



# Master's and doctoral research degrees

Prospectus 2019-2020

**UK No.1**  
Teaching staff  
to student  
ratio 1:7

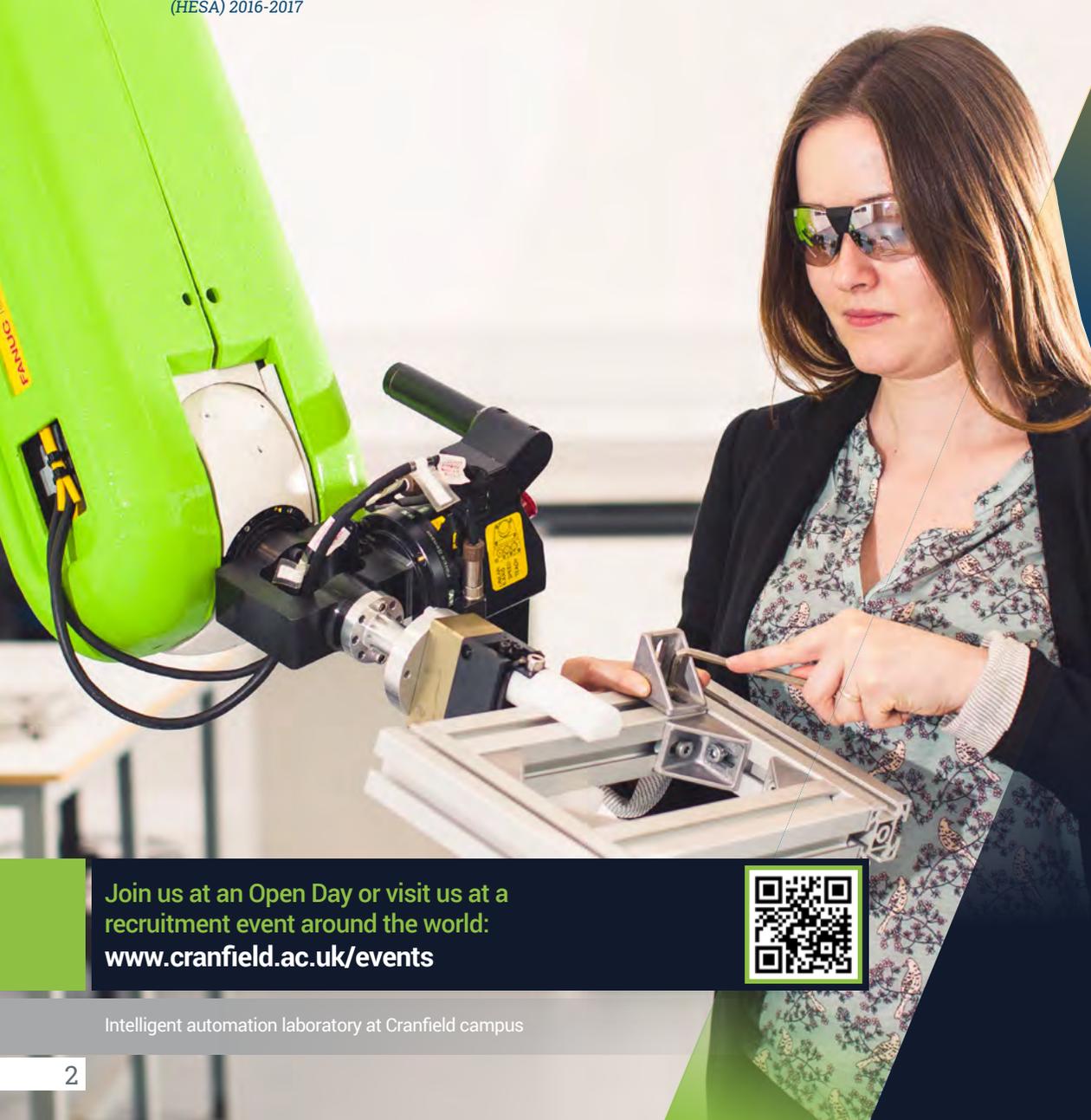
Higher Education Statistics Agency  
(HESA) 2016-2017

**UK No.2**  
graduate  
employment

(DLHE longitudinal, 2017)

**UK No.1**  
for research  
income from  
industry  
per academic

Times Higher Education (THE) 2017



Join us at an Open Day or visit us at a  
recruitment event around the world:  
[www.cranfield.ac.uk/events](http://www.cranfield.ac.uk/events)



Intelligent automation laboratory at Cranfield campus

# Welcome

to the UK's only specialist  
postgraduate university in  
technology and management

**At Cranfield, you will develop your skills  
and expertise alongside professionals  
from around the globe.**

We pride ourselves in accelerating the careers of the learners that study with us. Working with over 1,500 businesses and governments around the world, we have the highest commercial income per academic staff member of any UK university. This means our master's and doctoral-level students can work on projects that address real business challenges, taking innovative solutions through to proof of concept in our large-scale facilities.

In this prospectus, you will see our courses grouped by the business sectors we serve. We look forward to welcoming you to our campus at one of our Open Days or when you embark on your programme of study.

**Professor Sir Peter Gregson FREng MRIA**  
Chief Executive and Vice-Chancellor  
Cranfield University



# Why choose Cranfield?

Our master's and research students come from all over the world, bringing diverse perspectives, as well as industrial experience in technology and management to continually inform your learning environment.



**Triple Accredited  
Management School**  
(AMBA, EQUIS,  
AACSB International)

**WORLD  
No. 45**

for Engineering  
- Mechanical,  
Aeronautical and  
Manufacturing

*QS World University Rankings by  
Subject, 2018*

**81%**

of our research  
is classed as  
**world-leading or  
internationally  
excellent**

*Research Excellence Framework, 2014*

## Approximately half of our learners:

- study part-time while in employment,
- are over 30 years old.

As a postgraduate-only university, we are not listed in league tables that help compare undergraduate universities, such as *The Times World Rankings* and *The Complete University Guide*.

"I wanted a blend of design and business from my master's degree. With Cranfield's status, that's why I wanted to study there. Since graduating, I have returned to the University and lectured several times to new cohorts. I have run workshops and given advice to students."

**Rob Armes,**  
User Experience Specialist, PA Consulting Group,  
(Design, Strategy and Leadership MDes 2015)





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# A forward-thinking University

By choosing to study a master's or research degree at Cranfield, you will join our academics in addressing current and future challenges in technology and management, for the benefit of industry and society.



We are honoured to have been awarded the Queen's Anniversary Prize, the UK's most prestigious form of national recognition open to a UK university, on five separate occasions for our work in:

- **Soil science:** our education and research in large-scale soil and environmental data for the sustainable use of natural resources worldwide has been providing practical advice on land use for more than 40 years.
- **Water and sanitation:** over a 25-year period, we have pioneered improved water services benefiting the quality of lives and livelihoods in the most impoverished parts of the world.
- **Aviation and safety:** our air accident investigation training and research contributes to international aviation safety.
- **Humanitarian demining:** we have developed and delivered bespoke education and training programmes to managers from over 60 countries including Afghanistan, Angola, Cambodia and Iraq, playing a unique role in developing sustainable, national capacities in landmine clearance.
- **Manufacturing management:** we designed a unique and innovative programme for strategic-level managers in the manufacturing industry.

The Plant Phenotyping and Soil Health Facility at Cranfield campus.





Find out more about our award-winning work:  
[www.cranfield.ac.uk/rankings](http://www.cranfield.ac.uk/rankings)



# Fast-track your career

**Whether you are looking to change direction or take the next step in your career – be that into the worlds of academia, business, charity or government – Cranfield will provide you with the technical and business-relevant skills employers look for and entrepreneurs need to thrive.**

## **Teaching model**

Our courses are underpinned by our industrial partnerships. Master's group projects bring together students from across our themes to work on problems posed by industry.

## **Executive development**

Executive development programme delegates study alongside master's students on some modules, providing a wealth of experience and fresh ideas in one class.

