ONLINE AGRIFOOD TRAINING

SUPPORTING AGRIFOOD PROFESSIONALS TO ADOPT CIRCULAR ECONOMY APPROACHES FOR SUSTAINABILITY AND RESILIENCE

Update your technical skills with single modules, or work your way towards a postgraduate qualification

1872 PRIFYSGOL ABERYSTWYTH UNIVERSITY

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Contents

Introduction

Established in 2012, IBERS Distance Learning has an excellent track record in training agrifood professionals. Our aim is to support the sector to become more sustainable and resilient by helping it to adopt circular economy approaches. Our carefully curated online modules provide you with the latest thinking in sustainability practices and technologies as well as the communication tools to allow you to pass on this knowledge effectively. The IBERS DL programme's 'pay-as-you-go', 'pick-and-mix' format means that you can take individual modules or **build up to a range of postgraduate qualifications***. So, if you are interested in ideas such as: shorter supply chains, waste reduction and tools to identify carbon hotspots, in sectors ranging from meat and dairy to vertical farming, this could be the programme for you!

All our teaching material is online, which means that, provided you have a reasonable internet connection, you can study with us from wherever you are in the world.

*All schemes contain some core elements, so if you intend to work towards a qualification, please check that the modules you would like to take stack up! See the Qualifications & Modules section at the end of this brochure and feel free to get in touch if you need advice on this.

Who are we?

Institute for Biological, Environmental and Rural Sciences (IBERS) at Aberystwyth University

The university was established in 1872 in the historic mid-Wales coastal town of Aberystwyth. IBERS has a unique position as a research and teaching institute within the university. As a research institute it traces its origins back to the Welsh Plant Breeding Station (WPBS) which was established in 1919. IBERS is a world leader in forage and ruminant research and hosts the world class AberInnovation - Future Foods Centre. This expertise, and our close association with Aberystwyth's Behavioural Insights Centre, Vet School and Business School, feeds directly into our teaching programmes.

Is this programme for me?

These courses are aimed at anyone interested in improving the sustainability of the agrifood sector. Our students are drawn from large and small food processors, forward thinking farmers and growers, entrepreneurs, biotech, farm vets, feed sales, consultants, advisors, extension workers, researchers, lecturers, policy makers, brewers, and water authorities, to name but a few!

If you are already working in the agrifood sector, our courses provide an ideal way to ensure that your knowledge is up to date and (if you wish) to gain postgraduate qualifications by studying while you are working. Alternatively, if this is a sector that you would like to move into, our courses provide a route for you to gain the qualifications and knowledge you need to start your new career.

If you have a science degree or at least two years relevant experience, you will be able to sign up for a postgraduate qualification. If you don't have relevant experience or qualifications, you are welcome to register for individual modules; if you complete one successfully you can apply to join one of our MSc programmes, transferring in the credits you have completed.

How is the training delivered?

We have designed our training to be as accessible as possible to students who are working and/or are unable to come to the UK. Unless otherwise stated, each topic comprises a 13-week distance learning module worth 20 credits. These can be taken individually for your own continuing professional development or interest, or you can build them into a postgraduate qualification. If you are considering studying for an MSc, MRes or Doctoral qualification you will be expected to take the 'Research Methods' module (see the 'Qualifications & Modules' section at the end of this guide). The research elements of our Masters and Doctoral qualifications are carried out in your workplace with regular academic supervision. If you are not employed in a relevant sector then you would be expected either to carry out a desk-based study or to negotiate with a local institute or employer to allow you to carry out your research there (this could involve additional costs, not covered by the programme).

How long will it take?

Flexible Part-time: From the initial start date you have a maximum of 5 years in which to complete as many or as few modules as you wish. If, however, you are undertaking a part-time Doctorate, you are permitted an additional two years, giving you seven years in total. An MSc or MRes cannot be completed in less than two years.

Three Years Part-time: This route has been designed for MSc or MRes students in receipt of a UK Postgraduate Study Loan, which requires completion within 3 years. You will be expected to study at a rate of three modules per year.

How much work will I need to do?

