

A degree that matters.

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Undergraduate Prospectus 2020

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



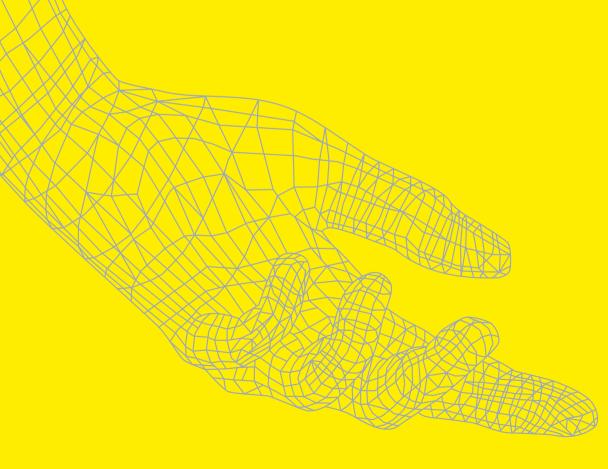
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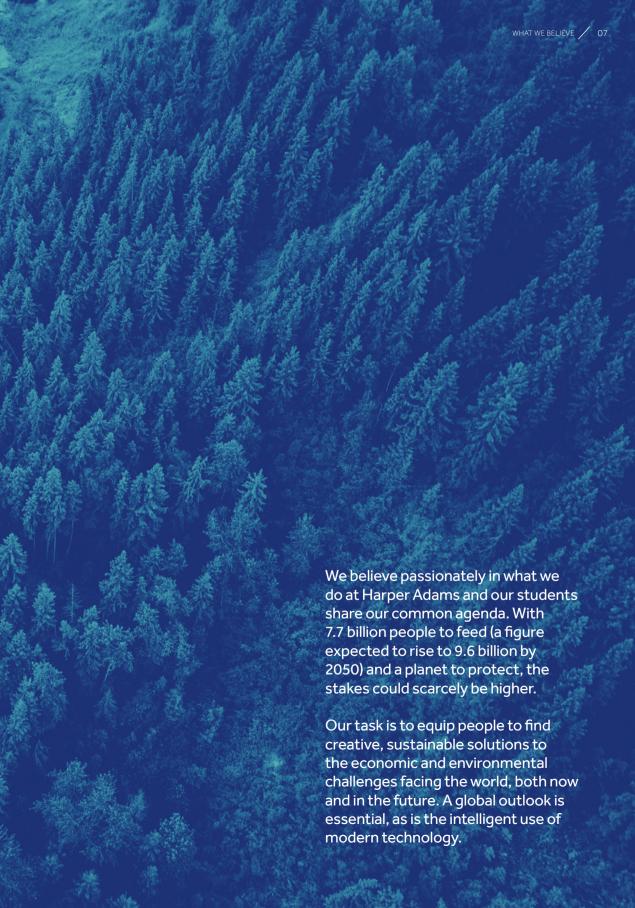
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Harper Adams has one clear purpose: to tackle the global challenges of the future, today.

Alleviating drought in the Middle East



14 of the 33 countries most likely to face water shortages by 2040 are in the Middle East.

For farmers in the region, this means a reliance on irrigation systems, but these often lead to issues with run-off, where water isn't absorbed by the soil. The result is a loss of crops and damage to the soil itself.

Harper Adams PhD researcher Ghazwan Mahmood is responding by developing best practices for farmers to tackle this issue. Working in our Princess Margaret Laboratories, covered Soil Hall and on the University farm, Ghazwan has been testing the effects that different soil treatments can have on water run-off. Alongside this, he's been designing and developing a water run-off sampler to measure his results in a way that's more accurate and cheaper than current systems.

Ghazwan has identified three soil treatments that create the best conditions for saving water.

His work has received funding from the Ministry of Higher Education/University of Anbar in Iraq – one of the nations that stand to benefit directly from his work. Equipment for the study has also been provided by Valmont — one of the world's leading manufacturers of irrigation equipment.



From our tranquil setting in the heart of the English countryside, we're connected to mankind's most urgent survival issues. We've connected with drone and robotics companies in China, agricultural machinery innovators in India and Africa's leading business school. In 2020 we will launch the UK's ninth vet school.

We are proud of our TEF Gold standard teaching and 97.2% graduate employment rate. Being ranked the UK's Best Modern University and consistently scoring high for student experience is rewarding, but seeing our graduates change the world excites us even more. Traditional universities play their part, but Harper Adams looks further forward. Today's challenges are global and there's no



Harper Adams is the University the world needs.

Sustainability meets science



Sometimes innovation can involve reaching back to the distant past.

As our population grows, so does the urgency of the challenge to create nutritious food in the most sustainable way possible. Food degree graduate Charlotte Reynolds responded by noticing something that had been overlooked. She took an underused crop and turned it into a new superfood snack.

Growing lupins requires just 50 litres of water per kilogram of crop.

While writing her dissertation, Charlotte became intrigued by the lupin — a pulse that has been a source of food for more than 6,000 years. It is grown in the UK, but in quantities that are virtually undocumented. By combining lupin flour with potato starch (a by-product of the crisp industry), she created Lupin Bites — a new snack that's high in protein, low in fat and gluten-free. They're also delicious.