## **Career Development Service**

With a track record of global employment success, our links with industry provide you with exciting career opportunities. Our comprehensive service is available to you from enrolment for life.

## **Start your own business**

We offer start-up support, such as venture weekends, to help develop your ideas into business opportunities.

Our business incubation facility offers six-months' free office space and facilities, training, legal and funding advice. As start-ups grow, they have progressed to our on-site Technology Park.

## **Learn more**

- » [www.cranfield.ac.uk/careers](http://www.cranfield.ac.uk/careers)
- » [www.cranfield.ac.uk/alumni19](http://www.cranfield.ac.uk/alumni19)
- » [www.cranfield.ac.uk/exec-courses](http://www.cranfield.ac.uk/exec-courses)

Our  
alumni:

A professional  
network of  
**60,000+**  
alumni

**30+**  
international  
alumni  
communities

**96%**  
of our graduates  
are employed or  
in further study

*DLHE longitudinal 2017*



"I have been able to get my business off the ground, supported by The Bettany Centre, CUBIC and other faculty at the University. I met my fellow co-founders at Cranfield and had a fantastic year doing the MBA. The ability to speak to alumni, faculty and other colleagues while developing the business has been instrumental in not only getting our business funded but in opening doors for business partnerships and supplier relationships."

**Daniel Bedi,**  
CEO and Co-founder, The Fan Area,  
(MBA 2017)





Pilot-plant hall at Cranfield campus



# Academic life

## Decide on your study route

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# Flexible full-time or part-time study and research

## You can choose how you study at Cranfield.

Our full-time master's courses are designed to be completed in a year. Most full-time research degrees take three years.

However, it may suit you to study while you are working. Over half our master's and a third of our research students study part-time.

### Course structure

Our courses are structured so that you don't need to live locally to study part-time. You will need to attend some modules in person and you can schedule your course structure around your commitments. These usually take the form of one week blocks at varying times of the year, minimising the time you need to be away from your place of work and your family.

### Multi-channel delivery

Blended learning opportunities include online materials, work-based projects, self-study, assessment by assignments and the latest tools for remote access to systems and information.

### Business relevant

Your project or research can be formulated around your workplace, so that you can access relevant expertise and apply the outcomes to your organisation. Some master's modules are taught together with full-time students, enabling you to network with people in your subject area and exposing you to global thinking.

## Masterships®

Cranfield is leading the way in UK Government-approved part-time study. We are the first university in England to run several master's-level, part-time degree programmes which companies can fund through their contributions to the Apprenticeship Levy. These offer opportunities for both the company and the learner to benefit with work-related skills development.

Find out more:  
[www.cranfield.ac.uk/masterships](http://www.cranfield.ac.uk/masterships)





“Studying part-time is very hard. I have two young boys, and my full-time job. It was very challenging, you have to be organised. I had great support from my family, colleagues and friends. Staff members at Cranfield were phenomenally supportive: I think they hit a really nice tone of putting the right amount of pressure on you, giving you the aspiration to do your best and really achieve what you’re capable of.”

**Kate Matthews,**  
Learning and Development, Citibank,  
(International Human Resources MSc 2015)

# Master's: a different way of learning

Our specialist, sector-facing master's courses are designed in close collaboration with industrial advisory panels. This ensures course content remains industry-relevant and our graduates impress employers with their business-readiness.



**Our staff to student ratio of 1:7 is the best of any university in the UK.** Many of our academic staff come from industry and your master's is informed by their experience of carrying out research on behalf of the University's 1,500 industrial clients and partners across the globe.

Check your course web page for more information about opportunities such as:

- collaboration with industry partners and students on other courses,
- networking with industry-relevant guest speakers and internationally-recognised academic staff,
- accreditation from professional bodies,
- internships and international travel.

“The Cranfield group project is a really important thing that we look at, particularly through the interview process. We need graduates who are pragmatic, practical people, who have got a good strong academic background, but can solve problems and work together as a team, to deliver our missions.”

**Kathryn Graham,**  
Engineering Manager, Surrey Satellite Technology





Find out more:  
[www.cranfield.ac.uk/study](http://www.cranfield.ac.uk/study)



If you enjoy doing original research and would like your degree to be more research-focused, look up our Master's by Research qualification:  
[www.cranfield.ac.uk/research](http://www.cranfield.ac.uk/research)

# Cranfield master's course structure

**This diagram illustrates the course structure of a lot of our full-time master's courses, it is not indicative of all courses.**

Please check your course structure online for more detailed information, including the weighting of each phase and part-time course structure variations.

**Taught programme:** an intensive learning experience, providing you with the knowledge and skills you need to excel in your chosen specialist field.

Defence and Security  
School of Management

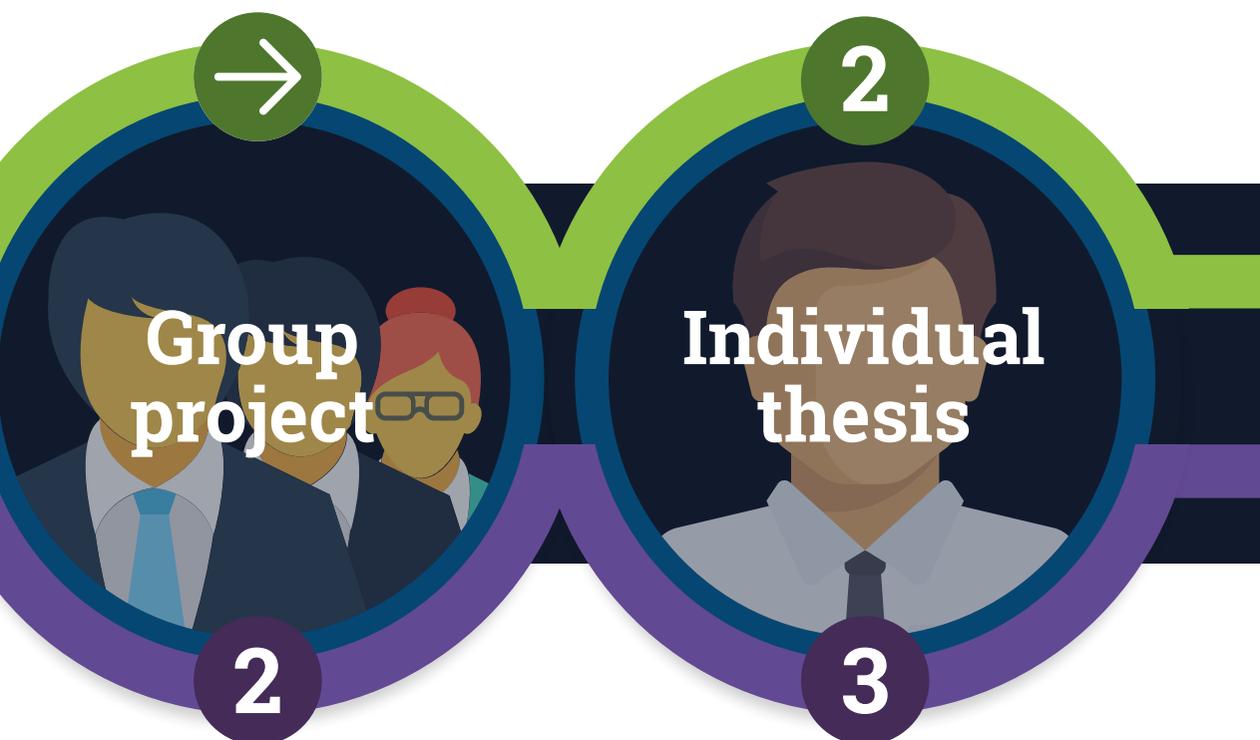


Aerospace  
Energy and Power  
Environment and Agrifood  
Manufacturing  
Transport Systems  
Water



**Group project** (not included in Defence and Security and School of Management courses): you will have the opportunity to address a real-world problem. The ability to understand how your part of a project affects the whole is a steep learning curve and this project gives our graduates a head start.