Our distance learning modules are designed to be flexible so that you can fit studying around your work and other commitments. A typical Masters student is expected to study for 200 hours, in total, when taking a 20-credit module. Our students report spending 10 to 15 hours a week per module studying. Obviously, the more time and effort you can put in the more you'll benefit from studying the module and the better your grades are likely to be.

If you are working full-time, we strongly **advise against taking more than one module at the same time**, at least until you have completed one and are aware of the workload involved.

Which is the right scheme for me?

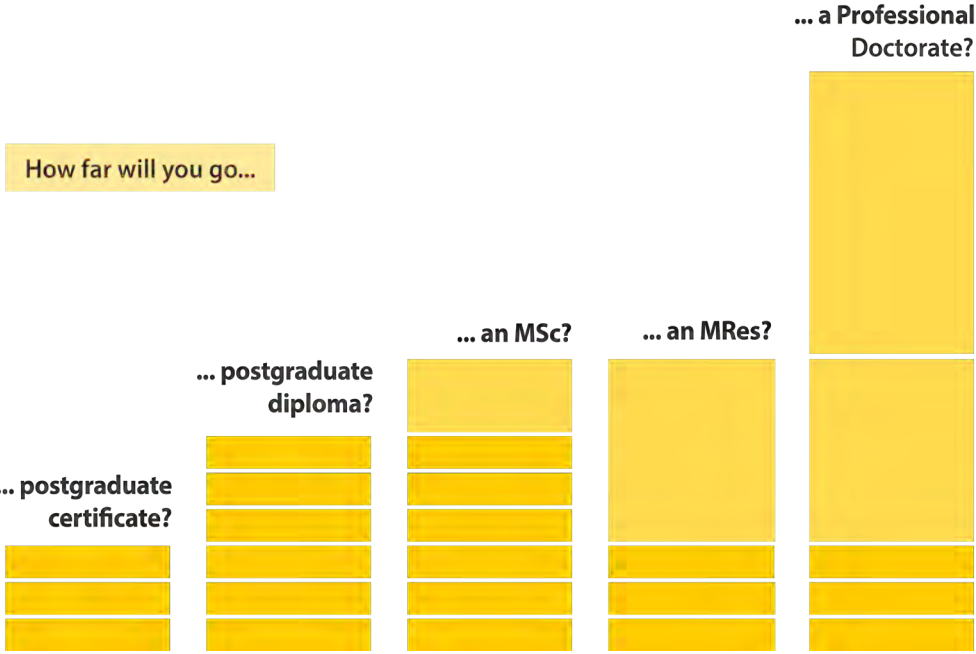
IBERS DL hosts three taught Masters (MSc) schemes, a separate Postgraduate Certificate (PGCert), two Research Masters (MRes) schemes and two Professional Doctorates. Which scheme you choose will depend on (1) whether you want to mainly be taught, or mainly carry out research, and (2) what combination of modules you would like to take. Have a look at the '**What Qualifications can I gain?**' section below for more details.

When can I start?

Modules are delivered in a rolling programme, with start dates in January, May and September. You may begin with whichever of your chosen modules is most convenient. The blocks are repeated each year to allow you to cover all your module choices over your years of study: if you are unable to take one in any year you can take it in the next. If you are working towards a qualification, make sure that your module choices stack up! See the 'Qualifications & Modules' section at the end of this brochure.

What Qualifications can I gain?

You are welcome to take only one or two modules for your own interest. If, however, you would like to gain a qualification, you will need at least 60 credits to achieve a postgraduate certificate (PGCert). Various routes are available, from a PGCert to a Professional Doctorate.



>> Taught Qualifications

A Master of Science (MSc) comprises 120 credits of taught material and 60 credits of dissertation. If you don't wish to go as far as an MSc you can exit with either a Postgraduate Certificate (PGCert) worth 60 credits or a Postgraduate Diploma (PGDip) worth 120 credits.

>> Research Degrees

Research Masters (MRes) - these programmes place a greater emphasis on research, rather than on taught elements. If you undertake the MRes you will need to pass any two 20 credit taught modules plus the Research Methods module. You will then work, with designated supervisors, on a 120-credit dissertation, as described in the 'Work-based Research' section below.

