned to the Rural Pathway of the RICS Assessment of Professional Competence. Students will specialise in the final year, post placement, with core modules covering agricultural, business and residential tenancies, advanced valuation, global agricultural trade policies and farm business management.

Optional modules will allow you to consider international rural property markets, sustainable forestry and forestry products, renewables and infrastructure.

Rural Property Management

Rural Property Management prepares students to manage rural estates and all their diverse assets. You will learn about maintaining and developing estate property and managing agricultural, residential and commercial tenancies, as well as development and marketing skills enabling you to diversify and enhance rural estates.

The course shares a common first and second year with the REALM course as both are aligned to the Rural Pathway of the RICS Assessment of Professional Competence. You will specialise in the final year with core modules covering strategic estate management, property development, events management and diversification. Optional modules will allow you to consider the conservation of historic estate assets, the provision of renewable energy or to study how rural property is managed internationally.

BSc (Hons)
UCAS code D440

104 UCAS points

Year 1
- Professional Practice Skills Development
- Estate Management Law
- Introduction to Business for Rural Advisors
- Valuation and Estate Management
- Rural Geography and Economics
- Construction
- Animal Production (Land Management)
- Sustainable Crop Production

Year 2
- Land Information and Research Skills
- Agency and Tenancy Law
- Taxation
- Valuation
- Planning and Development
- Compensation and Utilities
- Farming Systems and Environment

Options
- Forestry, Game and Land Management
- Forestry and Forest Products

Year 3
Placement year

Year 4
- Honours Research Project (30 credits)
- Advanced Landlord and Tenant
- Strategic Estate Management
- Conservation of the Historic Environment
- Property Development and Management
- Events Management and Diversification

Options
- Sustainable Energy
- International Rural Property Markets
- UK and Global Forest Systems

Careers

Rural Property Management graduates are likely to progress to positions in the management of rural property, estates and land, often within a firm of chartered surveyors specialising in this work or in some instances as a resident agent on a larger estate.

Our land and property graduates, from both the REALM and RPM courses, work with:
- Large national property firms
- Small professional practices
- Estates
- Auctioneers
- Utility companies
- Charities
- Local authorities
- Althorp
- Balfours
- Bidwells
- Brown&Co
- Buccleuch Estates
- Carter Jonas
- Chatsworth
- Defence Estates
- Elveden
- Fisher German
- H & H Land
- Knight Frank
- Ministry of Defence
- National Grid
- NFU
- Rostons
- Savills
- Severn Partnership
- Strutt and Parker
- The National Trust
- United Utilities
- Yorkshire Water

Accreditation

This degree course is accredited by the **Royal Institution of Chartered Surveyors (RICS)** for the Rural Surveying Pathway.

Modules are 15 credits unless otherwise stated.

harper.ac.uk/land21

BSc (Hons)
UCAS code N232

104 UCAS points

Year 1
– Professional Practice Skills Development
– Valuation and Estate Management
– Estate Management Law
– Construction
– Marketing Principles
– Introduction to Economics
– The Organisation in its Environment
– Business Data Analysis

Year 2
– Land Information and Research Skills
– Valuation
– Agency and Tenancy Law
– Compensation and Utilities
– Planning and Development
– Economic Policies
– Taxation
– Financial Decision Making

Year 3
Placement year

Year 4
– Honours Research Project **(30 credits)**
– Investment, Valuation and Appraisal
– Business, Residential Tenancies and Land Law
– Property Development and Management
– Leadership and People Management
– Strategic Management

Options
– Events Management and Diversification
– Sustainable Energy
– International Rural Property Markets

Careers

Careers in surveying and land agency are busy, varied and creative, suiting those who like to work both independently and in teams, and who enjoy talking and listening to other people, understanding their problems and coming up with solutions that fit their needs and budget. Graduates from this course may work in the commercial departments of large firms such as:
– Knight Frank
– Avison Young
– CBRE
– Colliers International
– Cusham & Wakefield
– JLL

Alternatively, they may work for organisations such as:
– The Valuation Office Agency
– Network Rail
– Smaller firms specialising in general practice and estate agency work

Accreditation

This degree course is accredited by the **Royal Institution of Chartered Surveyors (RICS)** for the Commercial Property Practice Pathway.