**Individual thesis:** an opportunity to think and work in an original way. This could be working on a project for a University partner, delving deeper into an area of specific interest or a real-world challenge in the sector you want to work in.



# Research: a world-class destination

**Studying for a research degree gives you the time and offers you access to the facilities and expertise to pursue your ideas in your chosen specialist area of interest.**

At Cranfield, we provide the framework to apply your work to make a real difference to society. With our emphasis on specialist sectors, our strong links with industry and government, and our collaboration with some of the top universities in the UK such as Oxford, Cambridge, Imperial College London and Warwick, you will work with some of the brightest minds in their fields.

## Research councils

Funding councils have awarded Cranfield over £10 million in research grants in the past year alone.



## Doctoral centres

Doing your research degree through a funded doctoral centre provides you with the structure to help you network with research students working in your field at partner universities.

This enables you to benefit from expertise and facilities across the UK, and a supportive network of people at different stages of their research degrees who can give you advice and support. For more information on current opportunities, visit [www.cranfield.ac.uk/research](http://www.cranfield.ac.uk/research)



In collaboration with University of Oxford



In collaboration with the universities of Newcastle, Cambridge and Birmingham



In collaboration with Imperial College London and the universities of Sheffield, Newcastle and Exeter



In collaboration with the universities of Bristol, Manchester and Nottingham



In collaboration with the universities of Warwick and Exeter



In collaboration with Cambridge University

For more information on current opportunities, visit:  
[www.cranfield.ac.uk/research/phd](http://www.cranfield.ac.uk/research/phd)





"I think the most important thing is that I know that the research that I'm doing is needed by industry. A lot of the time with a PhD project you're solving a theoretical question, but we all know that our research is going to be used in industry once we've finished."

**Jessica Taylor,**  
Energy and Power EngD current student,  
(Offshore and Oceans Technology MSc 2016)



# Your doctoral research experience

As part of a specialist postgraduate community, research students at Cranfield work among like-minded professionals, benefiting from a wealth of multidisciplinary experiences.

## The Cranfield Doctoral Network

As a researcher at Cranfield you will become a member of the Cranfield Doctoral Network, providing you with opportunities to share ideas and collaborate in a multidisciplinary environment.

Comprising eight doctoral communities, which are aligned with the University's sector specialisms, these give you opportunities to participate in a programme of events and networking opportunities.



The above diagram includes key elements involved in all research degrees, and is illustrated on an example full-time PhD timeline. Other research degrees follow a slightly different structure.

For more information on these qualifications visit [www.cranfield.ac.uk/research](http://www.cranfield.ac.uk/research)



## Transferable skills – Doctoral Researchers’ Core Development programme

In addition to your academic studies, we provide a framework for your ongoing professional development through workshops, webinars and other resources. This enriching experience encompasses four key areas, highly valued by employers:

- ✓ Knowledge and intellectual abilities,
- ✓ Personal effectiveness,
- ✓ Research governance and organisation,
- ✓ Engagement, influence and impact.

Review key findings and write thesis

Year 3

- Progress review
- Skills training
- Submit papers to supervisor

Viva voce exam

### Research degrees and durations

Qualification	Degree name	Duration	
		Full-time	Part-time
PhD	Doctor of Philosophy	3 years	6 years
DBA	Doctor of Business Administration	n/a	4 years
EngD	Engineering Doctorate	4 years	n/a
MPhil	Master of Philosophy	2 years	4 years
MSc by Research	Master of Science by Research	1 year	2 years

# What are the different research options?

There are several ways you can embark on a research programme at Cranfield, depending on your ambitions and circumstances.

## Employment-related research projects

If you or your employer have a challenge which you think could form your research project, we can support you to develop a solution while gaining a research qualification.

### Benefits

- Opportunity to study in your own country while working.
- Career development.

1

## Funded research opportunities – studentships

We offer a range of pre-defined research projects that you can become involved with. These are funded opportunities, known as studentships, often in collaboration with industry and research councils. They offer a paid route – similar to a job in research. See the current opportunities at [www.cranfield.ac.uk/research/phd](http://www.cranfield.ac.uk/research/phd)

### Benefits

- Projects come with fixed income (stipend).
- Pre-defined topic aligned with industry or government interests.
- Often involves multiple sponsors on a collaborative research project.

2

## Individual research projects

If you have an area of research that you would like to explore further, we can help you develop your proposal.

### Benefits

- Opportunity to explore and develop your own topic.
- Potential for funding.
- Structured programme with specialist support.

3



Kings Norton Library at our Cranfield campus

# Map your postgraduate progression

Our sector specialisms bring related academic areas together. They align your qualification with an industry sector, adding strength, scope and opportunity to your learning.

## Our sector specialisms

Your undergraduate academic discipline	Aerospace	Defence and Security	Energy and Power	Environment and Agrifood	Management	Manufacturing	Transport Systems	Water
Aeronautical Engineering	●	●	●		●	●	●	●
Agriculture			●	●	●			●
Biological Sciences		●	●	●	●			●
Business Studies		●	●	●	●		●	●
Chemical Engineering		●	●	●	●	●		●
Chemistry	●	●	●	●	●	●		●
Civil Engineering		●	●	●	●		●	●
Computer Science	●	●	●	●	●	●	●	●
Design	●	●		●	●	●		●
Economics		●	●	●	●		●	●
Electrical Engineering	●	●	●		●	●	●	
Energy and Fuels	●	●	●		●		●	
Engineering	●	●	●	●	●	●	●	●
Environmental Sciences		●	●	●	●			●
Food Science and Nutrition				●	●			
Geography				●	●		●	●
Management	●	●	●		●	●	●	●
Manufacturing Engineering	●	●	●		●	●		
Marketing					●			
Materials Science	●	●	●	●	●	●	●	
Mathematics and Statistics	●	●	●	●	●	●	●	●
Mechanical Engineering	●	●	●	●	●	●	●	
Military Sciences		●			●		●	
Physics	●	●	●		●	●	●	
Psychology		●			●		●	
Social Sciences		●		●	●	●	●	●
Water Resources				●	●			●

## Research and thesis titles

Both research and master's students must publish a thesis covering a novel subject in their chosen study field. To give you an idea about the kind of work we do, **here are a few examples of thesis titles by academic discipline and how they relate to our sector specialisms.**

### Aeronautical Engineering – Aerospace

'Spacecraft flight in the atmosphere'

### Biological Sciences – Water

'Impact of chemical shock loads on a membrane bioreactor for urban wastewater reuse'

### Chemistry – Environment and Agrifood

'Development and optimisation of chemometric techniques for the evaluation of meat freshness'

### Computer Science – Energy

'Numerical simulation of two-phase gas and non-Newtonian shear-thinning fluid flows in pipelines'

### Civil Engineering – Water

'Optimisation of reservoir water flooding'

### Design – spans all of our sector specialisms, search C4D online

'Influencing sustainable product choice through anticipated pride and guilt: the role of self-accountability and recalled emotions'

### Economics – Transport Systems

'The economics of safety: a case study of the UK offshore helicopter industry'

### Engineering – Manufacturing

'Sustainable manufacturing for the future: a shift towards smarter and cleaner production with the aid of technology'

### Forensic Science – Defence and Security

'A multi-proxy investigation into the effects of burial environments on nuclear DNA in bone over forensic and archaeological timescales'

### Geography – Environment and Agrifood

'Sugar cane modelling using GIS and remote sensing techniques'

### Management – School of Management

'Leadership and organisation as a function of the different prevailing cultures'

You can search for more in your area of interest by supervisor and specialisms, themes, areas of expertise, research areas and academic areas online:

[www.cranfield.ac.uk/ceres](http://www.cranfield.ac.uk/ceres)



Vincent Building at our Cranfield campus



“If you have the engineering instinct, then you will enjoy making things, have a curiosity about materials, a pleasure in seeing a problem that needs something made to fix it. I think you should start each job with a fresh perspective and say, “This problem has never arisen before; how are we going to fix it?””