>> Professional Doctorates

The aim of our Professional Doctorate programmes is to offer a qualification which, whilst being equivalent in status and challenge to a PhD, is more appropriate to those who are pursuing a professional rather than an academic career.

It provides a career development path, but it also offers an opportunity for industry to engage in meaningful research. The Doctoral route starts with the MRes (see above) which forms Part I of the doctorate. The Part II/Doctorate is then undertaken for a minimum of three years (part-time) or two years (full-time) and comprises a longer thesis (up to 60,000 words). This thesis will involve experimentation and must embody the methodology and results of original research. It should, ideally, build upon your Part I dissertation.

COURSE THEMES

For core and optional modules see the **Qualifications & Module Choices Table** at the end of the brochure

Agriculture Courses

While each module in this programme covers a different area of technical expertise, they all focus on the challenges facing livestock production systems and on their potential solutions.

Four routes are offered:

- **MSc Sustainable and Efficient Food Production (MSc, PGDip, PGCert)** allows you maximum flexibility if you wish to develop and update your knowledge within specific areas of livestock production.
- **PGCert Livestock Science** provides a very focussed introduction to the livestock sector, with no optional modules.
- **MRes Agriculture** If you would prefer a more research-focussed route, then this route will be of interest.
- **Doctor of Agriculture (DAg)** builds on the MRes Agriculture to provide a deeper dive into agricultural research.

BioInnovation Courses

The **BioInnovation** modules, delivered jointly by Aberystwyth and Swansea Universities, provide access to the latest thinking around the circular economy. They are ideal for anyone with an interest in integrating this ethos into agrifood or biotech practice or policy. Whilst overarching modules such as Waste Resource Management and Sustainable Supply Systems enable students to apply the principles of circularity to a range of sectors, the specialist options provide a deep dive into specific sectors and enabling technologies. Taught (**MSc, PGDip, PGCert**) and research (**MRes** and **DProf**) routes are offered.

Agrifood Innovation Courses

The MSc Agrifood Innovation is a taught scheme (PGDip and PGCert also available) combining communication and leadership skills acquired through workshop-based modules (from Aberystwyth Business School) or through the online Behaviour Change module, with a detailed understanding of the challenges facing the agri-food sector. 60 credits worth of options can be taken from any Aberystwyth modules. The programme is aimed at agricultural and environmental advisers, vets, FE lecturers and technical sales staff. If you currently work in one of these areas, or would like to, this course is the ideal way to develop your advisory skills, update your technical knowledge, and gain a postgraduate qualification while you are working.

Please note that:

- **Business School modules fees are higher than IBERSDL fees.**

WORK-BASED RESEARCH

All research projects involve a detailed review of the academic literature in your discipline, to enable you to identify a research question that responds to a 'gap in the knowledge' that your project can address. You will then design an appropriate strategy to find an answer to that question and you will identify appropriate methods to both collect and analyse data. Both MSc and MRes dissertations build on the research proposal that you will develop during the *Research Methods* module, and you will be given structured academic support from a subject-specialist supervisor.

Research Methods (Taught Module)

This is a core (compulsory) module for all MScs, MRes and Prof Doctorate programmes. It runs three times a year, in January, May and September, for 13 weeks and is worth 20 credits.

It provides a framework for developing your research skills in the context of your own research question and, as such, is generally, but not always, the last taught module taken. You should have a clear idea of at least a broad research topic before undertaking this module. The teaching team will match you with a tutor and with an academic supervisor whose research field is in your area of interest. Your tutor and academic supervisor will then guide you as you develop your ideas. The module will culminate with you designing a research proposal, in collaboration with your employer and supervisor, which you can use as the basis of your dissertation.