Charlotte didn't just create a new type of crisp for the growing healthy foods market. She created a product that can be made sustainably. Growing lupins requires just 50 litres of water per kilogram of crop, compared with beef which requires 13,000. They require fewer fertilisers and can even be grown in drought-prone areas.

Lupin Bites have won awards from the Global Pulse Confederation and been showcased at the Institute of Food Technology in Chicago.



97.2% graduate employment¹

BEST MODERN **UNIVERSITY**²

89% student satisfaction Joint 8th in the UK³

TEF GOLD TEACHING AWARD⁴

BEST **IN UK FOR**

STUDENT SUPPORT. JOB PROSPECTS. COURSES AND LECTURERS⁵

Queen's **Anniversary** Prize 2017

recognises the university's pioneering work in developing agricultural technologies, and associated alternative farming methods, to deliver global food security.

The modern world needs a unique approach.

Our four-part course structure is designed to meet this need.

Year 1: Discover

your passion in a wide range of lectures and seminars.

Year 3: Apply

your knowledge on your placement year.

Year 2: Develop

your interests by studying a more refined curriculum.

Year 4: Deliver

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

*Fee for 2019/2020

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.

Links with industry

Harper Adams is proud to be a trusted partner of many industry leaders. We pride ourselves on our ability to offer you the best opportunities in your chosen field, and know we can assure companies that we are providing them with committed and versatile students.

Companies that offer placement years to Harper students include JCB, Bulmers, and Chester Zoo among hundreds of others, both in the UK and across the globe.

Our long-standing partnership with Dairy Crest resulted in the opening of the Dairy Crest Innovation Centre in 2016, a facility used to enhance teaching and knowledge exchange in the food sector.



Off-highway engineering



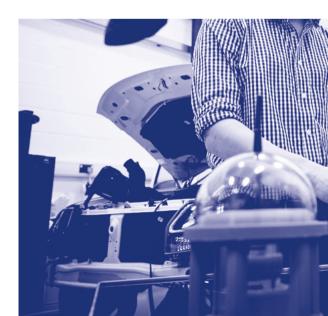
"The placement year allowed me to scope out the industry area before making a longterm commitment."

James, from Essex, graduated from Harper Adams with an MEng degree in off-highway mechanical engineering. He spent his placement year working for QT Services (manufacturers of Dakar race cars) as a CAD engineer and race mechanic. He was responsible for designing new components and worked extensively on the Dubai edition race car. His responsibilities included design

visualisations for customers requiring specific vehicle graphics and decals, and maintaining cars between stages during race events.

"The best things about the placement were gaining experience in a racing environment, making friends and connections, and succeeding under pressure," he says. "The placement year allowed me to scope out the industry area before making a long-term commitment. I am constantly asked about it by prospective employers. It gave me the opportunity to gain non-theoretical experience and has provided me with an excellent reference. It also enhanced my self-confidence."

James would recommend Harper Adams to anyone interested in pursuing a career in engineering. "The University turns out engineers who specialise in real problems," he says, "not textbook exercises. It has given me the ability to perform in real-life situations."



Setting up your own **business**

Lots of our students have set up successful businesses of their own, either while studying with us or after graduation. We have modules, workshops and advice to help you become your own boss. Agriculture graduate Joshua Dowbiggin says "I would 100% recommend other students to set up their own businesses whilst at university. It immediately sets you apart from the crowd."

CAREERS SERVICE

Whether you already know the career you want to pursue or you are looking for further guidance. the Careers Service is here for you both during your time at Harper Adams and after you graduate. Practical advice and support include the following:

- Online vacancy service
- Careers and placement fairs
- Subject specific careers events with employers and alumni
- One-to-one advice
- Workshops on creating CVs, applying for jobs, preparing for interviews and psychometric tests
- Job hunting skills
- Applying for further study
- **Business start-ups**







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



A degree that matters.

Sustainability Biodiversity 4 **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

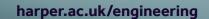
Engineering

Harper Adams engineering graduates are industry-ready from the first day on the job. Of those who graduated in 2017, 85% are already in graduate level roles.



- · Agricultural Engineering
 - MEng
 - BEng (Hons)
- · Automotive Engineering (Off-Highway)
 - MEng
 - BEng (Hons)
- · Mechanical Engineering
 - MEng
 - BEng (Hons)
- Product Support Engineering
 - BSc (Hons)
- Food and Drink Advanced Engineer
 - Degree Apprenticeship

All courses except Degree Apprenticeship an accredited by IAgrE



The power to shape the future



Do you enjoy solving problems? Are you creative, always coming up with new ideas and designing solutions? Then you're already on the way to becoming an engineer.

[&]quot;There is a lot of confusion about what an engineer actually is," says Ellie Krayenbrink, an engineer with Jaguar Land Rover Special Vehicle Operations (JLR SVO). "It pushes me to achieve new limits every day. It's exciting, challenging and extremely rewarding." Ellie knew from an early age that engineering was the career for her, and studied both BSc (Hons) Agricultural

Engineering and an engineering management Masters degree at Harper Adams.

