

DN250 Agricultural Science

DN250AES Agri-Environmental Sciences

DN250ACP Animal and Crop Production

DN250ASC Animal Science

DN250ENT Engineering Technology

DN250FAM Food and Agribusiness

Management



University College Dublin Agriculture, Food Science and Human Nutrition

AGRICULTURAL SCIENCE



DN250AES Agri-Environmental Sciences

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Why Agricultural Science?

From animal science to farm management and conservation and protection of the wider environment, from the animal feed industry to enterprise development, from crop protection and agribusiness to alternative energy sources and food chain technology, Agricultural Science will provide you with the foundation to take your career anywhere in the world.

Our exciting range of programmes cover a wide variety of different subjects offering you a broad choice of lifestyle and career path.

DN250

Average CAO Points 2012 485

Minimum CAO Points 2012 445

Minimum A Level/GCSE: BBB (A-Level) & b (AS) or equivalent combination

If you are interested in Agricultural Science, but are not yet certain of which area to specialise in, you can simply enter DN250 on your CAO form. Then, during your first year at UCD, you can choose your area of specialisation. Once you receive an offer on the Agricultural Science programme (DN250) you will be guaranteed a place in any of the five specialisations from second year.

If, on the other hand, you know which of the following five programmes you'd like to specialise in, you can select ONE of these programmes on your CAO application by entering the relevant acronym after the CAO CODE DN250 as follows:

DN250 AES	Agri-Environmental Sciences
DN250 ACP	Animal & Crop Production
DN250 ASC	Animal Science
DN250 ENT	Engineering Technology
DN250 FAM	Food & Agribusiness Management

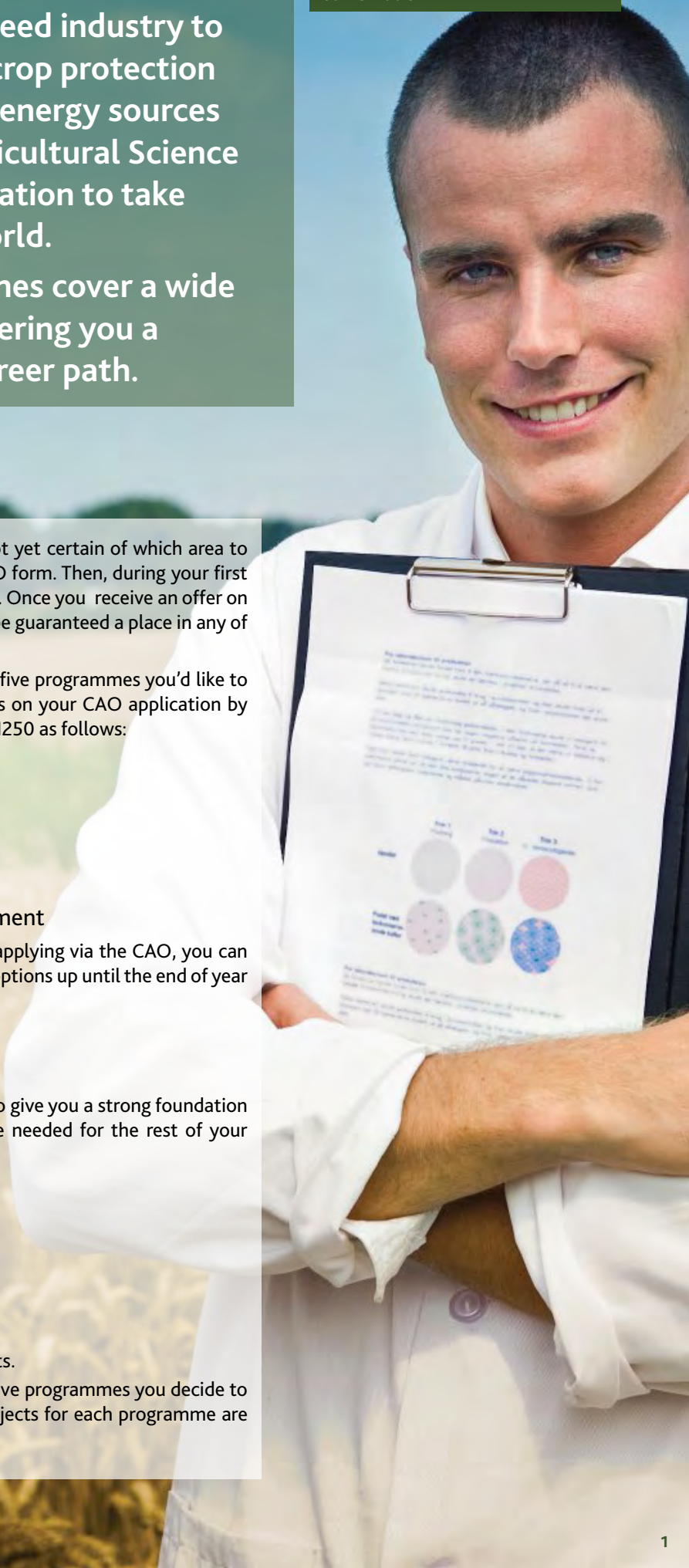
If you select one of the above five programmes when applying via the CAO, you can still change between any of the above five programme options up until the end of year one.

What will I study?

All our programmes have a similar first year, designed to give you a strong foundation in the core sciences, maths and economics, which are needed for the rest of your studies. You will study subjects in

- Maths
- Chemistry
- Physics
- Animal & Plant Biology
- Information Skills & Computer Applications
- Agricultural Economics & Business
- and a selection of Agricultural Science based subjects.

Your subjects in year two will depend on which of the five programmes you decide to specialise in from year two. Second and third year subjects for each programme are detailed on pages 7 to 9.



Agri-Environmental Sciences

The Agriculture Sector has a huge impact on the natural environment at both an Irish and global level, and an ultimate interest in the protection of the natural resources and processes on which the security and safety of our food supply ultimately depends.

On completion of this specialist programme, you will have:

- A wide knowledge of the applied agricultural and environmental sciences that underpin sustainable agriculture, food production and rural land use systems
- A comprehensive understanding of rural environmental issues in Ireland, the EU and worldwide
- Practical experience of agri-environmental research through personal experience in a final year project on your chosen topic
- The scientific and environmental management skills to contribute to future farming and land use industries, as either a scientist, planner or policy-maker
- The interpersonal and professional skills required to follow your chosen career path

Student View

I choose the omnibus entry route Agricultural science which allowed me to get a taste of many of the different agriculture programmes before deciding which programme to pursue.

I discovered during year one that it was the agri- environmental based subjects that I enjoyed most and consequently I chose the Agri-Environmental Sciences degree programme.

I really enjoyed the practical aspects of the course. During year 3 of my degree I travelled to Purdue University, Indiana for a semester where not alone did I get the chance to see and experience life in a different culture but also meet people from all around the world. The 4th year research programme provided me with an opportunity to design and develop a substantial project on a topic that I am interested in.

Following graduation, I have been lucky enough to get a graduate role and have already put into use many of the skills acquired in UCD. I would definitely recommend this course to others as after four enjoyable years with a great bunch of people you have a wide range of knowledge, expertise and skills which will stand to you for life, no matter where you end up. The diversity of the course means that after college years your options are not limited whether it is further study, travel or employment you're interested in.

Grainne Mc Cabe, Agri-Environmental Sciences



DN250 AES

Average CAO Points 2012	485
Minimum CAO Points 2012	445
Minimum A Level/GCSE: BBB (A-Level) & b (AS) or equivalent combination	



Ards Forest Park, Donegal

Professional Work Experience and Study Abroad Opportunities

Five months Professional Work Experience takes place in third year of the Agri-Environmental Sciences programme. In recent years, increasing numbers have opted to complete Professional Work Experience abroad. Teagasc, the Department of Agriculture, Food and the Marine, the Environmental Protection Agency, the National Parks & Wildlife Service, local authorities and commercial companies are popular destinations to conduct Professional Work Experience.

You can also study abroad for one semester, at universities including:

- University of California
- Kansas State University
- University of Melbourne
- Purdue University
- Michigan State University

There are a limited number of scholarships available, on a competitive basis, which support the travel costs associated with studying and completing Professional Work Experience abroad.

The Agri-Environmental Sciences degree can open any door you want in the agri-environmental world

Barry O'Donoghue
*Conservation Ranger,
National Parks and
Wildlife Service*



Animal and Crop Production

The science and business of producing Animals and Crops in an efficient but also sustainable and environmentally friendly manner is just one example of the challenges facing Agricultural Scientists, Farmers and Agribusinesses in Ireland, the EU and globally.