Dissertations

Two dissertation routes are available through this programme:

- **MSc Dissertation (60 Credits)** – this forms the research component of the Masters (MSc). It will normally be 12,000 – 15,000 words in length, with a maximum of 20,000 words. Part-time students should expect to complete their dissertation within a year.
- **MRes Dissertation (120 Credits)** - this forms the research component of the MRes and is intended to provide both meaningful research for the industry and, for Professional Doctorate candidates, a solid foundation for the longer Part II thesis. We anticipate that most part-time students will take two years to complete their MRes dissertation. The assessment of this research project is composed of two parts (A & B). Part A is the 'thesis' (not more than 8,500 words) which should be presented for assessment in the form of a research paper (guidance provided) for an appropriate scientific journal, as agreed with your academic supervisor. This part is worth 90% of the overall marks. Part B is a recorded presentation of the project, lasting not more than 12 minutes. This part is worth the remaining 10% of the overall marks.

MICROCREDENTIALS

Grow your knowledge!

If you prefer not to commit extensive time or financial resources to a full module and are seeking a taste of postgraduate learning or knowledge in a specific topic, we offer a wide range of "microcredentials" which are drawn from a selection of our postgraduate modules.

What are microcredentials?

IBERS DL Microcredentials are short, online courses that allow you to enhance your knowledge at your own pace, with the option of earning university credits. When you sign up for a microcredential we will register you for a year, however each microcredential can be completed in 8-weeks

Who are they for?

Our microcredentials are designed for individuals leading busy lives, particularly those working in or interested in the agrifood and biotech sectors. If you fall into these categories, microcredentials could be an ideal fit for you!

How are they assessed?

The learning process within the microcredentials will involve formative quizzes that assess your understanding and progress along the way. At the end of the course, if you are interested in earning university credits, you will have the opportunity to take a course assessment. The type of assessment you will receive depends on the course you have taken. It will either be a 1500-word report or a data set analysis, which needs to meet a pass-mark of 50%. Alternatively, you may have to take a Master's-level test, which requires a pass-mark of 70%.

Full details on how our microcredentials work can be found **here** along with a list of courses available.

TAUGHT MODULES

The following section details the modules in alphabetical order, with planned delivery dates can be found here. in addition, our Agrifood Innovation MSc schemes offer 3 optional modules that are delivered in person by Aberystywth University Business School and are not timetabled to set dates.

The **Qualification & Module Choices section** at the end of the brochure also lists all modules and shows which schemes they fit into.
Unless otherwise stated, **all modules are delivered online**, **run for 13 weeks, and are worth 20 credits**.

MODULES and their CONTENT

Unless otherwise stated, the following modules are all delivered by online IBERS:

Behaviour Change

Learn how to increase the uptake of new knowledge, ideas, products and policies

We face many challenges in our transition to zero-carbon including adapting behaviours to engage with new knowledge, ideas, products, and policies. However, attempts to change people's behaviours are often unsuccessful, even if they acknowledge that the changes would be beneficial. That's because people are not really rational! Behavioural insights are increasingly being used to encourage positive behaviour change in relation to the environmental challenges that we face. Whether it's developing policies to reduce energy consumption, or community projects to reduce food waste, or interventions to encourage recycling, the outcomes can be improved using appropriate behaviour change approaches.

Units of this module can be taken as microcredentials.

Business Management – Rural Entrepreneurs

Equip yourself with the skills and knowledge you need to become a successful entrepreneur.

Key skills include: leadership, business analysis and planning, change management and strategies to identify risk and build in resilience. You will learn how to develop a robust and logical business plan and will use these skills to create one for your own new venture. Because the module requires knowledge of Microsoft Excel, it also contains a short online course on using Excel to help students who may have limited experience of this package.

Coaching and Mentoring for Leaders

(delivered by Menter a Busnes on behalf of Aberystwyth Business School)

Learn how to coach and mentor staff to maximise their potential

This module is workshop based and will be delivered in 2 x two-day teaching blocks, one month apart, followed by a fifth day of practical assessment and overall module review. Students will develop a critical appreciation of the utilisation of coaching in organisations and how and when it can be effectively and appropriately used by middle and senior managers. They will also be given ample opportunity to develop and improve their own coaching skills through supported practice, self-reflection, and group discussions on the benefits, applications and potential pitfalls of coaching. Assessment of the module will be through a coaching session, a reflective journal and a written assignment.