**Ralph Hooper,**

Designer on the first vertical take-off-and-landing (VTOL) aeroplane, Hawkers at Kingston, (Cranfield College of Aeronautics 1946)



The Volante Vision Concept, previewed by Aston Martin, Cranfield Aerospace Solutions, Rolls-Royce and Cranfield University at Farnborough Airshow 2018, uses VTOL as well as digital aviation and autonomous systems.

**UK  
No.1**

Over half of all the postgraduate students in the UK in aerospace engineering study for their MSc with us.

**£35  
million**

£35 million Aerospace Integration Research Centre opened in 2017



Over three-quarters of our Aerospace learners come from outside the UK, representing over 55 countries.

**UK 17%**

**EU 51%**

**Overseas 32%**

(Figures from February 2018)

**THINKING, BRILLIANTLY APPLIED**

Cranfield has the most postgraduate aerospace students of any UK university and is the only university in Europe which owns and operates its own airport.



Cranfield airport

## Research in action

**Working with Airbus, we are developing new hybrid power system technologies for small to medium unmanned aerial systems (UAS).**

A major barrier to growth in the small, commercial UAS sector is the lack of affordable, lightweight, fast and secure “sense and avoid” communications technology needed for safe operation.

We are currently modifying a UAV to develop and test hybrid power laser communication systems.



UAV laboratory at Cranfield campus

Find out more:  
[www.cranfield.ac.uk/aerospace2019](http://www.cranfield.ac.uk/aerospace2019)



## Investing in innovative facilities

Cranfield's global research airport has all the traditional facilities such as wind tunnels, gas turbine labs and avionics labs. We continue to invest in our aerospace facilities to ensure we add the value you need, and your future employer has come to expect from a Cranfield aerospace graduate:

- **Aerospace Integration Research Centre (AIRC):** the AIRC houses physical and virtual simulation labs including development of a virtual wind tunnel and an aircraft flight simulator to assess the impact of new ideas on aircraft.
- **Air traffic management laboratory:** with an integrated airport control tower simulator and high-fidelity flight simulators, we can investigate the impact of the different air traffic management agents on airspace users.
- **UAV laboratory:** used for flight testing in the areas of guidance, navigation, control and surveillance.
- **Cranfield Aerospace Solutions:** a company 100% owned by the University and the market leader in rapid prototyping of new aerospace concepts.

Aerospace Integration Research Centre (AIRC)



"Cranfield's AVD programme is unique in its practical approach and the very high quality of projects it takes on. We had several flight demonstrations of our own UAV design, which is always an amazing experience."

**Eduardo Sepulveda Palacios,**  
Aerospace PhD, current student,  
(Aerospace Vehicle Design MSc 2015)





## Cranfield Defence and Security

“Cranfield Defence and Security has enjoyed a close working relationship since the Defence Academy was founded in 2002.

Defence and Security's deep expertise and reputation are key to ensuring the postgraduate education required of UK defence is world-leading.”

**Air Vice-Marshal Chris Luck MBE  
MA RAF,**  
Commandant Joint Services Command  
and Staff College, Defence Academy of  
the United Kingdom





**60%**

More than half of our defence learners are serving military officers and civil servants.

The Digital Forensics MSc is GCHQ certified.



**65+**

Students from more than 65 countries have studied Defence and Security with us.

**THINKING, BRILLIANTLY APPLIED**

Cranfield is one of the world's leading universities for defence and security education, research and consultancy. Our academics' expertise ranges from energetics and forensic sciences to international stabilisation and cyber security.



Guided Weapons Hall at Cranfield University at Shrivenham

## Research in action

### Supporting counterterrorism and resilience

Our research on terrorism and counterterrorism has informed discussion, debate, decision-making and practice among policymakers working on counterterrorism, radicalisation and resilience issues both within the UK and beyond.

Issues we have explored include the processes of radicalisation, de-radicalisation and disengagement from violent extremism, along with risk assessment frameworks and tools for assessing the extent of radicalisation in individuals. We also developed advanced computer simulations to better understand the impact of terrorist bombings in complex city centres and other settings.

This work is directly feeding into enhanced risk and resilience planning in the UK and is contributing to the development and implementation of new tools supporting counterterrorism and resilience work and our understanding of issues relating to radicalisation among professionals working in relevant areas. These insights have strengthened and informed UK and international policy formulation.

Learn more about how our research impacts  
defence and security  
[www.cranfield.ac.uk/defenceandsecurity2019](http://www.cranfield.ac.uk/defenceandsecurity2019)



## World-class, state-of-the-art facilities

Several unique facilities and large-scale test environments, including those on the Ministry of Defence site at Shrivenham, are used by our students and clients for exceptional research. They include:

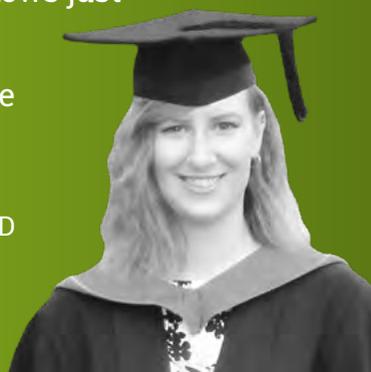
- **Guided Weapons Hall:** an extensive selection of complete missile systems, including air-air missiles, surface-air missiles and anti-ship missiles;
- **Cranfield Ordnance Test and Evaluation Centre (COTEC):** where materials and weapons are tested and evaluated for government agencies, defence suppliers and manufacturers;
- **Cranfield Forensic Institute:** with ballistics, explosives, archaeology, materials science and forensic computing facilities.

Forensics simulation at Cranfield University at Shrivenham



"My PhD is part-sponsored by AWE. There are strong links to industry and the opportunity to carry out research at other institutions. I really liked how real-life case studies were brought into lectures, as it shows just how relevant the subject is while also providing you with ideas of careers, which you may not have considered before."

**Caitlin Gilroy,**  
Current student, Defence and Security PhD  
(Forensic Engineering MSc 2016)





“I chose Cranfield to do my PhD because of the interaction between industry and academia, and its recognition in both industrial and academic networks. Working on a project that is directly embedded in an industrial application is an enormous opportunity to grow and develop as a researcher. I believe this helped me to become a well-rounded professional.”

**Dawid Hanak,**  
Lecturer in Combustion, Carbon Capture and Storage, Cranfield University,  
(Energy and Power PhD 2016)





**UK  
No.3**

Cranfield is one of the largest HE providers for energy postgraduates  
*Higher Education Statistics Agency, 2016-2017*

**1 million  
KWh/year**  
solar-powered

Cranfield's solar power farm is a working research facility, it provides 5% of the annual electricity on campus.



Over three-quarters of our Energy and Power learners come from outside the UK, representing over 45 countries.

**UK 23%**

**EU 32%**

**Overseas 45%**

(Figures from February 2018)

**THINKING, BRILLIANTLY APPLIED**

With global strategic partners in industry and government, our specialisms address the issues around providing sustainable, reliable and affordable energy supplies with minimal environmental impact.



## Research in action

### **Driving down the cost of offshore wind energy.**

We acted as the technical lead on the largest joint industry research project in offshore wind: the offshore wind Structural Lifecycle Industrial Collaboration (SLIC) project. Offshore wind turbines and their supporting structures are constantly exposed to wave and wind forces, which cause fatigue and corrosion damage. Together, we were successful in setting new design and operation standards.

Working with a consortium of ten energy companies (lead by Centrica) and using our structural integrity lab, Dr Athanasios Kolios and Dr Ali Mehmanparast's teams created a clearer picture of the life expectancy of existing structures. This is used to improve the accuracy of risk assessment for offshore developers and operators, and safety around these structures; and future wind turbine structure designs, which, together, will significantly decrease the cost of offshore wind energy.