As an Animal and Crop Production student you will have access to international experts that will help you develop:

- Knowledge of the growth, development and improvement of farm animals and crops
- The capacity to formulate animal and crop production systems that are economical and sustainable
- Communication and IT skills
- The capacity for lifelong learning so as to remain informed of evolving technical, economic and regulatory frameworks
- Knowledge of the agribusiness industry

Student View

Given my interest in Agriculture from a very early age, studying on the Animal and Crop Production programme at UCD was always an obvious choice from my perspective.

I have really enjoyed the past four years at UCD. While it has been challenging, I made many new friends and have enjoyed the friendly atmosphere among staff and students in the Agriculture and Food Science Centre.

After graduation, my foremost memory of UCD will be the experience I gained organizing and coordinating Agricultural Science Careers Day 2011. I am very proud that more than 25 exhibitors attended and presented many job opportunities to the Agricultural Science Class of 2011, and that we attracted significant media attention and received presentations from high profile speakers at the event. Careers Day was the culmination of a range of activities including the development of a graduate handbook, dedicated CV and interview workshops, mock interviews, employer presentations, applicant screening and a careers exposition.

Michael Egan, Animal and Crop Production



DN250 ACP

Average CAO Points 2012 485

Minimum CAO Points 2012 445

Minimum A Level/GCSE: BBB (A-Level) & b (AS) or equivalent combination

Professional Work Experience and Study Abroad Opportunities

Eight months Professional Work Experience takes place between January and August in year three of the Animal and Crop Production programme. A dedicated Professional Work Experience advisor will help ensure you gain experience in each of the relevant enterprises. In recent years, increasing numbers have opted to complete Professional Work Experience abroad, with New Zealand and USA particularly popular options.

You can also study abroad for one semester, at universities including:

- University of California
- Kansas State University
- University of Melbourne
- Purdue University
- Michigan State University

There are a limited number of scholarships available, on a competitive basis, which support the travel costs associated with studying and completing Professional Work Experience abroad.

The grounding I got in the science and business disciplines has been hugely beneficial and it is one of the most versatile programmes on offer to students

Frank O'Mara
Director of Research, Teagasc



See Programme Pathway model for Animal and Crop Production Sciences on page 8.



Animal Science

DN250 ASC

Average CAO Points 2012	485
Minimum CAO Points 2012	445
Minimum A Level/GCSE: BBB (A-Level) & b (AS) or equivalent combination	

Animal Science covers all aspects connected to the development, growth and health of animals including breeding, nutrition, reproduction, genomics and physiology. At the core of Animal Science is the study of the applied sciences that are fundamental to understanding how animals function and also underpin the principles of livestock production.

The degree will give you an appreciation of:

- The growth and development of domestic farm animals, and animal behaviour and welfare
- Animal production systems and how the components are integrated and managed in an environmentally friendly and sustainable manner
- The animal industry in Ireland, the context in which it operates and its relationship to animal industries in Europe and worldwide.

Professional Work Experience and Study Abroad Opportunities

Five months Professional Work Experience takes place in year three of the Animal Science programme. A dedicated Professional Work Experience advisor will help ensure you gain relevant experience during this time. In recent years, increasing numbers have opted to complete Professional Work Experience abroad, with New Zealand and USA particularly popular options.

You can also study abroad for one semester, at universities including:

- University of California
- Kansas State University
- University of Melbourne
- Purdue University
- Michigan State University

There are a limited number of scholarships available, on a competitive basis, which support the travel costs associated with studying and completing Professional Work Experience abroad.

Student View

I love animals and always wanted to study Animal Science at UCD. I chose UCD as it has an excellent reputation internationally, I liked the course and the campus is welcoming and has great facilities.

I really enjoyed the course, particularly years two, three and four when the subjects I studied were more focussed on animal science. Staff are very approachable and with small class sizes you will make lots of new friends. Practical courses in particular at the UCD Research Farm at Lyons Estate in years three and four were really enjoyable. For me, Professional Work Experience in year three was the best aspect of the programme. I gained invaluable experience with Dovea Genetics in Tipperary and with Teagasc in Athenry.

I would recommend students with an interest in science, animals and agriculture to consider this programme as there are very good long term career prospects, and the sector is topical and crucial to Ireland's economic recovery. I enjoyed the programme so much that I am going to commence a PhD in Animal Science commencing in September 2011!

Hazel Watson, Animal Science, Galway



I had a fantastic time studying for this programme; it gave me a good foundation from which I have built my career in communications and journalism.

Maeve Dineen
Business Editor,
Irish Independent



Engineering Technology

Apply your interest in science and technology and discover how engineering science helps to develop bioenergy, mechanisation, environmental and bioprocess technologies. Engineering Technology covers broad areas of bioenergy, mechanisation, environmental technology and processing technology for agri-food and related industries.

This degree will give you a global perspective and understanding of:

- How engineering science helps to develop these technologies
- How to produce, harvest, process, preserve and distribute biological products (plant and animal) in a sustainable and environmentally friendly way.

Student View

One of the main things I particularly liked about UCD was the small class sizes and the eagerness of both the mentors and tutors in answering any questions which you may have.

The campus is very green, spacious and is a very good environment in which to study. The proximity to Dublin city centre was also of great benefit.

Engineering Technology allows for variance within the degree, the inclusion of subjects like Air Pollution and GIS allows for change as well as adding a new focus on a particular industry if you so wish. This allows students to work towards a specific goal if they have one in mind. Be sure to choose the Biosystems Engineering Challenge subject in first year – it was really enjoyable.

I plan on using my degree as a stepping stone into another master's programme. The UCD agricultural science degree programmes are very well regarded among agricultural industry leaders as well as other postgraduate Universities due in part to the excellent way in which the courses are taught.

David Longworth, Engineering Technology



DN250 ENT

Average CAO Points 2012 485

Minimum CAO Points 2012 445

Minimum A Level/GCSE: BBB (A-Level) & b (AS) or equivalent combination

Professional Work Experience and Study Abroad Opportunities

Professional Work Experience on the Engineering Technology degree programme is carried out by means of a major project in years three and four where you will have significant interaction with an organisation. Students are also encouraged to undertake relevant work experience during the summer months.

You can also study abroad for one semester, at universities including:

- University of California
- Kansas State University
- University of Melbourne
- Purdue University
- Michigan State University

There are a limited number of scholarships available, on a competitive basis, which support the travel costs associated with studying and completing Professional Work Experience abroad.

I really enjoyed my time at UCD. The range of subjects was fascinating and very well delivered, encouraging an engaging project type learning experience which allowed me to gain key skills for my current position.

Richard Hayden
Director of Operations,
The Sportsturf Institute





DN250 FAM

Average CAO Points 2012 485
Minimum CAO Points 2012 445

Minimum A Level/GCSE: BBB (A-Level) & b (AS) or equivalent combination

Food and Agribusiness Management

If you enjoy science and business, the Food and Agribusiness Management degree programme provides a unique opportunity to gain an understanding of both subjects. As a result, graduates are well placed to occupy leading roles in a variety of sectors.

During the Food and Agribusiness Management degree, you will learn how the principles of economics and business management apply to farming, food production and marketing. You will gain an understanding of how the Irish and international food systems deliver food products and services that people want, and how farmers and food manufacturers can produce profitably, while also taking care of the natural environment. The four year degree programme provides a unique opportunity to understand both business and science, focusing on the agri-food sector – Ireland’s largest indigenous industry. You will develop skills that may be used across a wide range of jobs and experiences.

Student View

Starting UCD on the first day was a little daunting but I settled into university life very quickly and have made great friends. I chose the Food and Agribusiness Management programme as I didn’t want to study just one subject area for four years and given that this programme has a mix of both science and business subjects, I knew it would be interesting.



Lecturers on the programme are very approachable and helpful and the facilities on campus are excellent. Important supports such as the Career Development Centre are available on campus, providing guidance and assistance along the way. Professional Work Experience took place in year three and I gained valuable experience here.

I have really enjoyed my time on the programme and made lots of new friends. I would recommend students with an interest in either food, business, agriculture and/or science to consider this programme as it offers very good employment opportunities. If I could offer one piece of advice it would be don’t leave assignments to the last minute!

- Annemarie Joyce, Food and Agribusiness Management

Professional Work Experience and Study Abroad Opportunities

Professional Work Experience in the food and agribusiness industry or related sectors is undertaken in year three of this programme. This helps you build your skills, apply the knowledge you have learnt and in many cases can lead to employment following graduation. In recent years, increasing numbers have opted to complete Professional Work Experience abroad.

You can also study abroad for one semester, at universities including:

- University of California
- Kansas State University
- University of Melbourne
- Purdue University
- Michigan State University

There are a limited number of scholarships available, on a competitive basis, which support the travel costs associated with studying and completing Professional Work Experience abroad.