Interested in becoming a residential or commercial chartered surveyor? To build a rewarding career valuing, selling, managing and developing a range of different property types from houses to offices and light industrial units? Then this general property management course is for you.

It has been developed for students who wish to study a commercial surveying course at Harper Adams. There are more than 440,000 people employed in real estate activities in the UK, with a growing demand for more real estate professionals. Real Estate students graduate with specialist knowledge and experience of commercial, residential, leisure and industrial properties.

Modules are 15 credits unless otherwise stated.

harper.ac.uk/land21

Environmental Land Management

Modern environmental land management is a challenging multi-disciplinary field, and this course will train you as an effective practitioner with good knowledge and understanding of the relevant scientific, policy and legislative frameworks as well as sound people and project management skills.

Strategies to protect our environment and to promote the sustainable use of natural resources at national and international levels are traditionally founded on the scientific principles of ecology and environmental management. Evidence-based decision-making is a critical skill, but land-based professionals must also balance social, economic and legal constraints when advising clients on land management, development and business opportunities. Promoting economically sustainable rural communities and productive farming systems, whilst addressing the threats posed by climate change, population growth and biodiversity loss are key challenges.

Our Environmental Land Management graduates will be equipped with the professional skills and scientific underpinning needed to give them a thorough understanding of the technical, economic and managerial principles of land management, alongside the cultural, ethical and policy contexts.

Key features include:
- **Residential field trips in Year 1**
- **A range of field trips and visits to relevant local and national organisations to provide real-life experience and to meet professionals at work**
- **Emphasis on the integration of applied environmental science, legal and socio-economic perspectives to achieve sustainable land management solutions**
- **A focus on the practical application of theory to give you the skills to succeed**

BSc (Hons)
UCAS code D462

88 – 104 UCAS points

Year 1
- Skills for the Environmental Scientist
- Introduction to Ecology
- The Natural Environment and Climate Change
- Introduction to Sustainable Agriculture and the Environment
- Environmental Survey Technologies and Field Skills
- Contemporary Countryside and Environmental Issues
- Rural Geography and Economics
- Valuation and Estate Management

Year 2
- Research Methods for Environmental Scientists
- Planning and Development
- Wildlife Identification and Conservation
- Pollution, Ecology and Brownfield Reclamation
- Professional Services for the Environmental Land Manager
- Farming Systems and Environment
- Climate Change and Environmental Valuation

Options
- Forestry and Forest Products
- Forestry, Game and Land Management

Year 3
Placement year

Year 4
- Honours Research Project (30 credits)
- Geographical Information Systems and Land Use
- Environmental Assessment and Management
- Ecosystems and Environmental Resource Management
- Property Development and Management
- Developing and Managing Environmental Projects

Options
- UK and Global Forest Systems
- Sustainable Energy
- Events Management and Diversification

Modules are 15 credits unless otherwise stated.

If this course is of interest to you look at Wildlife Conservation and Environmental Management on page 75.