Find out more:  
[www.cranfield.ac.uk/energyandpower2019](http://www.cranfield.ac.uk/energyandpower2019)



## Facilities

Energy and Power has a range of world-class and unique industrial facilities that students can use as part of their studies and research. These include:

- **The energy process laboratory:** equipped with pilot-scale facilities to study the clean energy conversion in fossil and biofuels and study different CO<sub>2</sub> capture techniques.
- **The process systems engineering laboratory:** equipped with industrial-scale single-phase and multi-phase flow facilities to study the behaviour of complex flows found in oil and gas.
- **Our energy technology laboratory:** one of the best equipped pilot-scale energy facilities in the UK, helping us to address the needs of the energy and process industries.

Wave tank



“The group project provided a platform to groom problem-solving and critical evaluation skills, and I am confident that these skills will be very useful in the working environment.”

**Jonah Ibiomagabara,**  
Project Analyst, Agile P3 Limited,  
(Renewable Energy Engineering MSc 2017)





“One thing I'm really proud of is that the outcome of my PhD has landed in a farm-schools programme that's supporting 7,000 small-holder farmers in Northern Madagascar. My PhD was sponsored by Unilever, I worked in their labs so they became aware of the business impact my PhD could have. As a result, I now have a full-time role based at Colworth.”

**Siobhan Gardiner,**  
Global Food and Refreshment R&D  
Manager, Unilever,  
(Environment and Agrifood PhD 2017)





**70**  
years

Home to a unique global soil inventory charting 70 years of soil survey data.

**€6**  
million

Cranfield led a €6 million European project called AGFORWARD (2014-2017) to promote agroforestry



Over half of our Environment and Agrifood learners come from outside the UK, representing over 35 countries.

**UK 28%**

**EU 45%**

**Overseas 27%**

(Figures from February 2018)

**THINKING, BRILLIANTLY APPLIED**

For more than 50 years, we have contributed to enhancing natural capital and ensuring that global food systems are more resilient for the future.



Drone technology

## Research in action

### **Sharing expertise accelerates environmental, agricultural and humanitarian solutions.**

Our collaborative research shows that using drone (UAV) technology to collect unbiased data can improve assessments of our waterways. This data could be used in river management, restoration and river quality regulatory frameworks, ultimately improving water quality for landowners, local authorities and the general population.

Recent advances in UAV technology, statistical modelling and robust algorithms to automate feature recognition are enabling early detection of biohazards, such as jellyfish or seaweed blooms, before they arrive at coastal nuclear power plants.

UAV deployment in catastrophe relief situations can save lives and help target limited or stretched resources. Cranfield experts are discovering what opportunities and challenges exist in the use of drones in relief efforts and for future scenario planning.

Find out more:

[www.cranfield.ac.uk/environmentandagrifood2019](http://www.cranfield.ac.uk/environmentandagrifood2019)



## Investing in facilities

Air quality, climate change and stratospheric ozone depletion are three of the major environmental challenges of our time. **The Centre for Atmospheric Informatics and Emissions Technology** is helping to advance understanding in these areas, and is the result of over £3 million investment from Natural Environment Research Council (NERC) and National Centre for Atmospheric Science (NCAS). The Centre is also home to researchers at the **Facility for Airborne Atmospheric Measurements (FAAM)**.

Cranfield has achieved significant investment in a £5.5 million **Agri-EPI Centre**, and £3 million **Crop Health and Protection Centre**. The two Centres will combine research and development capabilities to address the importance of soil resources in agriculture, and sensing and analysis of “big data” from agriculture.

Crop Health and Protection (CHAP) and Agricultural Engineering and Precision Innovation (Agri-EPI) Centre glasshouse and pilot-scale soil facilities



“We share what we learn from industry with Cranfield, to create the syllabus that fits the students' needs for the future.”

**Dr Bizhan Pourkomainian,**  
Director Global Food Safety, Restaurant and  
Distribution  
McDonald's Restaurants Limited





“Cranfield was an amazing year and one I’ll never forget. I wrote my best ever business plan and actually made it happen! Above all, I learnt a lot about myself; not just about me as an individual but about me in the context of a team and as a leader – I wouldn’t have had the success I’ve had without this being part of my journey.”

**Sarah Willingham,**  
Serial entrepreneur and former Dragon  
on Dragons’ Den (BBC TV),  
(MBA 2003)





FLAGSHIP  
**MBA**

Our flagship MBA is ranked fourth in the world for Economics and Organisational Behaviour and third in the UK for employment three months after graduation in the *Financial Times* 2018 Global Full-time MBA ranking

WORLD  
**No.1**

Ranked number 1 for international delivery in the *Financial Times* Customised Executive Education 2017 rankings



Almost half of our School of Management learners come from outside the UK, representing over 80 countries.

- UK 49%
- EU 11%
- Overseas 40%

(Figures from February 2018)

**THINKING, BRILLIANTLY APPLIED**

As a world leader in management education and research for over 50 years, we are uniquely placed to connect leadership with technology. We develop knowledge and expertise to improve the practice of management.

**We are one of an elite group of schools worldwide to hold triple accreditation.**



## Research in action

**Cranfield's research, in partnership with the charity Working Families, overturned the perception that flexible working is just a cost to the employer.**

Our research found flexible workers scored significantly higher on organisational commitment and job satisfaction than standard workers. Best practice to facilitate successful flexible working includes providing guidance to flexible workers on how to manage colleagues' and managers' expectations, and training for managers to ensure goals and objectives are met.

Find out more:  
[www.cranfield.ac.uk/management2019](http://www.cranfield.ac.uk/management2019)



## Collaborative research partnerships

Organisations as diverse as L'Oréal, Royal Dutch Shell, HSBC, Air Asia and Unilever have benefited from our work. Home to world-class research into workplace diversity, we are leading the debate on research in gender and leadership and the changing world of work, shaping academia, policy and practice globally. Learn more online about our expertise and research, and how this shapes our master's degrees.



“Cranfield’s International Executive Doctorate (DBA) was tremendously helpful for my career – I started the programme as a functional manager and went through five different promotions. I link my career progression directly to this programme as it provided rigour, discipline, content and a new way of thinking and reasoning that allowed me to have the confidence to challenge the loud voice in the room.”

**Dr Gabriel Morelli,**  
Global Head of Commercial Excellence, Sandoz  
(MBA 2000, DBA 2010)



**Cranfield**  
Manufacturing

“Because of the waste and environmental impact associated with the current way of manufacturing, there is this huge demand for a much leaner, more efficient process to produce large aerospace components.”

**Dr Filomeno Martina,**  
Lecturer in Additive Manufacture,  
Cranfield University

Additive manufacturing has reduced material waste from 95% to 10%. The lighter weight aerospace parts produced could also reduce fuel consumption.





**UK  
No.1**

**for engineering  
master's students**  
*Higher Education  
Statistics Agency  
2016-17*

**4**

**Member of four  
Centres for Doctoral  
Training (CDTs) for  
Manufacturing**



**Over half of our  
Manufacturing learners  
come from outside  
the UK, representing  
over 50 countries.**

**UK 40%**

**EU 33%**

**Overseas 27%**

*(Figures from February 2018)*

**THINKING, BRILLIANTLY APPLIED**

Through our industry connections, we provide insight into current industry challenges in fields as diverse as ultra-precision engineering to through-life engineering services.



OpEx virtual reality laboratory at our Cranfield campus

## Research in action

### Global problem-solving with virtual reality technology.

We enable engineers to view and solve technical problems in a different location, using virtual reality technology.

Using human motion capture technology borrowed from the gaming industry, and a synchronous data transfer protocol from computer networks, we are able to replicate physical environments in a virtual one and effectively transfer the actions of humans across geographically separated distances.

We have worked with Jaguar Land Rover to enable its engineers to view and solve problems in different parts of the world without having to fly to specific locations.

Find out more:  
[www.cranfield.ac.uk/manufacturing2019](http://www.cranfield.ac.uk/manufacturing2019)



## Facilities

Our world-class facilities include:

- **Precision engineering:** we are home to a range of ultra-precision diamond turning machines and house the UK's national facility for large X-ray optics manufacture.
- **Welding Engineering and Laser Processing Centre:** one of the most extensive large-scale metal additive manufacturing facilities in the world with a variety of state-of-the-art laser processing equipment.
- **Electron microscopes:** materials students receive hands-on experience with sophisticated electron microscopy techniques.
- **Manufacturing informatics:** we provide an environment for digital twin development and digitisation of high-value manufacturing.