My career path has moved through television, print journalism and into politics. Every day along the way I rely on the skills and understanding first developed through the programme.

Mairead McGuinness
Member of the
European Parliament



See Programme Pathway model for Food and Agribusiness Management on page 9.

Career Opportunities

Our graduates have an excellent record in obtaining challenging and fulfilling employment in a variety of sectors, including food, agriculture, business and services, where your professional activities will include enterprise management, technical service and consultancy, management, research, education, marketing, communications and primary production of quality food and fibre products.

Where do they end up?

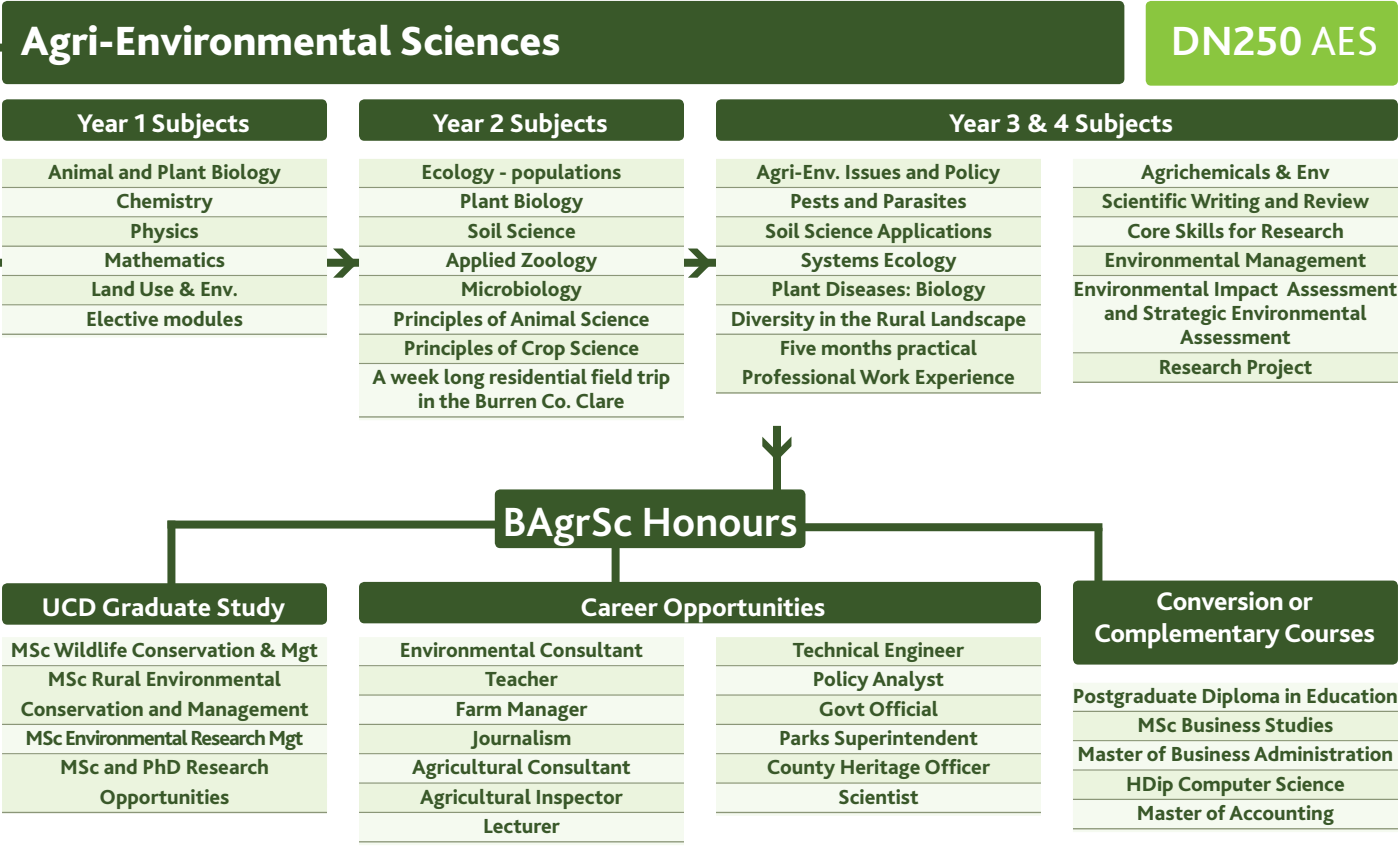
Examples of roles occupied by recent UCD Agricultural Science graduates are listed below:

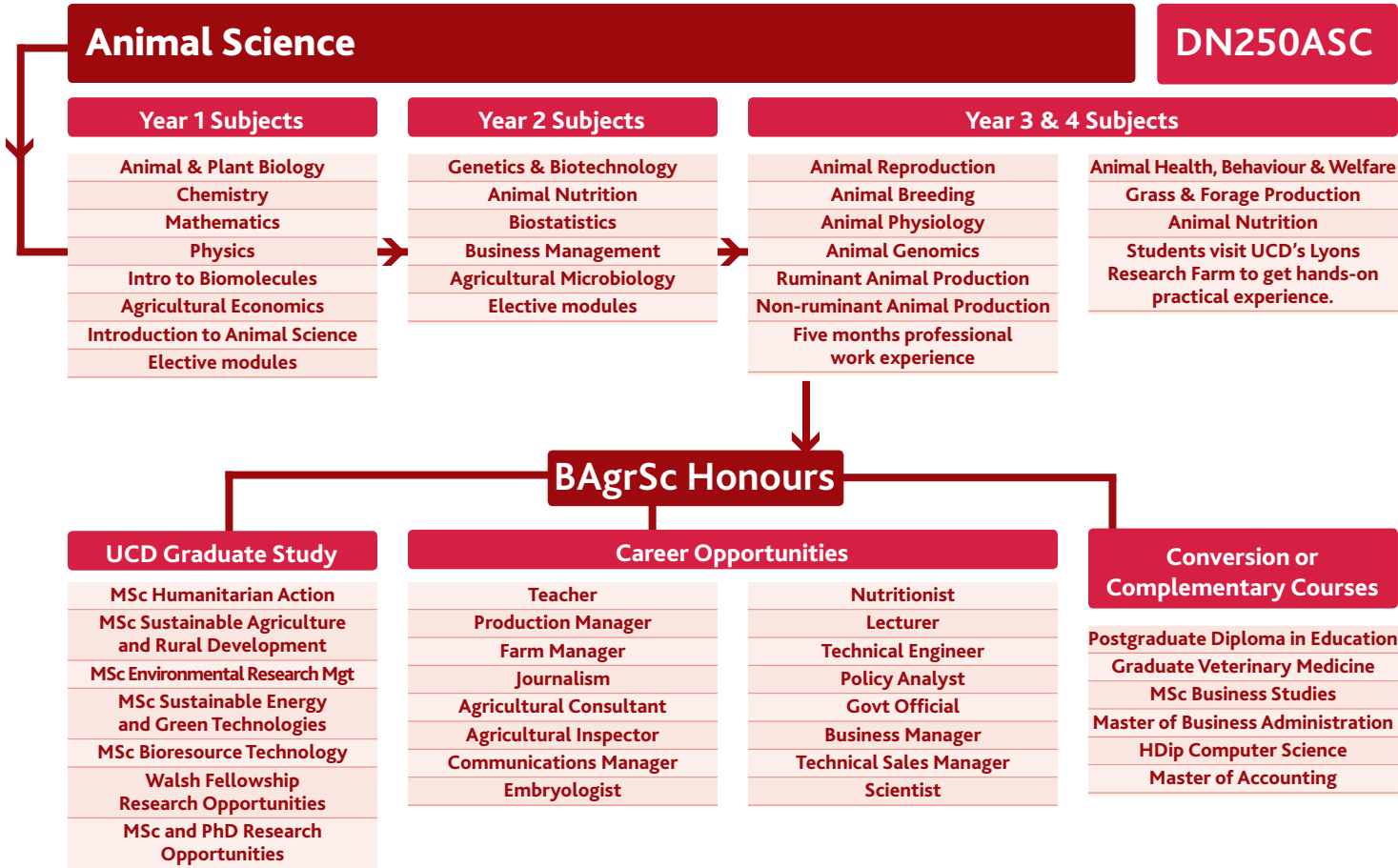
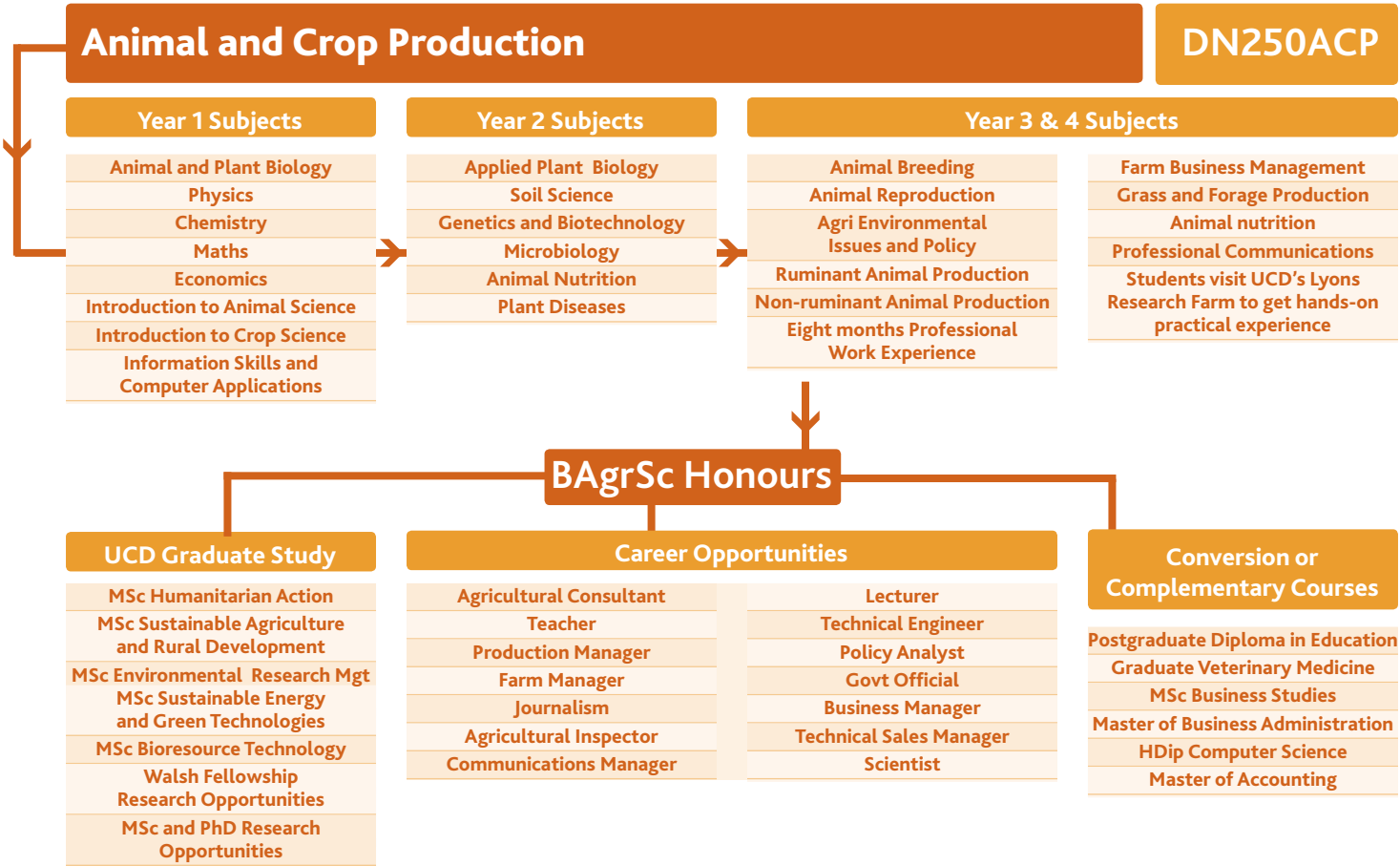
- Scientist
 - Agricultural Consultant
 - Business Manager
 - Advisor
 - Technical Sales Manager
 - Quality Assurance Officer
 - Agricultural Inspector
 - Environmental Analyst
 - Food Technologist
 - Teacher
- Production Manager
 - Banker
 - Parks Superintendent
 - Farm Manager
 - Stockbroker
 - Marketing Manager
 - Journalist/TV Presenter
 - Government Official
 - Development Officer
 - Area Sales Manager.