She went on to become a Platform Engineer, a role for highly skilled generalists who understand many different processes within a company, and can bring them together to ensure a finished product.

"My parents always said I was born to be an engineer. From a young age I was always analysing how things would function. I have also always been extremely impatient with inefficiency! I was not the most traditional academic child at school. I thrived in lessons such as design and technology but was fairly average in English language.

"I believe it is not always an engineer's job to know the answer but instead their ability to define the problem and identify an appropriate solution. This will require others' knowledge. No one person can know everything. There is no shame in not knowing the answer; the key is having the ability to find it out."



Engineers have the power to shape the future, and the responsibility for doing it. Are you up for the challenge?

> The world needs more engineers. Yet employers say many graduates lack practical experience, leadership skills and technical expertise. Harper Adams engineering graduates are industry-ready from the first day on the job.

> These courses are challenging – you'll need real motivation and drive, and have to be prepared to put in the hours. But the rewards are worth it. And you'll get a huge amount of help and guidance, with staff readily available for one-to-one study help.





Reducing nitrates in the water supply



"The great thing about Harper students is that they have both the practical skills and the academic ability."

3rd year geographer Jordan Rushton is one of several Harper placement students working with Wessex Water to analyse soil and water, feeding back valuable data to farmers to moderate the use of chemicals in agriculture.

It's a job that didn't exist 15 years ago and is now a growing industry. As Tim Stephens, Senior Catchment Advisor at Wessex Water says, "The great thing about Harper students is that they have both the practical skills and the academic ability – they can translate new knowledge to the farmer."

The last 70 years of agriculture has been defined by the drive to higher crop yields, but it has come at a price to the environment. Elevated nitrate and pesticide levels are not just wasteful but potentially dangerous if they leach into the water supply.

However, better understanding of the food/water/energy nexus is transforming the data available to farmers – data which can help minimise the impact of intensive production to the land.



Almost everybody is concerned about the environment these days and rightly so. Pollution, population growth, climate change and habitat loss are posing grave challenges everywhere.

If you want to help tackle these urgent issues, 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 the 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.

COURSES

- · Countryside Management
 - BSc (Hons)

Accredited by the Institute of Chartered Foresters (ICF)

- Countryside and Environmental Management
 - BSc (Hons)

Accredited by Chartered Institute of Ecology and Environmental Management (CIEEM) and Institute of Chartered Foresters (ICF)

- Geography and Environmental Management
 - BSc (Hons) Accredited by Royal Geographical Society
- Wildlife Conservation and Environmental Management
 - BSc (Hons)/BSc
 - BSc (Extended)*

BSc (Hons) accredited by Chartered Institute of Ecology and Environmental Management (CIEEM)

One year top-up programmes from FdSc to

*Subject to validation



"The continuation of civilisatio and the natu world upon which we depend

Sir David Attenborough



Business Management

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

No matter what career path you ultimately take, the business skills you acquire will prove invaluable.

From agriculture to product packaging, the food industry is the largest manufacturing sector in the UK.

harper.ac.uk/business

A natural progression from undergraduate to business professional



"The prospect of running my own business has always been something that's interested me."

Entrepreneur and Business Management with Marketing graduate Kiron Phillips has started his own luxury vodka brand - RK Vodka.

"Vodka is my drink of choice, and seeing a market requesting exclusive products, it inspired me to look into setting-up my own brand.

"I did my placement with BTC Group. They were really supportive of my idea and helped me during the initial steps of starting the business.

"I was looking at marketing to post-millennials for my dissertation and used myself as a case study. I believe social media will be a key way of hitting my target market.

"I'm also using my dad as another case study as he was, and still is, marketing his business to a different audience. One thing that I think is important for a business to do is building rapport with your clients."

RK Vodka is going from strength-to-strength and has featured in Tatler and GQ magazines.









CAREERS

- Accountancy
- Agricultural account manager
- Banking and finance
- Business consultancy
- Business ownership
- Buying and merchandising
- Commodity trading
- Consultant/advisor
- Distribution
- Event management
- Farm inputs and outputs
- Financial management
- Market research
- Marketing
- New product development
- Online technologies
- Personnel management
- Promotion and advertising
- Public relations and journalism
- Purchasing
- Quality management

Land & Property Management

Land and property are the backbones of our economy. But they don't look after themselves. They need careful, creative management.

> Harper Adams Land & Property Management graduates have an employment rate of 97.1%. Of those, 88% are in graduate level roles, and the same proportion moved straight into the profession they had been studying for.

harper.ac.uk/land

Protecting that which matters most



"One of the reasons I chose to study at Harper Adams was because of the placement year."

Chatsworth Estate, in Derbyshire, has long been a popular destination for placement students.

"I thought that having a year working in industry would give me a better understanding of the career I was aiming for, and put me in a better position to apply for a job when I graduate.

"Having done a few weeks of work experience with surveying firms, I felt that I knew enough about the job to decide that I wanted a career as a Rural Chartered Surveyor, but not enough real experience that would mean I would be of much use to a future employer.