Controlled Environment Agriculture (CEA)

Learn about the latest advances in the field of controlled environment agriculture (CEA) and how to develop controlled growing systems

Controlled Environment Agriculture (CEA) is a technology-based approach to food production, allowing growers/food producers and agri-tech businesses to optimise growing conditions and resource usage. CEA has the potential to increase business resilience and food security in the face of factors such as climate change and land availability. This module introduces students to the latest advances in this rapidly developing area of agriculture, highlighting the benefits of a range of controlled environments and their potential for improved products and food security.

Units of this module can be taken as microcredentials.

Facilitation for Organisation Leadership

(delivered by Menter a Busnes on behalf of Aberystwyth Business School)

Hone your skills in facilitating meetings and events

This module is workshop based and will be delivered in 2 x two-day teaching blocks, one month apart, followed by a fifth day of practical assessment and overall module review. Students will develop a critical appreciation of the rationale for the use of facilitation as a pedagogic tool, an evaluation of the range of models and techniques proposed and used, and will be provided with an opportunity to acquire effective individual facilitation skills, and the knowledge, self-reflection and experience to use facilitation effectively and appropriately. As part of the module assessment, learners will be required to design and facilitate a session and to submit a written assignment.

Fermentation for Food Applications

(Delivered by Swansea University)

Learn how to develop, refine and scale-up processes for brewing, yoghurt and cheese making, probiotic products; or even to gain value from waste.

This module is aimed at anyone interested in developing or refining processes for brewing, yoghurt and cheese making, making probiotic products, or waste valorisation. It begins with an introduction to fermentation processes before looking in detail at the equipment, processes and parameters for successful production. This module does involve the use of maths; however, one-to-one maths help sessions are available if needed.

Genetics and Genomics in Agriculture

Gain a working knowledge of the principles and technologies that underpin modern breeding programmes.

This module will focus on the challenges facing land-based production in the 21st century, such as the transition to zero-carbon, climate change mitigation and adaptation, and the delivery of global food security. After initially detailing the broad objectives and methods involved in breeding programmes, the module structure allows you to focus on a specific crop or animal breeding pathway. It will give you an understanding of the methodologies applied in molecular and population genetics. The role played by emerging technologies in meeting the grand challenges sustainably will be explored.

Units of this module can be taken as microcredentials.

Grassland Systems

Learn to maximise the potential of grasslands for food production and ecosystem services.

In addition to livestock production, grasslands could reduce biodiversity loss and, as a carbon sink, help to mitigate climate change and aid the transition to zero-carbon. This module looks at the range and distribution of grassland and forage crops. Nutrient management and environmental protection are themes throughout, as are strategies for grazing and forage preservation. The role of plant breeding and management is investigated. The ecosystem services and management requirements of a range of grassland systems will be evaluated.

Units of this module can be taken as microcredentials.

Horticultural Science

Explore the underlying scientific principles that unlock sustainable horticulture.

This module provides a robust understanding of the scientific principles that will prepare students with a common language and fundamental knowledge base to respond to critical global challenges, including: climate change mitigation and adaptation, food security, halting biodiversity loss, and the transition to a zero-carbon economy within this diverse sector. It will cover above- and below-ground biology, the interactions that enable plant health, and the micro and macro environmental strategies that can be utilised to maximise plant performance and/or ecosystem services.

Leading Change

(delivered by Menter a Busnes on behalf of Aberystwyth Business School)

Develop your leadership skills

This module is workshop based and will be delivered in 2 x two-day teaching blocks, one month apart, followed by a fifth day of practical assessment and overall module review. Students will develop a critical appreciation of leadership, management and team dynamics – particularly in relation to instigating, communicating and supporting change. Aimed at middle and senior managers, it will be delivered through lectures on academic principles, seminars with senior leaders from across sectors, self-reflection, and facilitated discussions on the key issues. Assessment of the module will be through a group presentation, a reflective journal and a written assignment.