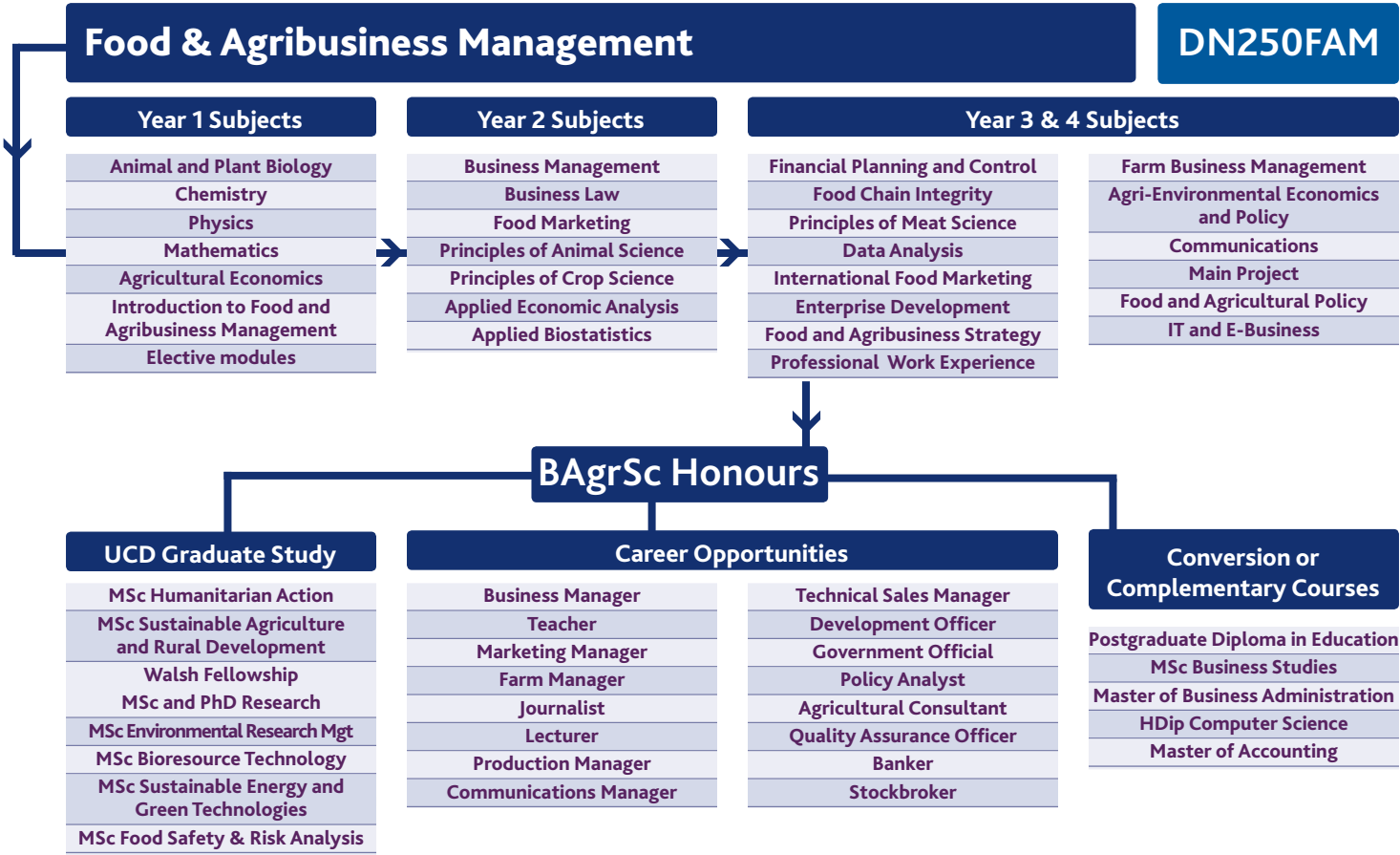
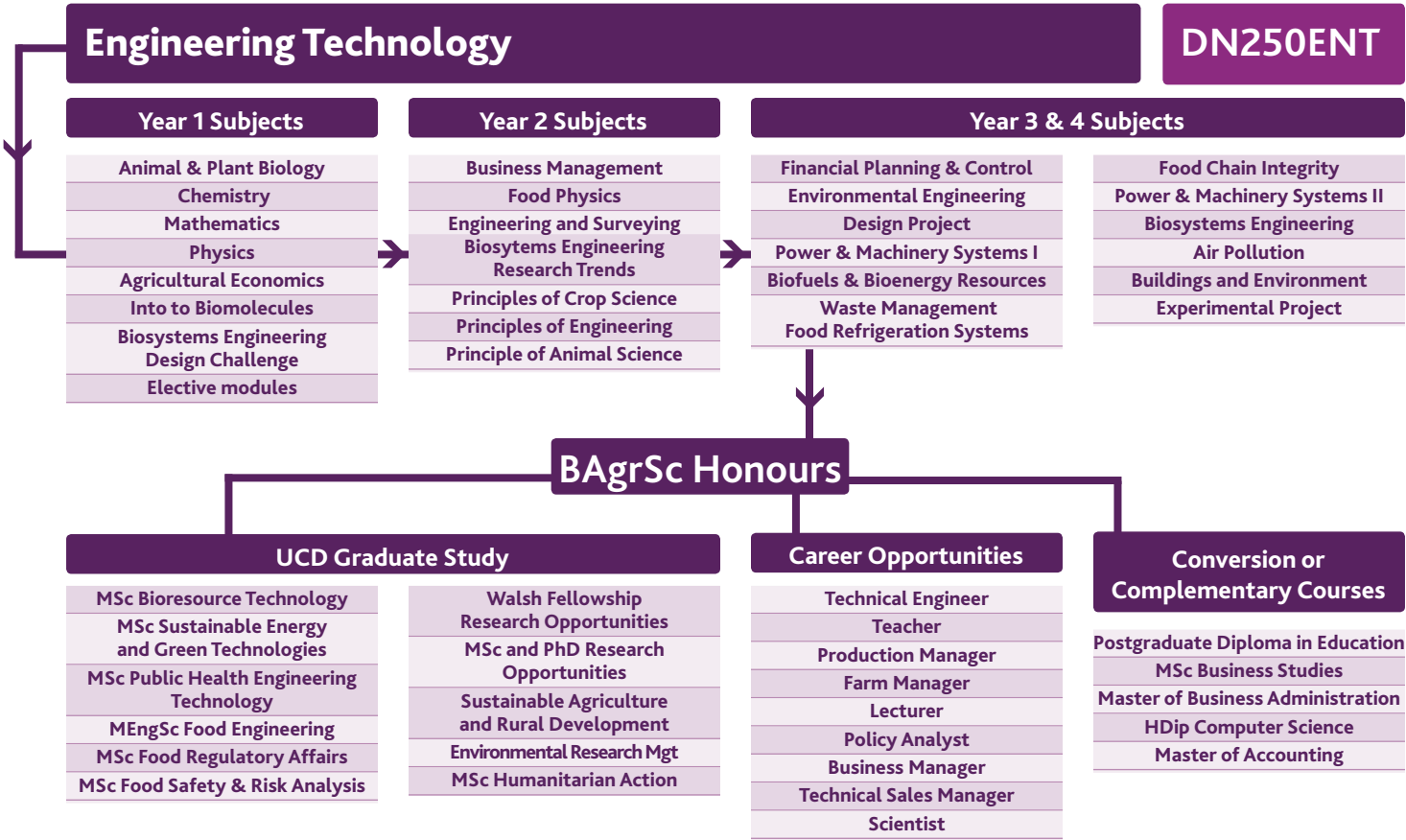
You can access additional information with regard to career opportunities for each programme on the following pages.