"Working for Chatsworth was fantastic. One thing that drew me to the job was the chance to get out of the office, and Chatsworth is certainly somewhere you can do that. I was given jobs by the Land Agents and more or less managed my own time, so I could spend the morning walking a farm doing a record of condition for a new tenancy, and the afternoon in the office mapping and drawing up heads of terms.

"Being such a diverse estate, I was able to have a really varied role and get involved with all sorts, from farms and properties to holiday cottages to the fishery. I thoroughly enjoyed it!"

Maddi is now a rural Chartered Surveyor at the National Trust's Altrincham Hub.







If you would relish finding practical solutions to the issues facing our towns and countryside and their people, a degree in land and property management could be right for you. Careers in surveying and land agency are exciting, challenging and incredibly varied, with no two working days the same.

Harper Adams has an outstanding reputation in this field, with expert chartered surveyors, foresters and town planners on the staff. But you won't just learn in the classroom. You'll see the university estate, including a commercial farm, in action and there are numerous visits to local farms and estates.

CAREERS

- Large national land agency and property
- Small professional practices
- Estates
- Livestock auctioneers
- Utility companies
- Charities
- Local authorities

"If you want a areer where ou often ave to think utside the box d come up opractica problem look no furt

Andrew Black, senior lecturer and HAU alumnus

Applied Biology

If you want to make a positive difference to the world, a degree in Applied Biology could be perfect for you.



Discovering a career path on placement



"Placement gave me confidence and knowledge of the research industry, which makes me stand up head and shoulders above other graduates without any experience."

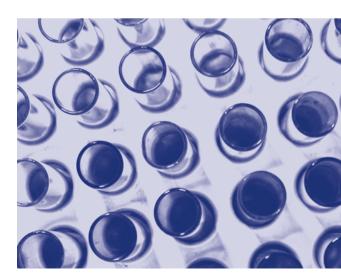
Harper Adams alumna Rebecca McLean spent her placement year with the Animal Health Trust as a Research Assistant, during which she worked within the Immunology department.

Immunology, the study of immune systems in all organisms, was not something that Rebecca had considered before her placement year, but she found that she loved the laboratory environment so much that she began a career in immunology research.

"Most days I would be collecting samples required for my laboratory work," explained Rebecca, "which meant communicating with many different departments, followed by an afternoon of working on my research project in the laboratory."

"Each day on placement I would plan what laboratory work I had to undertake then at the end of each day I would write up all my results. It gave me confidence and knowledge of the research industry which makes me stand up head and shoulders above other graduates without any experience."

Rebecca was also able to write her honours research project – usually completed during students' final year – whilst on placement, which freed her up to concentrate on her assignments and exams when she returned to Harper Adams.



CAREERS

- Animal pharmaceuticals
- Biotechnology project management
- Environmental monitoring
- Food product development
- Life sciences research
- Roles connected to agriculture
- Education, reach-out and technology transfer

Applied Biologists solve real world environmental problems. develop foods, improve nutrition and design medicines for both humans and animals.

These are hands-on science degrees. In our laboratories, on our farm and on your placement, you'll study molecular, cellular and whole organism biology of micro-organisms, plants and animals.

You'll graduate with the in-depth knowledge and practical skills for a rewarding career in fields such as research and development, biotechnology, pharmaceuticals, food or environmental science. These are qualifications that put you in a great position to make your mark.





A dairy where the cows are in control



Mark Rutter, Professor of Applied Animal Behaviour, outlines the new government-funded robotic dairy facility at Harper Adams, which runs in parallel to the main dairy.

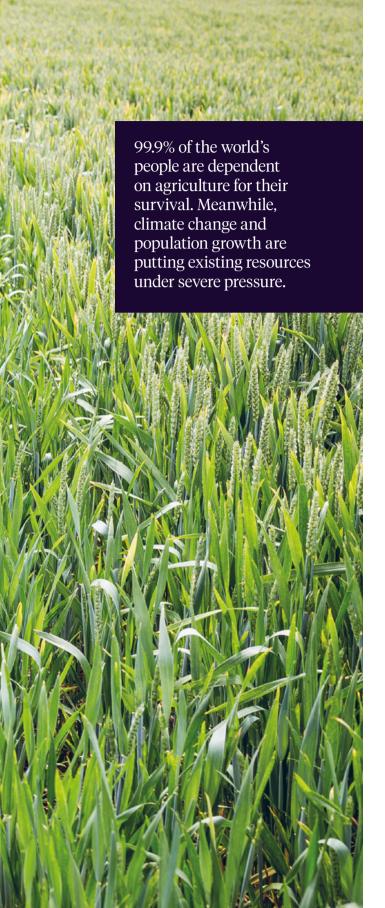
[&]quot;The cows choose themselves when to come in and when to be milked," he explains. "We generally get higher levels of production from robotic systems because the cows are, on average, milked a little bit more frequently."

The other great advantage to this system is that it allows the animals to exhibit their natural behaviours. This enables Mark to find out much more about their health and general condition than would be possible under a traditional system, in which the farmer would have a 'one size fits all' approach, dictating when milking occurs to suit his or her self rather than the cows.