harper.ac.uk/enviro21

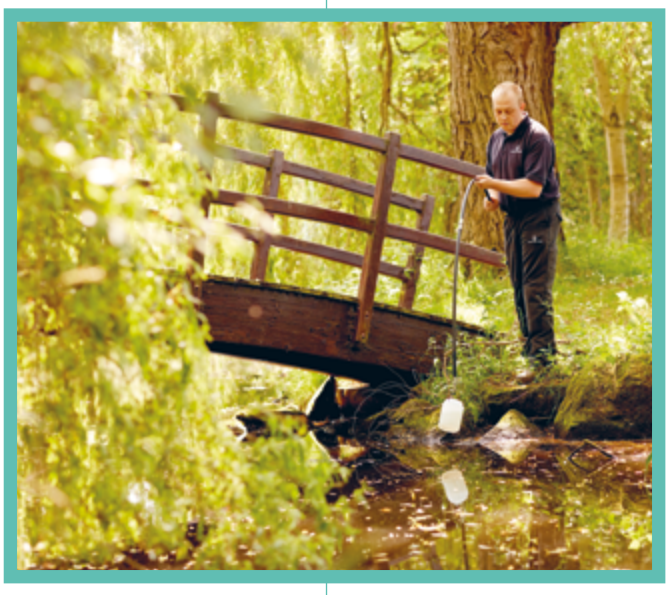
Careers

There are many career opportunities in the field of Environmental Land Management including:
- Environmental Surveyor and Auditor
- Environmental Manager
- Forestry Officer
- Land-based and Environmental Consultant
- Renewable Energy Officer
- Countryside Manager
- Environmental Education Officer

Employers in the sector include:
- Environment and land-based consultancies
- Land agents
- Statutory bodies like the Environment Agency and Natural England
- Local authorities
- National Trust
- Wildlife Trusts

Skills

Skills you will learn include:
- Project planning
- Sustainable agriculture and estate management
- Survey skills and habitat management for wildlife
- Decision-making and negotiation with land managers
- Environmental valuation and mitigation
- Property development and diversification opportunities
- Climate change adaptation and renewable energy strategies
- Pollution control and monitoring
- Environmental management systems
- Species and habitat identification
- Forestry and game management



Want to find out more?

To learn more about our courses, visit the below links on our website.

AGRICULTURE

Agriculture
harper.ac.uk/agric21

Agriculture with Crop Management
harper.ac.uk/agric21

Agriculture with Animal Science
harper.ac.uk/agric21

Agriculture with Farm Business Management
harper.ac.uk/agric21

Agriculture with Mechanisation
harper.ac.uk/agric21

ANIMAL SCIENCES AND VETERINARY PROFESSIONS

Animal Behaviour and Welfare
harper.ac.uk/animals21

Animal Health and Welfare
harper.ac.uk/animals21

Animal Production Science
harper.ac.uk/animals21

Veterinary Bioscience
harper.ac.uk/animals21

Veterinary Nursing
harper.ac.uk/vetnurse21

Veterinary Physiotherapy
harper.ac.uk/vetphys21

Veterinary Medicine and Surgery
harperkeelevetschool.ac.uk

Wildlife Conservation and Environmental Management
harper.ac.uk/wildlife21

Zoology
harper.ac.uk/zoo21

APPLIED BIOLOGY

Applied Biology
harper.ac.uk/bio21

BUSINESS MANAGEMENT

Business Management with Marketing
harper.ac.uk/business21

Agri-Business
harper.ac.uk/business21

Agri-Food Marketing with Business
harper.ac.uk/business21

ENGINEERING

Agricultural Engineering
harper.ac.uk/eng21

Automotive Engineering (Off-Highway)
harper.ac.uk/eng21

Mechanical Engineering
harper.ac.uk/eng21

FOOD TECHNOLOGY AND INNOVATION

Food and Consumer Studies
harper.ac.uk/food21

Food Technology and Product Development
harper.ac.uk/food21

Food Technology with Nutrition
harper.ac.uk/food21

LAND, PROPERTY AND ENVIRONMENT

Rural Enterprise and Land Management
harper.ac.uk/land21

Rural Property Management
harper.ac.uk/land21

Real Estate
harper.ac.uk/land21

Environmental Land Management
harper.ac.uk/enviro21

Apprenticeships matter

All Harper Adams degrees prepare students for the world of employment, but a degree apprenticeship takes this to the next level.

If you already know what job you want to do after university, a degree apprenticeship is the perfect way to establish a firm foot on the career ladder. You'll also avoid tuition fees and get paid for the work you do.