Livestock Health and Welfare

Improving the living conditions of livestock benefits the animal, the business, and society

This module is focused on reducing the waste caused by poor health and welfare. You will look at the general legislation and management of health and welfare, focussing on current methods of assessing and improving health and welfare in cattle, sheep, pig and poultry systems, as well as the economic implications of poor health and welfare. You will evaluate different methods of improving welfare and controlling disease for your chosen sector, as well as assessing the potential benefits of current and future research.

Units of this module can be taken as microcredentials.

Livestock Nutrition

Learn to improve production efficiency and meat and milk quality whilst reducing impacts

This module will look at the principles of livestock nutrition in a broad context. It covers the evaluation of feeds as well as the principles of metabolism and the nutritional requirements of the animal. As well as discussing the roles of minerals and vitamins in livestock nutrition, the module will also look at some of the latest research in these areas and at how this knowledge can be applied when formulating rations.

Units of this module can be taken as microcredentials.

Livestock Production Science

An introduction and overview of livestock production systems

The focus of this module is on how to increase the efficiency of both intensive and extensive livestock production systems. It draws upon research within IBERS and elsewhere and will cover topics which include the growth and development of livestock, parasitology, reproductive technologies, precision livestock farming technologies, disease epidemiology, and livestock performance and welfare.

Units of this module can be taken as microcredentials.

Meat Processing

Learn about new and established technologies for meat processing and product development.

Meat and meat products make an important contribution to the nutrient intake in our diet. The Welsh meat industry is continuously looking for innovative and efficient approaches to ensure food security, and conscientious meat processing can provide a pathway to reduce food waste as we transition to zero-carbon. Where there are sufficient students, this module will also include a visit to Food Centre Wales, Horeb (or similar) for hands-on experience in meat butchery and meat product development. If this is not possible an online alternative will be provided.

Microalgal Technologies

(Delivered by Swansea University)

Learn about the multiple uses of microalgae and how they can be cultivated

Microalgae provides an answer to many global challenges. It can be used as human food, animal feed, wastewater treatment, fertilizer, biofuel, or to produce high value metabolites. The demand for personnel for microalgae cultivation has grown in recent years, but little training has been available and this has led to mistakes being repeated across the globe. This module will demonstrate the tools, machines, and systems in each process of cultivation, focusing on the latest technology available, offering students the opportunity to decide which fit best to the production model they wish to develop.

Organic & Low Input Livestock Production

How can we reduce the inputs into, and the impacts of, ruminant production?

This module examines the concepts behind ruminant production in a low input or organic system, primarily in temperate contexts. It considers alternative methods of production, from unique forages and sward mixtures to interesting animal breeds that could provide a more tailored product for niche markets. The course also looks at natural methods of disease control that can be adopted by low input or organic systems. The module aims to provide students with an in-depth knowledge of the latest research into low-input and organic farming.

Plant Breeding

New crop and forage varieties are key to meeting global challenges

This module is designed to give those with an interest in plant breeding a comprehensive understanding of what it takes to bring a variety from concept to market. Featured crops include beans, peas, oats, ryegrass, clover, and energy crops. We consider all aspects of what makes a commercial plant breeding program successful. Real datasets will demonstrate the challenges a breeder faces when making selections. You will undertake case studies to look in depth at the process of breeding a crop of your choice.

Units of this module can be taken as microcredentials.

Public Goods

What are public goods? How might they affect your business?

The UK National Ecosystem Assessment (2011) describes a public good as "a good or service in which the benefit received by any one party does not diminish the availability of the benefits to others, and where access to the good cannot be restricted". The concept of public goods is becoming increasingly important in national and international legislation and could affect any business that may have an impact on the environment. They are particularly important in the transition towards a net zero carbon target, climate change adaptation strategies, and enhancing biodiversity.

Silage Science

Why waste time and resources making poor silage?

Small improvements at each stage of the ensiling process can help to reduce waste and improve silage quality, so reducing some of the costs and impacts of ruminant production. This module will develop your knowledge of modern forage and grain ensilage systems, giving you the skills to integrate recent research into your work. It will examine silage evaluation; fermentation; microbiology; inoculant development; pathogen transfer; and food safety. Although there will be an emphasis on ensiling grass, the processes for grain, non-arable crops and food by-products will also be described and evaluated, and the benefits of ensiling green biomass for biorefining purposes will be explored.