Coatings laboratory at our Cranfield campus



"Cranfield students are world-renowned for being the best from a manufacturing and management perspective. I think the fact that they want to study at Cranfield University shows that they have a commitment to their industry, their education and their career as well. By studying here they don't want just to tick a box, they want to develop themselves, and really push the boat out."

**Neil Gibson,**  
Technical Manager, Crane Building Services and  
Utilities





“We typically find that the Cranfield alumni we recruit have got really good, well-rounded experience. They understand what’s driving our industry, the key things that are important to us, and they appreciate that actually it’s not just about their theoretical knowledge, it’s also about their communication skills and being able to work as part of a team.”

**Helen Jackson Garside,**  
Technical Group Leader Steering and Drive Control, Jaguar Land Rover  
(Motorsport Engineering and Management MSc 2004)





**UK  
No.1**

**We have the largest number of transport and automotive postgraduates of any university in the UK**  
*Higher Education Statistics Agency, 2016-2017*

**26%**

**26% of automotive engineering master's students in the UK study at Cranfield each year**  
*Higher Education Statistics Agency 2016-2017*



**Three-quarters of our Transport Systems learners come from outside the UK, representing over 60 countries.**

**UK 23%**

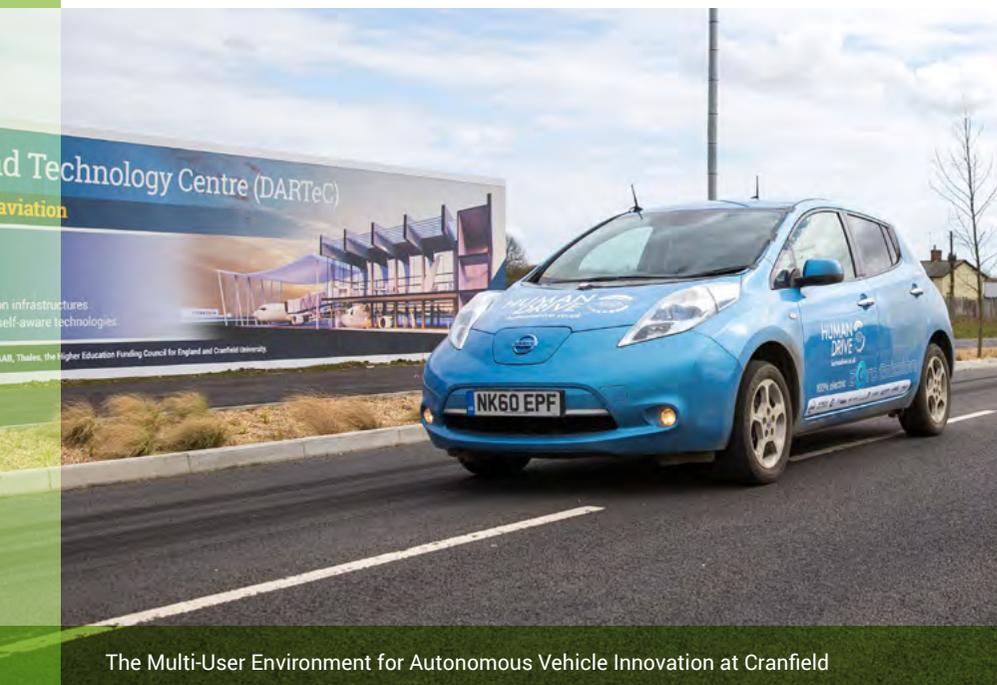
**EU 40%**

**Overseas 37%**

*(Figures from February 2018)*

**THINKING, BRILLIANTLY APPLIED**

With over 50 years' experience, our teaching and research expertise covers technology, engineering and management across all modes of transport, including sustainable transport and intelligent mobility.



The Multi-User Environment for Autonomous Vehicle Innovation at Cranfield

## Research in action

### Addressing safety in driver control transition for driverless vehicles.

The transition between self-driving and human-driving modes in driverless cars needs to be smooth, swift and safe. There is a risk that human drivers may not be ready to take control of the vehicle safely at short notice because their focus could be on other non-driving tasks.

Our researchers are studying driver attention and cognitive control characteristics to develop technology which enables the safe transfer of control between vehicle and person, taking into account driver attention factors.

Find out more:  
[www.cranfield.ac.uk/transportsystems2019](http://www.cranfield.ac.uk/transportsystems2019)



## Facilities global organisations use:

Our unique facilities enable us to work with global transport systems organisations on innovations in land, sea and air transport. These interactions inform our master's course modules, group projects and theses:

- **Accident investigation laboratory:** the only laboratory outside the USA for working with wreckage from air, rail and marine accidents.
- **Crash Impact Centre:** one of just three FIA (Fédération Internationale de L'Automobile) approved test centres in the world, crash testing Formula One cars. It is also used for major aerospace applications.
- **Off-road vehicle dynamics facility:** the only centre of its type in the UK to study the relationship between vehicles and different soil environments. Driving surfaces from around the world can be simulated under controlled conditions, speeding up development compared to traditional fieldwork trials.
- **Intelligent Mobility Engineering Centre:** a new facility with vehicle workshops, vehicle electrification, autonomy, simulation, mechatronics and control systems laboratories.

Cranfield's air traffic management (ATM) laboratory



"We come to see the students group project presentations because they're really good. I come every year to tell the students about my company, what we do and what is happening in the real world and answer any questions that they might have."

**Sara Avila,**  
Senior Airport Planner, Jacobs,  
(Airport Planning and Management MSc  
2010)





“The types of degrees that Cranfield graduates have are very relevant to our business and a lot of them have worked on projects which are really relevant to the role – real-life, practical experience.”

**Sharon Bedford,**  
Recruitment Officer, Veolia Water  
Technologies UK





THE QUEEN'S  
ANNIVERSARY PRIZES  
FOR HIGHER AND FURTHER EDUCATION  
2015

For our pioneering work  
on water and sanitation  
for developing  
countries.



Co-ordinating  
five of the UK's  
top universities in  
developing the next  
generation of water  
engineers.



Over half of our  
Water learners come  
from outside the UK,  
representing over 35  
countries.

**UK 38%**

**EU 39%**

**Overseas 23%**

(Figures from February 2018)

**THINKING, BRILLIANTLY APPLIED**

We are industry focused and our innovative research and applied postgraduate expertise in water treatment and management are making water services and natural water sources more resilient and sustainable.



On-campus wastewater treatment research facility

## Research in action

### **Risk and resilience in the international water sector.**

A long-standing collaboration with the US Water Research Foundation and a consortium of international utilities is supporting the development of improved risk governance in the water sector, meaning water utilities can become more resilient to extrinsic threats to their business and reputation.

Our researchers, together with a network of risk managers, have developed practical guidance on risk management for the sector. Our work has informed an analysis of risk management capability and an assessment of practical tools that utility companies can use to 'home grow' risk analysis capability, as well as guidance to utility executives on engaging their boards. Our research has encouraged the integration of risk thinking within utility master plans and is supporting the emerging emphasis on resilience within the international water sector.

Find out more:  
[www.cranfield.ac.uk/water2019](http://www.cranfield.ac.uk/water2019)



## £7.4 million investment in on-campus water facilities

As part of a major national consortium, the UK Collaboratorium for Research in Infrastructure and Cities (UKCRIC), we are enhancing and extending existing on-site industrial-scale water and wastewater test facilities, used by both master's and research students. Research from this collaboration will inform Government and industry investment in the UK's infrastructure.

Investments include:

- **a sensor testing facility** for exploring engineering resilience of urban water systems,
- **an infrastructure breakthrough innovation hub** with areas for design, rapid prototyping, and testing,
- **a data visualisation suite,**
- a new build **220m<sup>2</sup> clean water pilot hall,**
- **sewer loops** for analysing the formation and control of fats, oils and greases (FOG) in sewers.