Programme Pathways Models









UCD Agriculture and Food Science Programme Office

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Belfield, Dublin 4

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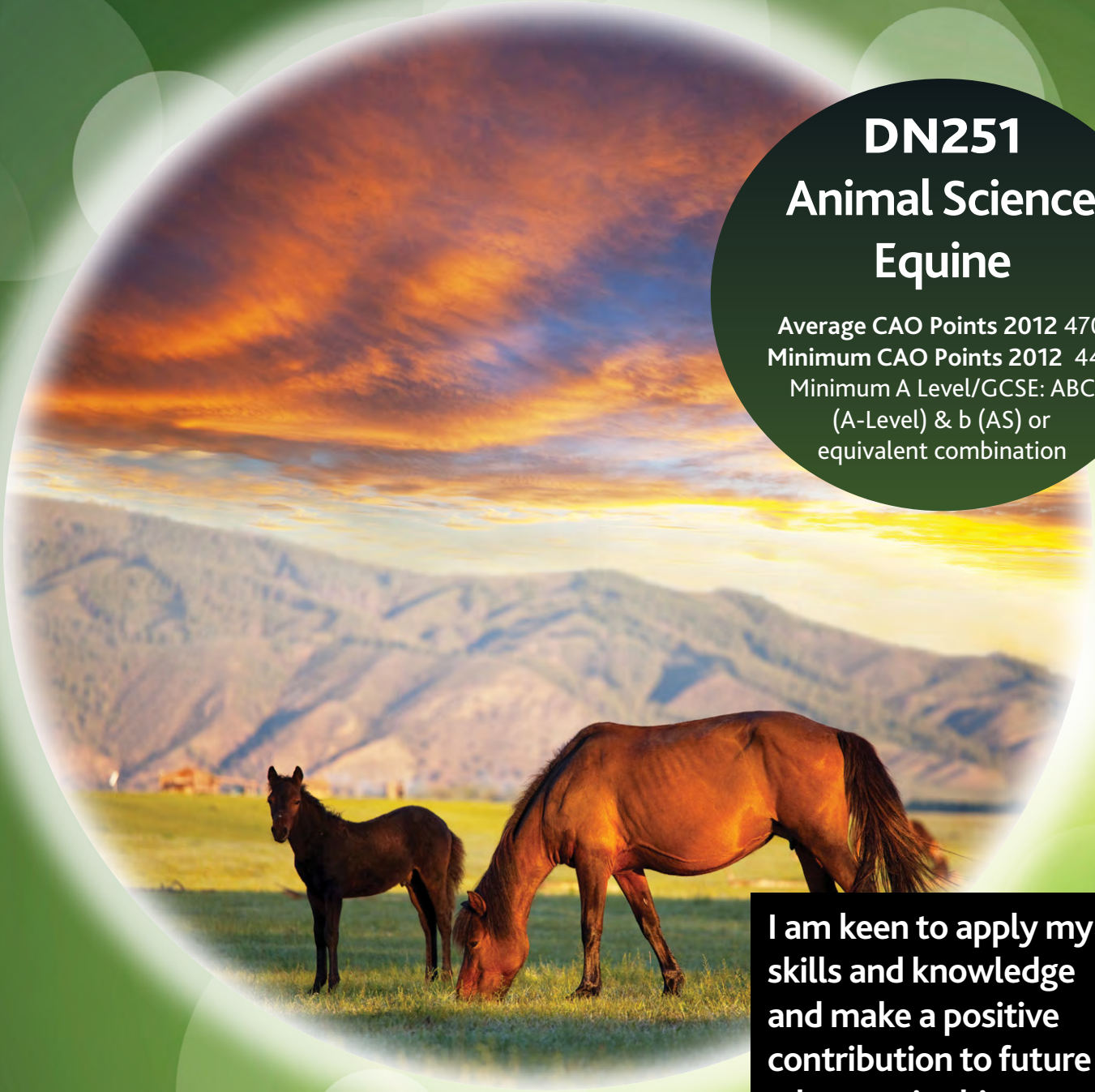
Web: www.ucd.ie/myucd/ag

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ANIMAL SCIENCE - EQUINE





DN251

Animal Science Equine

Average CAO Points 2012 470
Minimum CAO Points 2012 440
Minimum A Level/GCSE: ABC
(A-Level) & b (AS) or
equivalent combination

**I am keen to apply my
skills and knowledge
and make a positive
contribution to future
advances in this area.**

- Olga McGlynn,
Animal Science- Equine

Why Animal Science - Equine?

Animal Science – Equine focuses on the applied sciences that underpin animal and veterinary biosciences, with emphasis on the horse.

The degree provides the scientific knowledge and professional skills necessary for professional leadership roles within many aspects of the animal and equine science industries.

You will learn about:

- The growth and development of farm animals, how they function, their behaviour and welfare
- Animal productions systems and how the components are integrated and managed in an environmentally friendly manner
- The equine industry in Ireland, its global context and entrepreneurial opportunities
- Equine health, reproduction, genetics, breeding, nutrition and exercise physiology
- Advances and future directions in research with emphasis on equine genetics/genomics



Graduate View

Following graduation from the Animal Science - Equine programme, I decided to undertake a Masters in Equine Immunology at UCD, which is where I am now. My next step will be to get a job in the pharmaceutical industry or undertake a PhD – I am keen to apply my skills and knowledge and make a positive contribution to future advances in this area.

Overall, I really enjoyed my experience at UCD and I would encourage students with similar interests to consider this dynamic programme.