Sustainable Supply Systems

A look at innovative approaches to economic and environmentally sustainable supply systems.

Food and other bio-based producers, processors and retailers need to work together to maintain product supply for a sustainable future and food security. This module will draw on the latest research to explore the concept of sustainability and the challenges to achieving it. It will consider how economic, environmental and social sustainability can be improved and governed, and examine innovative approaches and technologies available to support this process while maintaining food security and the supply of safe and high-quality products. This module will be of interest to anyone seeking to understand more about sustainability and how it can be improved in any bio-based supply system.

Units of this module can be taken as microcredentials.

Waste Resource Management

Take a Circular Economy approach and learn how 'waste' can become a valuable resource

This module focusses on resource management within the food sector, highlighting the latest relevant research within production, processing, and retail. You will learn about the latest advances in waste management technology, considering resource management strategies from across the spectrum of UK and international business types within food supply networks.

Units of this module can be taken as microcredentials.

Qualifications & Module Choices

Module Name	PGCert Livestock Science	MSc Sustainable Efficient Food Production	MSc Agrifood Innovation	MSc BioInnovation	MRes Agriculture	MRes BioInnovation	Professional Doctorate in Agriculture	Professional Doctorate in BioInnovation
Total Credits	60 Credits	180 Credits	180 Credits	180 Credits	180 Credits	180 Credits	180 Credits + Thesis	180 Credits + Thesis
Behaviour Change			Core/Option	Option		Option		Option
Business Management - Rural Entrepreneurs		Option	Option		Option		Option	
Coaching and Mentoring for Leaders			Option					
Controlled Environment Agriculture (CEA)			Option	Option		Option		Option
Facilitation for Organisation Leadership			Core/Option					
Fermentation				Option		Option		Option
Genetics and Genomics in Agriculture		Option	Option	Option	Option		Option	
Grassland Systems	Core	Option	Option	Option	Option		Option	
Horticulture Science			Option	Option		Option		Option

Leading Change			Option					
Livestock Health and Welfare		Option	Option	Option	Option	Option	Option	Option
Livestock Nutrition	Core	Option	Option	Option	Option		Option	
Livestock Production Science	Core	Option	Option	Option	Option		Option	
Meat Processing			Option	Option		Option		Option
Microalgal Technologies				Option		Option		Option
Organic and Low Input Livestock Production		Option	Option		Option		Option	
Plant Breeding		Option	Option	Option	Option		Option	
Public Goods			Option	Option		Option		Option
Research Methods		Core	Core	Core	Core	Core	Core	Core
Silage Science		Option	Option		Option		Option	
Sustainable Supply Systems			Core	Core		Option		Option
Waste Resource Management			Option	Option		Option		Option
60 Credit Dissertation		Core	Core	Core				
120 Credit Dissertation					Core	Core	Core	Core
Thesis							Core	Core

Student Testimonials

"Having never seen a business plan before or really looked a set of farm accounts It was definitely a steep learning curve, however I enjoyed thinking about future diversification of my farm and writing a business plan for this purpose." **Jules Sandford**, Farmer *(Business Management for Rural Entrepreneurs)*

"I think that Aberystwyth University have tried really hard to make this format accessible for working people. I feel there is a high standard of academic rigour, but they have made it flexible enough that you can pick and choose when to do the work. They recognise that many of the learners may have been out of education for some time so new concepts are introduced in a step-by-step way." **Tim Stephens**, Nuffield Graduate and Catchment Advisor, Wessex Water (Nuffield Module)

➤ *"This is the best experience I have had of higher education distance learning. I was extremely well supported and advised and I am looking forward to continuing."* - **Sara Worrall**, International Charity Coordinator.(Organic & Low Input Ruminant Production module)

"One of the biggest advantages of these courses is that I directly apply my experience and knowledge to the modules, in doing so it is easy to notice gaps in my knowledge and this encourages me to do more research. Even for the tasks that I routinely do, I now question myself more and I always want to find out what the current research on a particular topic is about." **Seke Kazuru**, Bioinformatics Scientist, Malawi. *(Genetics and Genomics)*