Water laboratory in the Vincent Building



“The team project for Severn Trent was really inspiring, it enabled me to work with four other students from four different countries. Team working taught me a lot. After the thesis I was able to apply for a job in the same company and got offered a job as a research scientist.”

**Charlotte De Witte,**  
Research Scientist, Thames Water,  
(Water and Wastewater Engineering MSc 2015)





We are you

We have space for you to soar



# Your time at Cranfield

**Find out about the local area and  
accommodation options**

- 60 Professional resources
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- 64 Accommodation
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# Professional resources

**Many of our on-campus specialist research facilities are unique; from an operational airport to a wastewater treatment works.**

Our comprehensive range of equipment provides you with unparalleled opportunities for your research and studies.



Take a virtual tour of our Shrivensham and Cranfield sites to see inside some of our facilities:  
[virtualtour.cranfield.ac.uk](http://virtualtour.cranfield.ac.uk)



## Library and IT

Our extensive and specialised libraries offer a vast array of sector-specific resources. Our information specialists will support you in accessing and using them, and respond quickly to requests for one-to-one help. Our aim is to ensure that, when you graduate, you are familiar with the resources widely used in your industry and have the soft skills required to stay informed of the latest developments in your sector. You can find out more at [www.cranfield.ac.uk/library](http://www.cranfield.ac.uk/library)

Our IT services are always there for you and PC labs are open 24 hours. We provide commercially-relevant software, including specialist engineering applications; as well as industrial-grade facilities to develop and test your own software. Read more at [www.cranfield.ac.uk/itservices](http://www.cranfield.ac.uk/itservices)

Kings Norton Library (designed by award-winning architect Sir Norman Foster).



"I did my PhD long distance and part-time. One of the best features was the online library. There was good access to journal articles, PhD and master's theses that are related to your subject: I would just email the librarians and ask: 'how do I get to this kind of information?' and they were very responsive."

**Ava Patricia Avila Goldman,**  
Security Cooperation Analyst,  
Booz Allen Hamilton,  
(Defence and Security PhD 2016)



# Life at Cranfield University

**Our close-knit communities provide a safe and tranquil environment to study and socialise with skilled and ambitious people.**

Teaching and facilities for Aerospace, Energy and Power, Environment and Agrifood, Manufacturing, Transport Systems, Water and the School of Management are located on the Cranfield campus in Bedfordshire, in South East England.

Cranfield Defence and Security is primarily located at the Defence Academy of the United Kingdom at Shrivenham, near Swindon in Oxfordshire, where the UK Ministry of Defence offers postgraduate education and training to the country's Armed Forces and defence civil servants.

As a student, you and your family will be part of this warm, welcoming community. With over a 100 nationalities represented on our campus, we are committed to diversity and inclusion, and aim to provide a supportive learning environment, where everyone is treated with dignity and respect.

## **Cranfield campus is set in extensive grounds with:**

- Student accommodation options comprising family homes and student apartment blocks (see pages 64 and 65).
- Two hotels with full accommodation and conference facilities.
- Bars and cafes, a bank and a grocery store with a post office.
- Sports facilities with a fitness centre, outdoor sports pitches, tennis, badminton and squash courts.
- A chapel and mosque on site, with rooms available on request for multi-faith purposes.
- An on-campus nursery school and a pre-school, both rated as 'outstanding' by Ofsted.
- An adjoining Technology Park, housing dozens of entrepreneurial businesses.

## **Shrivenham facilities include:**

- A choice of restaurants, cafes and bars.
- The Officers' Mess, which you will be eligible to join at a modest fee. This offers a self-service dining room, a bar, TV rooms, a snooker room and quiet areas to study.
- There is an Athletics Union which you can join to access the sports hall and gymnasium, which has a fitness suite with fitness classes and an outdoor swimming pool.
- Prayer facilities.

Take a virtual tour of our campus:  
[virtualltour.cranfield.ac.uk](http://virtualltour.cranfield.ac.uk)





## Cranfield Students' Association

As a student of Cranfield University, you are automatically a member of **Cranfield Students' Association (CSA)**, a student-led, democratic organisation that operates at both Cranfield and Shrivvenham. The CSA is here to represent and support students, and to enhance your student experience in many ways.

CSA representatives sit on almost all University committees, providing a student voice throughout the University. It provides advice and support, and can signpost students to specialised services if required. The CSA runs a wide range of activities and entertainment, day trips, sports clubs and social societies. Many of these are run by students, providing opportunities for personal development and experience.

For more information visit [www.mycsa.org.uk](http://www.mycsa.org.uk)



## Student Advice Centre

We value our diverse student community and provide support to help you achieve your full potential during your time with us.

The Student Advice Centre offers a professional and confidential service where information, advice and guidance are available to all students on a broad range of issues, from information for those with families about local schools, to help with access to the many resources available.

Learning Support Officers form part of the Student Advice Centre and act as the central point of contact to provide information and guidance for disabled students and those with learning support needs, including dyslexia and mental health awareness.

### Student advice and support:

[www.cranfield.ac.uk/health-and-welfare](http://www.cranfield.ac.uk/health-and-welfare)

### Families:

**Cranfield:** [www.cranfield.ac.uk/cranfieldfamily](http://www.cranfield.ac.uk/cranfieldfamily)

**Shrivvenham:** [www.cranfield.ac.uk/shrivvenhamfamily](http://www.cranfield.ac.uk/shrivvenhamfamily)

For more information, see our Student guide:

[www.cranfield.ac.uk/studentguide](http://www.cranfield.ac.uk/studentguide)

# Accommodation

## On-campus

### Cranfield

We have a range of housing options to suit the different needs of our learners. Most are just a few minutes' walk from lecture rooms and social amenities.

All of our accommodation is furnished and centrally heated, with free wifi. There are several different types of accommodation available.

Options include four halls of residence, shared houses, studio flats for couples and family houses. There are also catering and en-suite options. More detailed information can be found in the table opposite.

Accommodation is very popular and gets booked early – we recommend you to apply for accommodation as soon as you receive your offer letter.

For further information, please visit [www.cranfield.ac.uk/accommodation](http://www.cranfield.ac.uk/accommodation)

### Shrivenham

Our courses at Shrivenham are based at the Defence Academy of the UK, which doesn't offer on-site accommodation. You can find accommodation off-site via the Shrivenham StudentPad link on this page.

Stringfellow Hall



Fedden House



Shared houses



## Off-campus

Privately rented houses, flats or rooms in nearby villages or in local towns are available for students close to both sites with regular transport provided by local bus services.

StudentPad is our off-campus student accommodation search engine to help you find houses, flats and lodgings nearby.

### Studentpad

[www.cranfieldstudentpad.co.uk](http://www.cranfieldstudentpad.co.uk)  
[www.shrivenhamstudentpad.co.uk](http://www.shrivenhamstudentpad.co.uk)

Find out more:

- » [www.cranfield.ac.uk/lifeatcranfield](http://www.cranfield.ac.uk/lifeatcranfield)
- » [www.cranfield.ac.uk/lifeatshrivenham](http://www.cranfield.ac.uk/lifeatshrivenham)



Cranfield campus accommodation	Disabled facilities/rooms	En-suite facilities <sup>1</sup>	Individual bathroom	Shared bathroom	Communal lounge	Individual living rooms	Individual kitchens	Communal kitchen/dining rooms	Cooking/cutlery/kitchen utensils provided	Fully furnished <sup>3</sup>	Part furnished <sup>2</sup>	Communal garden	Reception desk	Price per week 2019-2020 Minimum contract term applies.
<b>Lanchester Hall</b> • 348 rooms (half en-suite) • Shared kitchens for 6-8 people • Launderette	X	X		X	X			X	X		X	X	X	£100-£157
<b>Mitchell Hall – catered</b> • Price includes one meal a day, others available at extra cost. • Study bedrooms with wash basin • Launderette • TV Lounge					X	X					X	X	X	£145-£185
<b>Stringfellow Hall</b> • 196 spacious en-suite rooms • Shared kitchens for 5 people • Lift • Launderette	X	X						X	X		X	X		£160
<b>Chilver Hall</b> • 142 en-suite rooms • Shared kitchens for 5-8 people		X						X	X		X			£140-£157
<b>Shared houses</b> • Individual study bedrooms • Shared kitchens for 6-8 people					X	X		X	X		X	X		£90-£140
<b>Fedden House studios – couples</b> • 75 studios			X				X	X		X		X		£170
<b>Family houses</b> • 2, 3 or 4-bedroom houses dependent on number, age and gender of children • Individual garden				X			X	X		X				£195-£360



Only in some



<sup>1</sup> en-suite facilities may not apply to all rooms.  
<sup>2</sup> bed, desk, chair, drawers, hanging space, lamp, bin, noticeboard.  
<sup>3</sup> lounge suite, dining room tables and chairs, beds, bedside cabinets, desk, wardrobe, chest of drawers, cooker, fridge freezer.