Aside from the milking robot, the key piece of technology is something Mark describes as "a Fitbit for cows". It contains an accelerometer and chips similar to those found in smartphones. The device monitors the animals' movements. as well as their body temperatures and heart rates. This enables the team to pick up on any health problems early. It also makes it possible to determine the precise moment when a cow comes into oestrus. This makes artificial insemination much more efficient than it would otherwise be. Mark is working closely with the agri-tech companies which manufacture the monitoring systems, testing them under carefully controlled conditions so that they can be refined and improved.

One of the great things about Harper Adams, Mark believes, is the scope it gives students for observing research in practice and interacting with the researchers. "It's a great opportunity to work with commercial companies to develop these products," he adds.





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.

Engaged with vital issues such as food security, protecting the environment, and applying new technologies to improve efficiency, our graduates are proof that the agriculture industry offers a bright future.

Are you ready to join them?

CAREERS

- · Agronomist
- · Animal nutritionist
- · Business owner
 - Farm business consultant and advisor
- Dairy specialist
- Estate manager
- · Farm manager
- Field sales specialist
- · Mechanical engineer
- · Teacher

Animal & Veterinary Sciences

COURSES

- Animal Behaviour and Welfare (Clinical)
 - BSc (Hons)

Honours with CCAB accreditation

- Animal Behaviour and Welfare (Non-clinical)
 - BSc (Hons)/BSc
 - BSc (Extended)
- · Animal Health and Welfare
 - BSc (Hons)
- · Animal Production Science
 - BSc (Hons)
 - MSci
- · Bioveterinary Science
 - MSci
 - BSc (Hons)/BSc
 - BSc (Extended)
- Applied Zoology
 - BSc (Hons)/BSc
 - BSc (Extended)*
- · Zoology with Entomology
 - BSc (Hons)
- Zoology with Environmental Management
 - BSc (Hons)

- Veterinary Nursing
 - BSc (Hons)/BSc
 - BSc (Extended)*
- Veterinary Nursing with Companion Animal Behaviour
 - BSc (Hons)
- Veterinary Nursing with Small Animal Rehabilitation
 - BSc (Hons)
- Veterinary Physiotherapy
 - BSc (Hons)
 - BSc (Hons) (Extended)*

BSc (Hons) with AHPR accreditation

- · Veterinary Medicine
 - BVetMS (Extended)*

harper.ac.uk/animals harper.ac.uk/zoology harper.ac.uk/vetnursing harper.ac.uk/vetphys

*Subject to validation

Working to secure the well-being of captive animals



"For zoo jobs experience is everything and being an intern at Chester looks really good on your CV."

Carrie, 25, from Orkney, always dreamed of becoming a zoo keeper, but assumed it would be impossible owing to her lack of experience. Now, after her year's work placement as an intern at Chester Zoo, she is well on her way to fulfilling her ambition.

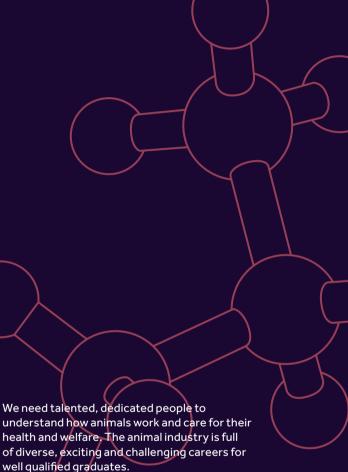
She was struck by how much support she received from the lecturers here. The practical experiences the University offers have also proved invaluable. "The facilities that are available on the farm and at the Companion Animal House (CAH) have given me the opportunity to develop confidence and skills in working with a wide range of species," she says.

The aspect of Carrie's course that really sped her on her way though was her placement. "For zoo jobs experience is everything and being a year intern at Chester looks really good on your CV - the number of people leaving the scheme either with jobs or returning to further education in my year was nearly 100%."

The internship was very varied. She might begin a day by cleaning out the giraffe and red river hog houses, then weighing the agoutis, then giving the pudu deer a glitter feed for a research project where the zoo needed to identify faeces from each individual.

When Carrie got back to Harper Adams, she wrote her dissertation on a giraffe at Chester with which she'd developed a special relationship.





understand how animals work and care for their health and welfare. The animal industry is full of diverse, exciting and challenging careers for well qualified graduates.

There will be lots of applied work in our extensive laboratories, the commercial farm on-campus, in our Companion Animal House, the Veterinary Services Centre and the new Centre for Animal Health and Wellbeing, opening in 2020. Class sizes are small, and you'll receive plenty of personalised guidance and advice. You'll gain confidence to work effectively under pressure and stand out from the crowd.

CAREERS

- Animal scientist
- Animal technician
- Clinical animal
- Developing/selling animal feeds or medicines
- Health and welfare
- Researcher
- Veterinary physiotherapist

- Field trials officer
- Nature conservationist
- Pest control manager
- Agronomist
- Veterinary nurse

Entomology

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."

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

Christina Faulder, Research Entomologist

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.

Harper & Keele

VETERINARY SCHOOL

2020 sees the opening of our new Veterinary School, co-founded with near-neighbours Keele University.