Brilliant module - it's given me loads to reflect on and given me a broader perspective on complexity. ...For me the most significant piece of research highlighted in this module was the importance of collective action and cooperation to create sustainable networks and synergy. [I will use what I have learned] to support the development of school farms and gardens, education around nutrition and sustainable food production for the next generation (and their families).
Mike Goldthorp, Trainer *(Sustainable Supply Systems)*

➤ *"It really pushed my skills and knowledge on to the next level across a broad range of topical industry issues."* **Rachel Martin**, Agricultural Editor, The Irish Examiner *(Livestock Production module)*

"I have completed the Future of Packaging module – the content is excellent! There is a big gap in everyone's knowledge on this. Everyone wants to do the right thing and it's unclear as to what this is! The module gave me really good insight to the plastic cycle, deepened my knowledge of the many packaging conundrums; and has pointed me towards what I need to know. I also gained an understanding of EPRs and some of the wider issues surrounding Waste Management."
Sarah Thomas, Food Centre Wales *(FoP, MSc BioInnovation)*

"In my job is very necessary to know about the process for making silage especially because this a topic for development in my country." - **Javier Castillo Sierra**, Agri Researcher, Colombia *(Silage Science)*

"Distance Learning is particularly attractive to me as it has granted me an opportunity to study and work at the same time." **Maureen Hamiyanze**, Project Officer, Zambia

"It's my first module on the DL MSc and I wasn't sure how I'd manage engaging in it. I think it's exceptionally well structured, and I'd highly recommend it." **Tom Furness**, Lecturer Reaseheath University *(Organic and Low Input Ruminant Production)*

"This course is great for people who are in the industry and have a science background but also for people like me who are social scientist and need to gain a broad understanding of meat technology. This will help me in my work managing farmers markets as well as supporting the Cameroon government in developing their local meat industry."
Carol Adams Food Adventure Wales *(Meat Processing)*

"It was so different to any other module I have studied that I found it really interesting. It has made me question how I am being manipulated in many areas of life
John Pryce Goodwin *(Behaviour Change)*

➤ *"Great learning experience with knowledgeable lecturers."* -
Sian Spear, Farm Worker.
(Genetics and Genomics)

"Each module tempts you into wanting to know more! They provide a good foundation which allows you to take your learning in the direction you want to go.... I have enjoyed the realisation that there is always more to know about everything and loved the process of learning.... The format works well; I can access learning where and when I want to and work pretty much at my own pace with the deadlines there to stop me from procrastinating!"
Veronika Norman, Freelance Consultant *(MSc Bioinnovation)*

"What I have learnt will help with the hydroponics unit that we will receive from Tech Tyfu next spring and I hope we will be able to learn from our practical experience. We also hope that we will be able to encourage other farmers to investigate CEA as an addition to their farming operation and also encourage more people to take part in further studies in their adult life."
Jodie Pritchard Baileys and Partners, *(CEA)*

"Part of my work is affecting management changes on farms, behaviour change is crucial."
Kate Hovers, Vet *(Behaviour Change, MRes BioInnovation)*

"It has changed how my business operates and has led me to some further reading and experimentation. I learnt so much about CEA that I think it could be a stand-alone degree. I would love to dig further into every aspect more thoroughly."
Amanda Wood, Owner, Microgreens *(CEA)*

"I work with Welsh red meat farmers as part of my job, developing and implementing project work on farms. This can be trialling new technologies for example, so gaining a broader knowledge on the technologies that are out there for precision agriculture use will really benefit me with developing project ideas for the future."
Elan Davies, Agri Advisor *(Precision Livestock)*

"I'm delighted to have completed a PGCert in BioInnovation. The modules I have taken (Meat Processing, Precision Livestock, Waste Resource Management) have all been really relevant to industry, really relevant to my role and very current and topical"
Anna Blakey Carcass Balance Manager - Karro Food Group (PGCert BioInnovation)

Some of our 2023 Graduates pictured with IBERS DL Lecturer, Dr Peter Wootton-Beard *(second from left)*

IBERS DISTANCE LEARNING

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