Harper Adams University offers a range of undergraduate Degree Apprenticeship programmes. Each has been developed in conjunction with employers to deliver the best possible outcomes for both students and businesses. They focus on work-integrated learning, allowing you to gain vocational qualifications relevant to your career. Not surprisingly, there is strong competition for places. But if you miss out, you can follow the same subject by applying to an ordinary degree programme. So, you have nothing to lose and everything to gain through applying.

To start a degree apprenticeship, you must first secure an apprentice position with one of the companies willing to sponsor your training. You cannot apply directly to Harper Adams, but we can direct you to vacancies via our apprenticeships web pages. We continue to work with employers to develop new apprenticeships programmes which will be announced when they secure approval. Please keep checking back to our website for updates.

harper.ac.uk/apprenticeships

Food and Drink Advanced Engineer Degree Apprenticeship
Incorporating BEng (Hons) Food Engineering

5 years part-time

Careers
– Asset care
– Automation engineer
– Infrastructure manager
– Mechanical engineer
– Production engineer
– Production management
– Process development

Food Industry Technical Professional Degree Apprenticeship
Incorporating BSc (Hons) Food Science and Technology

5 years part-time

Careers
– Development technologist
– Hygiene manager
– Food technical manager
– Product innovation
– Quality manager
– Shift quality manager

Geospatial Mapping and Science Degree Apprenticeship
Incorporating BSc/BSc (Hons) Geospatial Sciences

5 years part-time

Careers
– Geospatial engineering
– Hydrography
– Utilities
– Geospatial surveying

Chartered Surveyor (Rural) Degree Apprenticeship
Incorporating BSc (Hons) Rural Enterprise and Land Management

5 years part-time

Careers
– Chartered Surveyor
– Estate agent
– Land and Estate manager

A solid foundation

Helping you to enter higher education.

For students who want to work towards a degree but don't meet the entry requirements, extended foundation degrees and extended degrees provide a pathway to degree study. All routes involve an additional preparatory year, success during which will determine which courses you can progress to. All extended routes have minimum requirements at GCSE level. To find our whether you might qualify, contact our admissions team on:

E: admissions@harper-adams.ac.uk
T: 01952 815 000

FdSc Agriculture (Extended) (D407)

40% overall in year 0 and 10 weeks' work experience before starting year 1

Progress to one of:
- FdSc Agriculture
- FdSc Agriculture with Mechanisation

60% overall in year 0 and 10 weeks' work experience before starting year 1

Progress to one of:
- BSc (Hons) Agriculture
- BSc (Hons) Agriculture with Mechanisation
- BSc (Hons) Agriculture with Animal Science
- BSc (Hons) Agriculture with Crop Management
- BSc (Hons) Agriculture with Farm Business Management

60% overall and satisfactory interview with member of Engineering course team

Progress to one of:
- BEng (Hons) Agricultural Engineering
- BEng (Hons) Automotive Engineering (Off-Highway)
- BEng (Hons) Mechanical Engineering Management

BSc Animal Behaviour and Welfare (Extended) (XD04)

40% overall in year 0

Progress to:
- BSc Animal Behaviour and Welfare

60% overall in year 0

Progress to one of:
- BSc (Hons) Animal Health and Welfare
- BSc (Hons) Animal Behaviour and Welfare (Clinical or non-Clinical)

65% overall in year 0

Progress to:
- BSc (Hons) Animal Production Science

BSc Applied Zoology (Extended) (XD05)

40% overall in year 0

Progress to:
- BSc Applied Zoology

60% overall in year 0

Progress to one of:
- BSc (Hons) Applied Zoology
- BSc (Hons) Zoology with Entomology
- BSc (Hons) Zoology with Environmental Management

BSc Veterinary Bioscience (Extended) – Pathway 1 (XD03)

40% overall in year 0

Progress to:
- BSc Veterinary Bioscience

60% overall in year 0

Progress to:
- BSc (Hons) Veterinary Bioscience

60% overall in year 0 and Biology A-level at grade C or equivalent and 4 weeks' work experience before starting year 1