Keele has a long, distinguished history in the life sciences and human medicine, which dovetails nicely with our own pedigree in animal health education and research, including veterinary nursing and veterinary physiotherapy. Both universities are recognised for student satisfaction and graduate employability, and rated TEF gold for teaching excellence.

The course will be made up of bespoke modules specifically designed to meet the demands facing today's veterinary industry. A wide range of placement providers will equip students with the skills and knowledge to succeed in the modern veterinary workplace, and a core of practising vets on the teaching staff will ensure that graduates are "job-ready" and able to hit the ground running.

We very much look forward to welcoming the first cohort of Harper and Keele Veterinary School students.

harperkeelevetschool.ac.uk

"At the end of the you can't do this jo without empath animals. But/ to like peop pina are-imp ou can oday if you can't communicate."

Bill May, of LLM Farm Practice

COURSES

 Bachelor of Veterinary Medicine and Surgery
 - (BVetMS)

Food Technology & Innovation

Whatever you've eaten today, there is a high chance a Harper Adams graduate helped to bring that food to your plate.



Ensuring the safety and quality of food products



Lydia's first role after finishing a food degree was a job many people dream of: she became a professional food taster!

After graduating with a first class honours degree in Food and Consumer Studies, Lydia worked as a home economist at Campden BRI, an internationally recognised independent science and technology organisation. Its key function is to provide an independent and unbiased service to ensure product safety and quality. "I worked

in the Department of Consumer and Sensory Science on the product benchmarking team," Lydia explained. "My main role was to taste and benchmark products and award them an overall eating enjoyment score by appraising and scoring them on their appearance, odour, flavour and texture."

Lydia believes the teaching at Harper Adams, the time she spent on placement and the opportunities made available to her during her time at the university were key to securing such a good first graduate role.

"The food tutors were all excellent with real experience of working in industry," she says. "The smaller sized courses mean staff know all about you, so you get an interactive and consistently high quality teaching standard."

"The trip I went on to Beijing through Harper Adams' cultural exchange programme also helped me as I gained experience of a different food culture, ingredients and recipes. Because of my degree and past work experience, I was able to aim for the highest salary in my band."





CAREERS

- · New product developer
- · Food technologist
- · Professional food taster
- · Technical manager
- Manufacturer/entrepreneur
- Food research and development
- Food buyer
- Market analyst
- · Sales and marketing
- Technical brewer
- Home economist

100% of Harper Adams
University 2017 food
degree graduates were
employed six months
after leaving us, 92% of
them in graduate

Food science offers a vast range of interesting, challenging careers – from creating exciting new breakfast cereals to ensuring your sausages are tasty and safe to eat. The UK's food industry is huge, employing around 3.9 million people, and the global opportunities are endless.

We work with some of the biggest names in the industry to help our students become the food technologists and scientists of the future. You'll learn about all the different stages of the food supply chain, from farming to product development, manufacture and marketing.

When you graduate, you'll be in a great position to forge a successful career.

Apprenticeships matter

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

harper.ac.uk/apprenticeships

COURSE

- Food and Drink Advanced Engineer
 - BEng (Hons)
 - 5 years part-time

CAREERS

- Asset care
- Automation engineer
- Infrastructure manager
- Mechanical engineer
- Production engineer
- Production management
- Process development

COURSE

- Food Industry Technical Professional
 - BSc (Hons) 5 years part-time

CARFERS

- Development technologist
- Hygiene manager
- Food technical manager
- **Product innovation**
- Quality manager
- Shift quality manager

COURSE

- Rural Chartered Surveyor
 - BSc (Hons)
 - 5 years part-time

CAREERS

- Chartered surveyor
- Estate agent
- Land and estate manager

- 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.





At Harper Adams, 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 excellent 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.

Unique facilities

Harper's facilities 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.



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 an intensive beef unit.

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 13 knowledgeable librarians and assistants.

Faccenda Student Centre

Our student hub houses several essential services under one roof, including the Students' Union, Careers Service, Student Services, 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.

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.

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.



- Single site campus in a beautiful rural location
- More than £45m invested in the campus over the last ten years
- All facilities in very close proximity
- Commercial farm on-site

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.

Engineering facilities

Harper Adams has superb engineering facilities, ranging from the Agricultural Engineering Innovation Centre, home to the National Centre for Precision Farming, to our unique Soil Hall, the largest covered field demonstration area in the UK. Other resources include an off-road vehicle demonstration track, JCB design suite, a Z Corporation 3D printer, machinery hall and workshops dedicated to electronics and mechatronic, metal fabrication, and vehicle and machine assembly and maintenance.

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.

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.

Countryside location

Don't be deceived. Our idyllic rural setting hides the fact that we're connected to some of the world's most urgent and cutting-edge issues. Our students enjoy the clean, fresh environment of the English countryside, but to call Harper Adams 'peaceful' wouldn't be strictly true. Robots and drones are as much a part of our community as our resident animals and our students take their play as seriously as their work.



Social, sport, accommodation

Most students live on our safe, rural campus and in the nearby market town of Newport. But - being Harper Adams - this doesn't mean we're not connected to what really matters: sport, societies and a social life that's as energised as our working life.

Social life

From Freshers' Week to fancy dress parties, film nights, music, sports, comedy, day trips, food, and four themed balls a year, the Students' Union makes Harper life fun and friendly.