Olga McGlynn, Animal Science- Equine



Professional Work Experience and Study Abroad Opportunities

A five month Professional Work Experience (PWE) placement is integral to your Animal Science-Equine degree and is an invaluable learning and networking opportunity. Exciting options include placements on stud farms in the Kentucky Bluegrass region and Japan, top show-jumping and eventing yards in Ireland, and with Tattersalls Ireland and Horse Sport Ireland. Students also have the opportunity to train towards a British Horse Society Assistant Instructorship certification at a leading Irish equestrian centre (additional training costs are involved).

UCD's Research Farm at Lyons Estate provides modern teaching facilities and well equipped laboratories where you will carry out practical's relating to several of your core subjects on aspects of animal nutrition, reproduction and general husbandry.

You can also study abroad for one semester, at universities including:

- University of California, USA
- Kansas State University, USA
- University of Melbourne, Australia
- Purdue University, USA
- Michigan State University, USA

There are a limited number of scholarships available, on a competitive basis, which support the travel costs associated with studying and completing Professional Work Experience abroad

Student View

The recently established Animal Science - Equine programme provides a good opportunity for those who are intent on turning their passion into their career.

I fell into that category and once the programme started to gain momentum, a wide range of relevant material was covered; the end result being a very good overall knowledge of the equine species and the industry which it encapsulates. In an increasingly competitive industry, Animal Science - Equine equips you with knowledge required to forge a successful career in this truly global industry. I must give mention to the invaluable 20 week professional work experience (PWE) programme that takes place in 3rd year, which allows students to put into practice their skills and expertise, home or abroad. I spent my placement at Dromoland Farm in Lexington, Kentucky, gaining invaluable experience on a stud farm, all the while making lifelong friends. It was also a thrill to learn under leading equine geneticist Dr. Emmeline Hill as she makes significant progress in a potentially industry changing field.

Personally speaking, the programme has already played a huge part in my future career, helping me to secure a place on the Darley Flying Start programme which gives me the best possible start in my chosen sector-the Thoroughbred Horse industry. I'm hoping to take full advantage of the opportunities that will come my way as I pursue my ambitions of becoming a successful racehorse trainer/ breeder. The Animal Science-Equine programme has given me a strong academic background which will surely play a big part in my future endeavours in the equine industry.

Jack Davison, Animal Science- Equine



a good opportunity for those who are intent on turning their passion into their career.

- Jack Davison, Animal Science - Equine

Animal Science - Equine

DN251

Year 1 Subjects

Animal and Plant Biology
Chemistry
Physics
Mathematics
Agricultural Economics
Animal Science
Elective modules

Year 2 Subjects

Genetics and Biotechnology
Animal Nutrition
Agricultural Microbiology
Soil Science Basics
Agricultural Biochemistry
Principles of Animal Science
Principles of Crop Science

Year 3 & 4 Subjects

Animal Reproduction
Animal Breeding
Equine Industries
Animal Physiology
Farm Business Management
Five months Professional Work Experience
Equine Reproduction and Nutrition

Equine Anatomy & Physiology of Exercise
Equine Health and Husbandry
Animal Health, Behaviour & Welfare
Equine Genetics
Equine Sciences project

BAgrSc Honours

UCD Graduate Study

MSc Sustainable Agriculture and Rural Development
Walsh Fellowship Research Opportunities
MSc and PhD Research Opportunities
MSc Environmental Research Mgt
MSc Bioresource Technology
MSc Sustainable Energy and Green Technologies
MSc Food Safety & Risk Analysis
MSc Humanitarian Action

Career Opportunities

Equine enterprise management
Teacher
Marketing Manager
Equine leisure, recreation and tourism activities
Stud Management
Journalism
Lecturer

Equine Geneticist
Business Manager
Communications Manager
Technical Sales Manager
Equine Scientist
Government Official
Policy Analyst
Consultant

Conversion or Complementary Courses

Postgraduate Diploma in Education
Graduate Veterinary Medicine
MSc Business Studies
Master of Business Administration
HDip Computer Science
Master of Accounting
Darley International Student Programme



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University College Dublin, Belfield, Dublin 4

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Email: agandfoodprogrammes@ucd.ie

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DAIRY BUSINESS





DN252

Dairy Business

Average CAO Points 2012 465
Minimum CAO Points 2012 430

Minimum A Level/GCSE: ABC
(A-Level) & c (AS) or equivalent
combination

Why Dairy Business ?

The Irish dairy industry makes a major contribution to the Irish economy adding in excess of €2 billion to food exports and employing approximately 19,000 dairy farmers, 8,500 employees in the processing industry and supporting an additional 4,500 positions in ancillary services.

The dairy industry is experiencing significant change at the present time with expansion in farm and herd size, accelerated by the abolition of quota in 2015. This programme is designed to equip future leaders in the dairy industry with the necessary scientific, technical and business skills to cope with this business and enterprise expansion.

Staff View

I graduated with a BAgSc in 2001 and continued on to postgraduate studies graduating with a PhD in animal nutrition in 2005.

Following this I worked as a nutritionist with a large Irish animal feed company for two years before returning to UCD as a lecturer in dairy production. The time spent in industry gave me valuable practical experience and knowledge of the dairy sector.

My current research programme investigates dairy cow nutrition with a specific emphasis on dietary formulation to improve milk composition and reduce nutrient excretion to the environment.

Dr Karina Pierce, BAgSc Dairy Business programme option co-ordinator, President of the Agricultural Science Association, the graduate body for Agricultural Scientists.



Professional Work Experience

Professional Work Experience (PWE) takes place between July and December of year three, which offers students the opportunity to travel to New Zealand during the busiest time of year in the dairy farming calendar. PWE provides exciting opportunities for students to travel to New Zealand and participate on a comprehensive work experience programme. Students can apply the skills and knowledge gained whilst also receiving exposure to cutting edge technologies.



Student View

I am one of four students fortunate to receive a scholarship to help support some of the costs associated with conducting Professional Work Experience in New Zealand.

My scholarship is supported by the Agricultural Trust and I am delighted that industry recognises the significance of students completing Professional Work Experience in New Zealand. From my perspective, I am delighted to receive the scholarship and it is greatly appreciated.

Travelling to New Zealand is really exciting and I am sure my classmates and I will gain great experience on a much larger scale than exists here in Ireland. The farm I will be visiting has in excess of 860 dairy cows! I am particularly interested to see what aspects of Dairy Farm Management in New Zealand, often considered best practice, might potentially be applicable in Ireland post quota.

Katrin Breuer, Dairy Business



Pictured at the presentation of the FBD 2012 Travel Scholarships to UCD Dairy Business students are: Conor Gouldson, FBD; Nigel Daunt from Cork; Kate Bugler from Clare; James Moloney from Cork and Dr Karina Pierce, UCD.

I will gain great experience on a much larger scale than exists here in Ireland.

- Katrin Breuer, Dairy Business

Year 1 Subjects

Animal and Plant Biology
Economics
Chemistry
Mathematics
Introduction to Animal Science
Information Skills and Computer Applications
Introduction to Food and Agribusiness Management
Introduction to Management
Business Live
Elective modules

Year 2 Subjects

Animal Reproduction
Animal Breeding
Applied Biostatistics
Accounting for Non-Business Students
Business Law
Animal Nutrition 1
Principles of Dairy Production
Health, Welfare & Safety

Year 3 Subjects

JUNE – JULY
Technical Management of a Dairy Farm
JULY-DECEMBER
Professional Work Experience Students encouraged to travel to New Zealand
JAN-MAY
Modules undertaken at Teagasc Moorepark Co. Cork include:
Herd Health and Milk Quality
Grassland Management
Applied Dairy Breeding and Fertility
Dairy Systems

Year 4 Subjects

Farm Business Management
Food and Agribusiness Strategy
Climate, Carbon and Soil
Leadership and Change Management
Food and Agricultural Policy
Animal Nutrition II
Entrepreneurial Management
Professional Communications
Exp Design and Data Analysis

B AgrSc Honours

UCD Graduate Study

MSc Sustainable Agriculture and Rural Development
Walsh Fellowship Research Opportunities
MSc and PhD Research Opportunities
MSc Environmental Research Mgt
MSc Bioresource Technology
MSc Sustainable Energy and Green Technologies
MSc Food Safety & Risk Analysis
MSc Humanitarian Action

Career Opportunities

Farm Manager	Communications Manager
Teacher	Technical Sales Manager
Agricultural Consultant	Scientist
Marketing Manager	Government Official
Journalism	Policy Analyst
Lecturer	Consultant
Business Manager	

Conversion or Complementary Courses

Postgraduate Diploma in Education
Graduate Veterinary Medicine
MSc Business Studies
Master of Business Administration
HDip Computer Science
Master of Accounting



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FOOD SCIENCE





DN261 Food Science

Average CAO Points 2012 475
Minimum CAO Points 2012 455

Minimum A Level/GCSE:
ABB (A-Level) & b (AS) or
equivalent combination

Why Food Science ?