Progress to:
- BSc (Hons) Veterinary Physiotherapy

75% overall in year 0

Progress to:
- MSci Veterinary Bioscience

60% overall in year 0 and 4 weeks work experience before starting year 1 and completion of fitness to practice documentation

Progress to one of:
- BSc (Hons) Veterinary Nursing
- BSc (Hons) Veterinary Nursing with Small Animal Rehabilitation
- BSc (Hons) Veterinary Nursing with Companion Animal Behaviour

BSc Veterinary Bioscience (Extended) – Pathway 2

75% overall in year 0, A-level requirements and satisfactory interview with BVetMS course team prior to entry

Progress to:
- Bachelors in Veterinary Medicine and Surgery (BVetMS) at the Harper & Keele Veterinary School

BSc Wildlife Conservation and Environmental Management (Extended) (XD07)

40% overall in year 0

Progress to:
- BSc Wildlife Conservation and Environmental Management

60% overall in year 0

Progress to one of:
- BSc (Hons) Wildlife Conservation and Environmental Management
- BSc (Hons) Environmental Land Management
- BSc (Hons) Rural Property Management
- BSc (Hons) Rural Enterprise and Land Management

60% overall and satisfactory interview with member of Engineering course team

Progress to one of:
- BEng (Hons) Agricultural Engineering
- BEng (Hons) Automotive Engineering (Off-Highway)
- BEng (Hons) Mechanical Engineering Management

BSc Business Management with Marketing (Extended) (XD08)

40% overall in year 0

Progress to:
- BSc Business Management with Marketing
- BSc Agri-Business
- BSc Agri-Food Marketing with Business Studies

60% overall in year 0

Progress to:
- BSc (Hons) Business Management with Marketing
- BSc (Hons) Agri-Business
- BSc (Hons) Agri-Food Marketing with Business Studies

60% overall and satisfactory interview with member of Engineering course team

Progress to one of:
- BEng (Hons) Agricultural Engineering
- BEng (Hons) Automotive Engineering (Off-Highway)
- BEng (Hons) Mechanical Engineering Management

BSc Food and Consumer Studies (Extended) (XD09)

40% overall in year 0

Progress to:
- BSc Food and Consumer Studies

60% overall in year 0

Progress to:
- BSc (Hons) Food and Consumer Studies
- BSc (Hons) Food Technology and Product Development
- BSc (Hons) Food Technology with Nutrition

Postgraduate study

Postgraduate study routes at Harper Adams University.

- Advanced Veterinary Nursing
- Agricultural Economics
- Agricultural Law
- Agricultural Sciences and Production Systems
- Agroecology
- Applied Mechatronic Engineering
- Business Economics
- Conservation and Forest Protection
- Data Science
- Ecological Applications
- Engineering Business Management
- Entomology
- Food Industry Management
- Forestry Management
- Integrated Pest Management
- International Agri-Business and Food Chain Management

next steps

- Master of Research
- Plant Health and Biosecurity
- Plant Pathology
- Renewable Energy
- Ruminant Nutrition
- Rural Estate and Land Management
- Rural Property Management
- Veterinary Pharmacy
- Veterinary Physiotherapy

Plus, a suite of programmes for veterinary surgeons to develop specialisms, delivered in association with Improve International.