Off campus you'll find clubs, bars, cafés, shopping, cinema and theatre, recreation, YFCs, outdoor pursuits and many places of interest.

Sports and activities

If sport's your thing, you'll be happy at Harper.

Sports offered on campus include rugby, football, shooting, hockey, netball basketball, pilates, yoga, dance and fencing. 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 and LGBTQ students. There are also societies for debating, conservation, dance, gaming, music and outdoor pursuits.

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

Sports

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

Accommodation

Living on campus in safe, comfortable and affordable accommodation, you'll be close to all of the action. Many of our halls of residence are fully-catered. Self-catered accommodation includes en-suite bedrooms and shared kitchen diner.

Applying

Every effort is made to offer first year students accommodation on campus. Once you've applied for a place on a course here we'll send you more information about applying for accommodation.

Wardens

Each hall has live-in student wardens, who are first aiders and on hand for support and advice.









Supporting your future



Helping you with your learning needs

If you are dyslexic – or think you might be – Harper Adams can help. People with dyslexia think and learn differently from others but we have the tools to support you.

Becky, who is dyslexic, was delighted with the support she received at Harper Adams.

"All the lecturers were very supportive and happy to spend extra time explaining the work."

"When I visited the campus, I found the atmosphere to be very welcoming," she says. "Everyone appeared happy, supportive and full of encouragement. The dyslexia support was outstanding."

Her first impression was confirmed when she got here. "All the lecturers were very supportive and happy to spend extra time explaining the work. I felt such a sense of achievement when I perfected a task. When I did my exams, I remember how helpful both my peers and the staff were."

She left Harper Adams filled with confidence. "It enabled me to carry out my job in a professional manner once I had finished my studies," she says with pride.



Starting university is a big step. Living away from home, making new friends and just finding your feet are normal things to feel nervous about. But we're here to support you and you won't need to keep your problems to yourself. Whatever you need, from support with disabilities or learning difficulties, money worries or homesickness, you'll just let us know and we'll do everything we can to help.



New students arriving in September are eased gently into university life over ten days, to get their university experience off to the best start.

Student Centre

In the Faccenda Student Centre you'll find a friendly team of staff to help with whatever questions you may have.

Learner and disability support

The Learner Support Service is available to all students who feel they need support, whatever your learning needs or disability.

Emotional and mental health

Our wellbeing team can help if you are feeling anxious or depressed, or just need a friendly ear.

Accommodation

The Student Services team can give you advice on all your accommodation needs.

Healthcare

A GP offers appointments, Monday to Friday, in our campus clinic.

Student wardens

As well as out of hours Residences Officers, each hall has one or two live-in wardens.

Study skills

Support is on hand to help you develop skills such as note taking, report writing, referencing, revision and exam techniques. We also have a resident maths tutor.

Personal support

Your course tutor can help you with any personal problems or if you are struggling with your studies.

English language

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

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, and assist you with any other issues you may have.



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

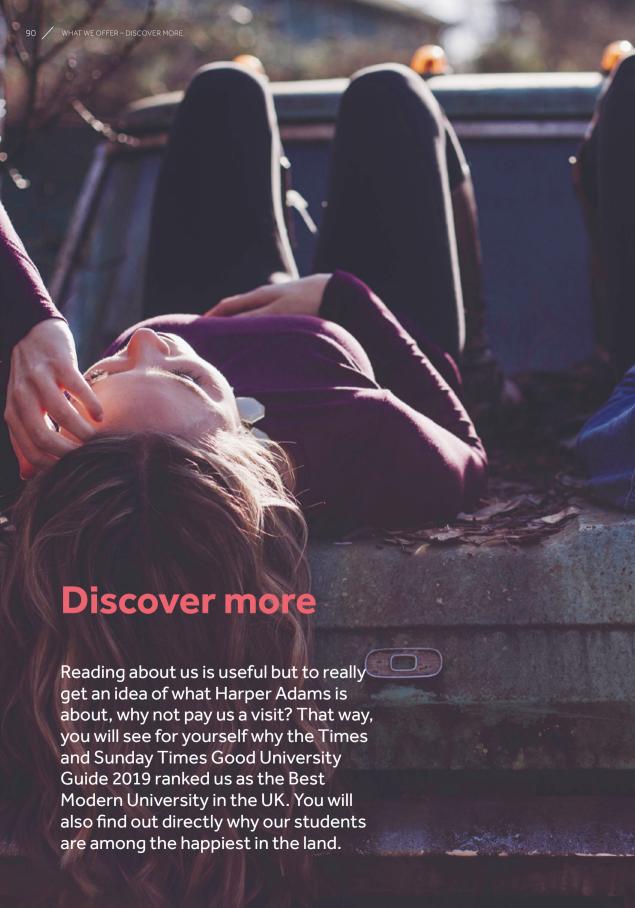
Harper Adams offers, through its Development Trust, a range of scholarship opportunities for students who have secured places on our degree programmes. Some scholarships are funded by donations from private individuals, some come from charitable trusts and others are sponsored by companies, many of which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

In 2017/2018 scholarships worth a total of £418,000 were shared between more than 130 students.