Food Science focuses on the physical, chemical and biological characteristics of food along the production chain from farm to plate. If you choose to specialise in Food Science, you will develop your scientific knowledge of how to produce high quality, safe and healthy foods.

As a food scientist you will have a role to play in all aspects of the food chain from production to processing, storage and marketing. This unique degree ensures you have a broad knowledge of food production and processing, thus gaining the scope and opportunity to develop different types of food products.

Graduate View

I am involved in commercial planning. The role requires an excellent understanding of the overall operation, from procurement of raw materials, the manufacturing process and the characteristics of the finished product to the requirements of the customer and the logistics of the overall supply chain.

I use my knowledge to identify what availability of product we have for sale and how best to meet customer orders and maximise the commercial return for the company.

I really enjoyed the Food Science programme. The small class size facilitated excellent student-lecturer interaction and was the basis for a great education. As well as completion of all core subjects, there were language, presentation & computer subjects, these provided me with skills which I use daily, both professionally & socially. The highlight for me was the professional work experience placement which enabled the theories learned in the class to be applied in practical & real-life scenarios.

- Paul Horgan, Group Commercial Team, Kepak



Graduate View

The Food Science programme gave me the opportunity to pursue my interest in food, science and nutrition.

My favourite subjects were the human nutrition and more specialised subjects, which took place in years 3 and 4. With my Food Science degree as a prerequisite, I completed an MSc in Public Health Nutrition and a postgraduate diploma in Dietetics at Queen Margaret's University, Edinburgh. I currently work as a dietician in St Mary's Hospital Dublin and have found some of the core subjects taken on the programme extremely beneficial. Many of my classmates from the programme are working in marketing, product development, food safety and quality assurance related roles and we all fondly remember our time in UCD.

- Ciara Murphy, Dietician, St Mary's Hospital Dublin



Purdue University

Professional Work Experience and Study Abroad Opportunities

A five month professional work experience (PWE) placement is integral to your Food Science degree and is an invaluable learning and networking opportunity.

You can also study abroad for one semester, at universities including:

- University of California, USA
- Kansas State University, USA
- University of Melbourne, Australia
- Purdue University, USA
- Michigan State University, USA

There are a limited number of scholarships available, on a competitive basis, which support the travel costs associated with studying and completing Professional Work Experience abroad

Participating on the Study Abroad Programme at Purdue University in year three was truly an experience of a life time for me.

- Aine Doyle, Food Science

Food Science

DN261

Year 1 Subjects

Animal and Plant Biology
Chemistry
Physics
Mathematics
Information skills and Computer Applications
Introduction to Food, Diet and Health
Elective modules

Year 2 Subjects

Food Physics
Sensory Analysis
Agricultural Microbiology
Human Nutrition
Basic Food Analysis
Genetics and Biotechnology

Year 3 & 4 Subjects

Food Analysis
Food Chemistry
Product Development
Food Microbiology
Bioprocess Engineering Principles
Five months Professional Work Experience
Food Chain Integrity

Fresh & Processed Meat Products
Milk and Dairy Products
Food Safety
Fermented Foods
Food Ingredients
Food Process Technology
Project

BSc Honours

UCD Graduate Study

MSc Food Regulatory Affairs
MSc Food Safety & Risk Analysis
MSc Bioresource Technology
MSc Research and PhD Options
MSc Sustainable Agriculture and Rural Development
Walsh Fellowship Research Opportunities
MSc Environmental Research Mgt
MSc Sustainable Energy and Green Technologies

Career Opportunities

New Product Development
Teacher
Quality Assurance Officer
Food Safety Inspector
Marketing Manager
Nutritionist
Food Technologist

Journalism
Business Manager
Microbiologist
Technical Sales Manager
Government Official
Supply chain Management and Buyer

Conversion or Complementary Courses

Postgraduate Diploma in Education
Graduate Veterinary Medicine
MSc Business Studies
Master of Business Administration
HDip Computer Science
Master of Accounting
MSc Public Health Nutrition
Postgraduate Diploma in Dietetics



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FORESTRY





DN271 Forestry

Average CAO Points 2012 385
Minimum CAO Points 2012 350

Minimum A Level/GCSE: CCD
(A-Level) & c (AS) or equivalent
combination

Why Forestry?

Forestry is the science, art and profession of managing forests. Foresters manage and create forests in sustainable and environmentally friendly ways to provide a variety of outputs including timber, recreation, conservation and aesthetics.

You will discover how the different components of a forest – the trees, soils, water, climate, flora and fauna interact with each other and are affected by human use. The protection and enhancement of biodiversity, soils and air quality are all highly relevant in the creation and management of forests today.

Other aspects of modern forest management which are also addressed in this programme include:

- carbon sequestration
- renewable energy resources
- multifunctional forestry
- bio-complexity
- sustainable forest management
- social and urban forestry
- adaptation for and mitigation of climate change
- and the conservation of genetic resources



Student View

I chose to complete a semester abroad at Michigan State University in the US during the third year of my Forestry degree programme.

I had a truly brilliant time, enjoying the freedom that came with living and studying abroad. Studying abroad provides the opportunity to do new and exciting things everyday which would usually require a huge effort or expense. I enjoyed meeting true Americans and received amazing hospitality.

I would absolutely recommend future students to participate in the Study Abroad Programme – you will not regret it!

- Aaron McNulty, Forestry student who completed a semester abroad at Michigan State University



Staff View

I enjoyed both science and business subjects at school. I also loved being outdoors, especially out walking in the woods. When it came time to think about options for further study, I was amazed to find out that there was a Forestry degree course on offer in UCD.

This programme, as with all the Agricultural Science programmes, has a strong scientific basis but also highly relevant business modules and a practical work experience element. My classmates are working in all aspects of forestry, but also in other areas of business and education. The degree has given me the opportunity to work in several different fields and now currently, as a Lecturer back in the Forestry programme in UCD. This is a dynamic and flexible programme and the possibilities are endless.

- Marie Doyle, Lecturer UCD School of Agriculture and Food Science



Michigan State University, USA

Professional Work Experience and Study Abroad Opportunities

A five month Professional Work Experience (PWE) placement is integral to your Forestry degree programme and is an invaluable learning and networking opportunity. Popular options include placements in Ireland, Europe and South America.

You can also study abroad for one semester, at universities including:

- University of California, USA
- Purdue University, USA
- Michigan State University, USA

There are a limited number of scholarships available, on a competitive basis, which support the travel costs associated with studying and completing Professional Work Experience abroad.

Studying abroad provides the opportunity to do new and exciting things everyday which would usually require a huge effort or expense.

- Aaron McNulty, Forestry

Forestry

DN271

Year 1 Subjects

Animal and Plant Biology
Chemistry
Physics
Mathematics
Agricultural Economics
Trees and Forests in Ireland
Elective modules

Year 2 Subjects

Principles of Forestry
Forest Management
Soil Science Basics
Plant Ecology
Tree Structure & Function
Business Management
Elective modules

Year 3 Subjects

Forest Establishment
Forest Protection
GIS & Remote Sensing
Wood Science
Silviculture
Five months Professional Work Experience
Elective modules

Year 4 Subjects

GIS & Forest Inventory
Forest Management Plan
GIS & Experimental Design
Scientific Research Project
Forest Planning
Elective modules

BAgrSc Honours

UCD Graduate Study

MSc and PhD Research Opportunities
MSc Environmental Resource Management
MSc Wildlife Conservation & Management
MSc Rural Environmental Conservation & Management
MSc Sustainable Agriculture and Rural Development
MSc Humanitarian Action

Career Opportunities

Forester
Teacher
Technical Advisor
Forest Inspector
Forest Development Officer
Purchasing Manager
Operations Manager
Harvesting Manager

Consultancy
GIS Analyst
Scientist
Entrepreneur
Pricing Analyst
Marketing Executive
Government Official
Farm Management

Conversion or Complementary Courses

Postgraduate Diploma in Education
MSc Business Studies
Master of Business Administration
Master of Accounting
HDip Computer Science



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University College Dublin Agriculture, Food Science and Human Nutrition

HORTICULTURE, LANDSCAPE AND SPORTSTURF MANAGEMENT





DN272 **Horticulture, Landscape and Sportsturf Management**

Average CAO Points 2012 400
Minimum CAO Points 2012 335

Minimum A Level/GCSE: CCD (A-Level)
& d (AS) or equivalent combination

Why Horticulture, Landscape and Sportsturf Management?