harper.ac.uk/postgrad

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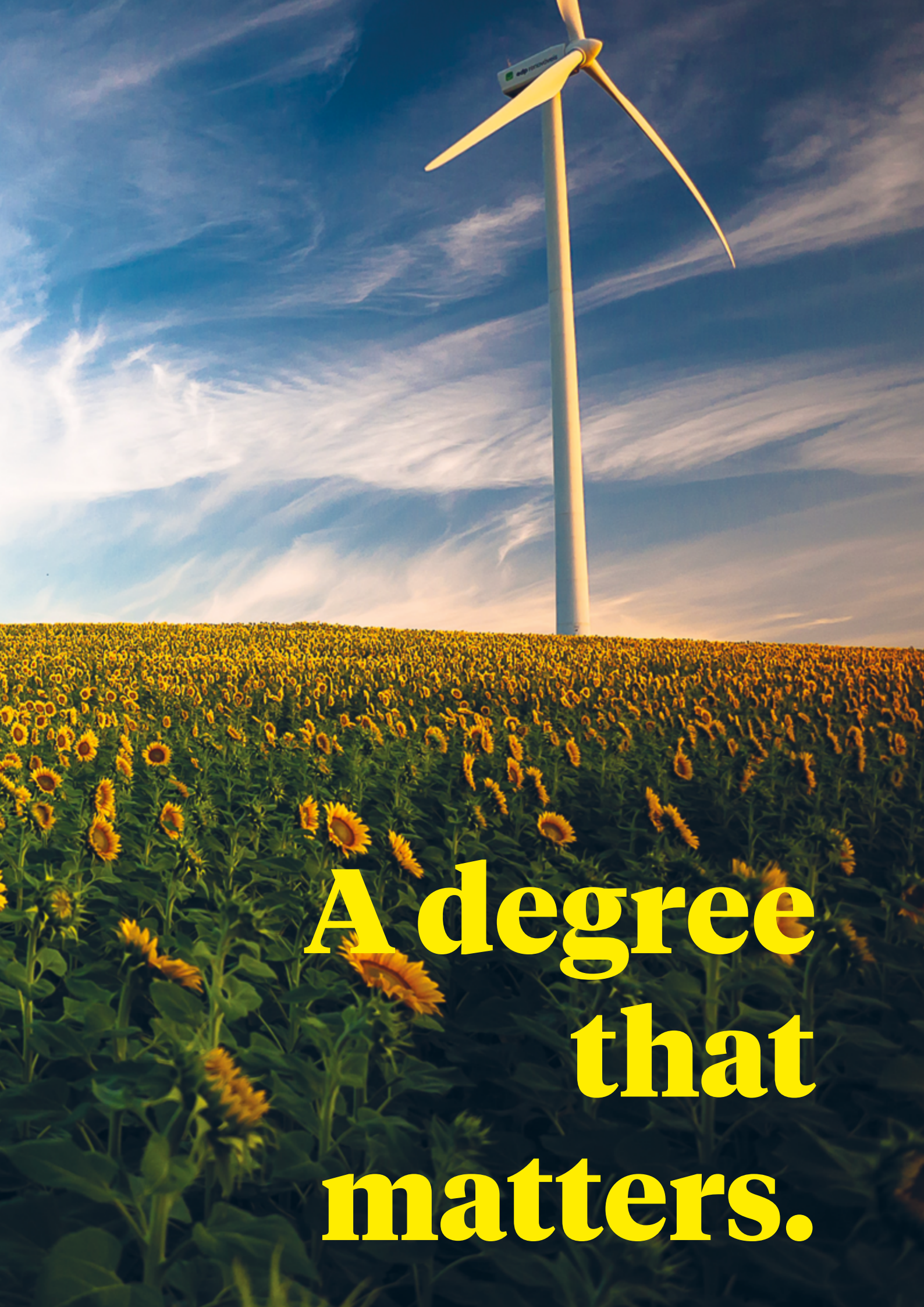
Disclaimer
Whilst every opportunity has been taken to ensure the accuracy of the information in this prospectus Harper Adams University wishes to emphasise that the content is regularly reviewed and is subject to change from time-to-time as required. We do not accept responsibility for any errors, misdescription or subsequent alterations that may be necessary. Our courses and services undergo reviews to ensure they are flexible, relevant and as up-to-date as possible. It is the responsibility of potential students to check the accuracy of relevant facts with the appropriate department before entering any financial or other commitment based upon them. To note the information contained within the prospectus may have changed since it went to print in January 2020. For the most up-to-date information about Harper Adams University please visit www.harperadams.ac.uk and the Harper and Keele Vet School **harperkeelevetschool.ac.uk**


A degree
that
matters.

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Shropshire, TF10 8NB
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