We value all our sponsors and donors. Because of their generosity, the scholarship programme goes directly to support the talent of tomorrow. This provides further support for students who choose to come to study at Harper Adams, in the form of funding but also through highly valuable professional networking, which helps to build individual confidence, industry contacts and placement opportunities. All eligible students are contacted about these opportunities.

"The scholarship is a great achievement that I'm very proud of. The award will certainly help me to achieve my goals at university as well as supporting my ambitions within the profession and with my future career."

- James Jay, 2018 scholar





There are lots of ways to discover **Harper Adams throughout** the year

Undergraduate open days

Come to one of our Open Days and experience all the following:

- Harper Adams
- A tour of the University campus led by existing students, who will be delighted to answer any
- Course hubs featuring talks, 1-1 chats and interactive activities
- An opportunity to ask our friendly staff about courses, university life, facilities and finance

Saturday June 15th 2019 Saturday October 12th 2019 Sunday November 17th 2019

Harper Adams Experience (HAE)

Are you ready for the Harper Adams Experience? Come and join us and experience a sleepover like no other, for only £45. There couldn't be a better way to find out if Harper Adams really is the university for you. You'll get to sample a slice of life at the very heart of our campus and equip yourself with all you need to make one of the most important decisions in your life.

July 7-8th 2019

Field to Fork Festival

In May, we celebrate what agriculture is ultimately all about - food and drink! Sample some of the best produce available and find out what is actually involved in the journey from the field to your plate and glass. There's music, all kinds of entertainment, and it's FREE!

Saturday May 4th 2019

Campus tour afternoons

We hold relaxed afternoon tours of our campus throughout the year. Meet students and staff and find out more about our courses in the environment in which they take place.

Friday March 8th 2019 Friday August 16th (Clearing) 2019 Tuesday September 17th 2019

harper.ac.uk/events

Levels of Study

Course index

28 | Engineering

Agricultural Engineering

- MEng
- BEng (Hons)

Automotive Engineering (Off-Highway)

- MEna
- BEng (Hons)

Mechanical Engineering

- MEng
- BEng (Hons)

Product Support Engineering

- BSc (Hons)

Food and Drink Advanced Engineer

- Degree Apprenticeship

32 | Managing the **Environment**

Countryside Management

- BSc (Hons)

Countryside and Environmental Management

- BSc (Hons)

Geography and Environmental Management

- BSc (Hons)

Wildlife Conservation and Environmental Management

- BSc (Hons)/BSc
- BSc (Extended)*

38 | Business Management

Agri-business

- BSc (Hons)
- FdSc

Business Management with Marketing

- BSc (Hons)/BSc
- EFDP
- FdSc
- BSc (Extended)*

Agri-food Marketing with Business

- BSc (Hons)
- FdSc

44 | Land & Property Management

Real Estate
- BSc (Hons)

Rural Enterprise and Land Management (REALM)

- BSc (Hons)

Rural Property Management

- BSc (Hons)

Rural Chartered Surveyor

- Degree Apprenticeship

50 | Applied Biology

Applied Biology

- BSc (Hons)/BSc
- BSc (Extended)*

Applied Biology with Biotechnology

- BSc (Hons)

54 | Agriculture

Agriculture

- BSc (Hons)
- FdSc
- Extended Foundation Degree Programme (EFDP)

Agriculture with Animal Science

- BSc (Hons)

Agriculture with

Crop Management

- BSc (Hons)

Agriculture with Farm

Business Management

- BSc (Hons)

Agriculture with Mechanisation

- BSc (Hons)
- FdSc

58 | Animal & Veterinary Sciences

Animal Behaviour and Welfare (Clinical)

- BSc (Hons)

Animal Behaviour and Welfare (Non-clinical)

- BSc (Hons)/BSc
- BSc (Extended)

Animal Health and Welfare

- BSc (Hons)

Animal Production Science

- BSc (Hons)
- MSci

Bioveterinary Science

- MSci
- BSc (Hons)
- BSc (Extended)

Applied Zoology

- BSc (Hons)
- BSc (Extended)*

Zoology with Entomology

- BSc (Hons)

Zoology with Environmental Management

- BSc (Hons)

Veterinary Nursing

- BSc (Hons)/BSc
- BSc (Extended)*

Veterinary Nursing with Companion Animal Behaviour

- BSc (Hons)

Veterinary Nursing with Small Animal Rehabilitation

- BSc (Hons)

Veterinary Physiotherapy

- BSc (Hons)
- BSc (Hons) (Extended)

Veterinary Medicine

- BVetMS (Extended)
- BVetMs at the Harper & Keele Vet School (page 43)

66 | Food Technology & Innovation

Food and Consumer Studies

- BSc (Hons)/BSc
- BSc (Extended)*

Food Technology and Product Development

- BSc (Hons)/BSc

Food Technology with Nutrition - BSc (Hons)/BSc

Food Industry Technical Professional

- Degree Apprenticeship

70 | Degree Apprenticeships

- Food and Drink Advanced Engineer
- Food Industry Technical Professional
- Rural Chartered Surveyor

^{*}Subject to validation





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