Horticulture is the art and science of plant cultivation for human use. It is a topic that covers a vast and interesting range of subjects, including all of the sciences, plant protection (pests and diseases), environmental studies, business, management and communications and, of course, growing plants.

Sportsturf Management focuses on the science behind developing and maintaining Ireland's golf courses, tennis courts, and football, rugby and other sports pitches. Nursery, Garden Centre & Ornamental Plant Production concentrates on the booming business of growing plants for housing developments, road construction and other projects. Social & Therapeutic Horticulture looks at the interaction between humans and plants and the use of horticulture to develop social capital and its use in therapy. This area would be of interest for those individuals who like working with people and plants. Fresh Produce Production studies food production, food supply and globalisation and its impact on food supply, safety and quality.

The objectives of this degree are to give you:

- Knowledge of the growth, development and protection of plants, and use of plants for food, leisure, sports, social and environmental benefits
- An understanding of horticultural plant production systems and how their components are integrated and managed in an environmentally friendly and sustainable manner.

Graduate View

A typical day for me involves teaching teenagers science, maths and biology, carrying out experimental work, supervising students, correcting experimental work and homework and much more.



As a horticulture student I developed a good mixture of scientific and technical knowledge along with the basics concepts of landscape design. In 4th year, I carried out a research project, which meant I developed how to carry out experimental work and to analyse results.

The highlights of the programme were the work experience which enabled me to apply my knowledge in a work environment. I had a great time in UCD, met many new friends and would recommend the programme as it provides a stepping stone into many different careers.

- Deirdre Mannion, Secondary School Teacher, St Raphaels College, Loughrea, Co. Galway



Irish Sky Garden, Chelsea Flower Show

Professional Work Experience and Study Abroad Opportunities

A five month professional work experience (PWE) placement is integral to your Horticulture, Landscape and Sportsturf Management degree programme and is an invaluable learning and networking opportunity. Popular options include placements in Ireland, Europe, North and South America, New Zealand and Australia.

You can also study abroad for one semester, at universities including:

- University of California, USA
- Kansas State University, USA
- University of Melbourne, Australia
- Purdue University, USA
- Michigan State University, USA

There are a limited number of scholarships available, on a competitive basis, which support the travel costs associated with studying and completing Professional Work Experience abroad.

Staff members are very supportive and have very strong links with industry.

- Oliver Kiernan, Fyffe's Graduate Programme



Graduate View

I graduated from the HLSM program in 2009 and am currently finalising an exciting graduate programme, based in Costa Rica, with one of the largest tropical produce importers and distributors in Europe.

The training programme has been fascinating and really comprehensive to date and our company hope to employ additional graduates from the UCD HLSM programme in the future.

I always had an interest in working outdoors and with plants so the Horticulture, Landscape and Sportsturf Management programme at UCD was an obvious choice. The programme is excellently organised and staff members are very supportive and have very strong links with industry.

The most interesting and memorable experience I had in UCD was the Professional Work Placement (PWE). PWE is carried out in year three for a period of five months and enabled me to network within the industry and apply the skills I had developed. All of my classmates equally enjoyed the PWE which is certainly one of the strengths of this programme.

- Oliver Kiernan, Fyffe's Graduate Programme

Horticulture, Landscape and Sportsturf Management

DN272

Year 1 Subjects

Animal and Plant Biology
Chemistry
Physics
Mathematics
Agricultural Economics
Plants and People
Elective modules

Year 2 Subjects

Fundamentals of Horticulture Management
Soil Science Basics
Physiological Plant Ecology
Applied Plant Biology
Engineering and Surveying
Microbiology
Elective modules

Year 3 Subjects

Plant Protection
Soil Science
Elements of Landscape Design
Landscape Trees and Shrubs
Sportsturf Construction
Biotech of Hort Plants
Professional Work Experience
Elective module

Year 4 Subjects

Food Production
Fruits, Vegetables & Protected Crops
Nursery Production
Sportsturf Management
Enterprise Development
Professional Communications
Research Project
Elective module

BAgrSc Honours

UCD Graduate Study

MSc and PhD Research Opportunities
MSc Sustainable Agriculture and Rural Development
MSc Humanitarian Action
MSc Environmental Resource Management
MSc Rural Environmental Conservation & Management

Career Opportunities

Horticulture Production Logistics and Retail
Teacher
Management
Sportsturf Consultant
Technical Advisor
Quality Assurance Inspector
Scientist
Entrepreneur
Marketing Executive
Farm Management

Conversion or Complementary Courses

Postgraduate Diploma in Education
MSc Business Studies
Master of Business Administration
Master of Accounting



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HUMAN NUTRITION





DN262

Human Nutrition

Average CAO Points 2012 545

Minimum CAO Points 2012 525

Minimum A Level/GCSE: A*A*A
(A-Level) & a (AS) or equivalent
combination

Why Human Nutrition ?

Nutrition – the interaction between food and health – is becoming increasingly important in society. This programme covers many aspects of nutritional sciences, from biochemistry to molecular and public health nutrition, and also includes topics such as nutrition communication and food regulatory affairs.

On graduating you will be able to apply your knowledge to many different areas of the food and health industry.



Staff View

As Director of the UCD Institute of Food and Health, my collaboration within UCD is extensive. Within Food and Health, I collaborate with food safety, food science, food biosystems, food law, consumer studies and with primary production. I also work with colleagues in the Conway Institute of Biomedical Sciences, the Geary Institute and the UCD Earth Institute.

I actively contribute to teaching on the BSc in Human Nutrition programme and, along with colleagues, I helped develop and introduce the programme in 2007. My research interests are in two main categories. One is laboratory-based and at present my focus is on the application of metabolomics technology to human nutrition. The second area is in public health nutrition, which is centred around several national food consumption surveys and their use for the development of evidence-based dietary guidelines. You can find out more information about my research on www.ucd.ie/foodandhealth

- Professor Mick Gibney, UCD Professor of Food and Health



Professional Work Experience

A year of professional work experience in third year gives you a unique opportunity to graduate with the skills necessary to enter the working world. This work placement also provides an excellent opportunity to gain practical experience and broaden your appreciation of the food industry or of nutrition related employment. You can expect to find employment in national and international companies and government departments associated with the food industry or nutrition, or within world-class research groups in international or domestic universities.

Student View

I went along to the UCD Open Days to find out more about the Human Nutrition degree programme. The course was relatively new, addressed exactly what I am interested in, staff were welcoming and the campus facilities were great, so I decided right there that I would apply.

I really like science and given that this programme is focussed on nutrition and health, which is where my interests are, I have really enjoyed the last three years at UCD. Small class sizes mean you get to know your classmates very quickly, make lots of new friends and have constant access to approachable and friendly staff. You also get to study a wide selection of subjects over the four years and in your spare time there are lots of societies and extracurricular activities on offer.

The best aspect of the programme to date has been Professional Work Experience. I carried out my Professional Work Experience in year three in the Physiology Unit, at the University Hospital at Nottingham University. I had a great time, found the experience really valuable and as a result I now know that I would like to work in nutrition research following graduation. Some of my classmates carried out their placements in government departments, with food companies, at research departments in universities and with relevant agencies such as the Food Safety Authority.

- Claire Byrne, Human Nutrition



This programme is focused on nutrition and health, which is where my interests are...

Human Nutrition

DN262

Year 1 Subjects

Biology
Chemistry
Physics
Mathematics
Microbiology
Introduction to Food, Diet and Health
Human Nutrition
Elective modules

Year 2 Subjects

Food Macronutrients
Nutrition Research Methods
Molecular basis of disease
Human Nutrition II
Basic Food Analysis
Nutritional Energy Metabolism
Biostatistics

Year 3 Subjects

One year Professional Work Experience

Year 4 Subjects

Food Regulation
Nutrition and Communication
Molecular Nutrition
Clinical Nutrition
Food Safety
Public Health Nutrition
Project
Elective modules

BSc Honours

UCD Graduate Study

MSc Public Health Nutrition
MSc Research and PhD Options
MSc Food Regulatory Affairs
MSc Food Safety & Risk Analysis
MSc and PhD Research Opportunities
MEngSc Food Engineering

Career Opportunities

Public Health/Community Nutritionist
Sports Nutritionist
Management Nutritionist
Teacher
Scientist
Marketing Manager
Health Promotion
Quality Assurance
Food Safety
Journalism
Lecturer
Business Manager
Microbiologist
Government Official

Conversion or Complementary Courses

Graduate Veterinary Medicine
Graduate Medicine
Postgraduate Diploma in Dietetics
Postgraduate Diploma Education
MSc Business Studies
Master of Business Administration
Master of Accounting



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