All prices include gas, water and electricity.  
 Please note that one of the family houses also has disabled facilities.  
**All information is correct at time of print and subject to change.**

# Cranfield: out and about

**Bedford and Milton Keynes are the closest towns to Cranfield's rural campus. Offering plenty of local attractions to enjoy, both towns also run fast trains to London for convenient day trips to the capital.**

## Bedford

There are plenty of things to see and do – from museums and ancient relics, to beautiful outdoor spaces, sports centres and late-night entertainment. Parking, shops, street markets and all styles of restaurants, cafés and bars are abundant. The River Ouse runs through the centre of the town and supports many activities.

For more information, visit:

[www.lovebedford.co.uk](http://www.lovebedford.co.uk)

[www.bedford.gov.uk](http://www.bedford.gov.uk)

## Milton Keynes

Some of the most exciting activities and best entertainment experiences in the UK are on offer in this remarkable town. Shopping, cinemas, theatres, sports, the National Bowl for live music festivals and indoor real-snow slopes are just a few of the attractions. Over 200 events and activities are organised by the Parks Trust each year.

For more information, visit:

[www.destinationmiltonkeynes.co.uk](http://www.destinationmiltonkeynes.co.uk)

[www.theparkstrust.com](http://www.theparkstrust.com)

### Transport – by train

#### From Bedford to:

London Luton Airport – 25 mins.

London St Pancras – 40 mins.

London Gatwick – 1hr 40 mins.

Leicester – 45 mins.

Nottingham – 1hr 15 mins.

Sheffield – 2hr 10 mins.

#### From Milton Keynes to:

London Euston – 35 mins.

Birmingham International

Airport – 40 mins.

Manchester Piccadilly – 1hr 35 mins.

For more information, visit:

[www.nationalrail.co.uk](http://www.nationalrail.co.uk)

### By bus

In partnership with Uno, we provide a dedicated, convenient and inexpensive bus service. This operates daily to and from Milton Keynes, Bedford and other towns and villages in the area until late in the evening. All the buses have free wifi and low-level entrances for pushchairs and wheelchairs.

For more information, visit: [www.unobus.info](http://www.unobus.info)



# Shrivenham: out and about

**Under an hour's travel time to central London, this safe location provides plenty of opportunities for learning, social activities and sight-seeing.**

## Shrivenham

The site of military colleges since 1946 and famous for its thatched cottages, stone walls, historic pubs and a Norman parish church, it is a small village with shops, doctor's surgery and Post Office.

## Oxford

Oxford is a city famous for its colleges, stone architecture and history. There are museums, shops, markets, theatres, restaurants, pubs and clubs. The many parks and gardens are perfect for walks and the River Isis is ideal for punting, rowing and boat tours.

**For information, visit:**  
[www.experienceoxfordshire.org](http://www.experienceoxfordshire.org)

## Swindon

Swindon offers a broad mix of entertainment options: from an international-size ice skating rink, leisure centre and parks, to a designer outlet village, shopping centre and live entertainment; as well as all the necessities of a vibrant town - restaurants, galleries, museums and cafés.

**For information, visit:**  
[www.swindon.gov.uk](http://www.swindon.gov.uk)



## Transport – by train

**From Swindon to:**  
London Paddington – 50 mins.  
Bristol – 25 mins.  
Cardiff – 1hr 15mins.  
Swansea – 2hrs.

**From Oxford to:**  
London Marylebone – 1hr 10mins.

**For more information, visit:**  
[www.nationalrail.co.uk](http://www.nationalrail.co.uk)

## By bus

From the Defence Academy, the local bus service (route 66) runs twice per hour and takes about 30 minutes to Swindon bus station and 1 hour 45 minutes to Oxford.

**For more information, visit:** [www.stagecoachbus.com](http://www.stagecoachbus.com)





# Important information

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# Finance your studies

**A Cranfield degree is an investment in your career and a significant financial commitment. We know that this is often an important factor in making a decision about your studies. Several funding options, loans, bursaries and scholarships are available.**

Many of our taught degree students fund their studies by putting together a funding package drawn from savings, small grants, loans or bursaries.

Working with you, we can suggest a package that suits your course and circumstances.

## Fees

### Taught tuition fees

These are listed in the tables at the this prospectus, on the individual course pages on our website and at [www.cranfield.ac.uk/fees](http://www.cranfield.ac.uk/fees)

### Paying for your research degree

Please read page 71 and see our website about the various ways you can fund your research degree. Please note that, for some research degrees, there may be additional costs (known as bench fees, or additional fee elements – AFE) of up to £10,000 per annum, in addition to the course fees, which will be explained during the application process. A guide to research fees can be found at [www.cranfield.ac.uk/fees](http://www.cranfield.ac.uk/fees)

### Deposits

Please note that a deposit may be required for some taught and research degrees. Please see our website for details.

### Fee status

The fees payable are determined with reference to the UK Government regulations. As a guiding principle, EU nationals (including UK) who are ordinarily resident in the EU pay the Home/EU tuition fees and all other students (including those from the Channel Islands and Isle of Man) pay Overseas fees.

## Bursaries and scholarships

The University offers various bursaries for high quality applicants. These may be available depending on your choice of course, your academic record, your country or your gender – there are several funding streams that may apply to you.

Research students are often able to apply for studentships or other funded opportunities – see our website for the latest information: [www.cranfield.ac.uk/research/phd](http://www.cranfield.ac.uk/research/phd)

You can benefit from our international partnerships as well as research council funding to help you with your studies. Research councils include:



Search the funding finder on our website at [www.cranfield.ac.uk/funding](http://www.cranfield.ac.uk/funding)





## Loans

There are several kinds of finance loans available. These are open to different groups of students, and have varying loan limits and interest rates. Examples include:

### Future Finance loans

Loans of between £2,000 and £40,000 for full- or part-time study operated by Future Finance Loan Corporation Ltd.

[www.cranfield.ac.uk/futureloan](http://www.cranfield.ac.uk/futureloan)

### Cranfield Postgraduate Loan Scheme

Science, technology, engineering and mathematics (STEM) loans of between £10,000 and £30,000 for full-time master's students, operated by Prodigy Finance Ltd.

[www.cranfield.ac.uk/loan](http://www.cranfield.ac.uk/loan)

### The Postgraduate Loan

Student Finance England loans of up to £10,609 for master's courses and £25,000 for doctoral courses to help with course fees and living costs.

[www.gov.uk/funding-for-postgraduate-study](http://www.gov.uk/funding-for-postgraduate-study)

### Prodigy Finance MBA loan programme

Prodigy Finance provides funding for MBA students through contributions from the University, alumni and friends of the School of Management.

[www.cranfield.ac.uk/mbafunding](http://www.cranfield.ac.uk/mbafunding)

## Managing your budget

### Cost of living

For single students to cover the cost of accommodation and living expenses, you need to budget around £1,000 per month, for couples £1,500 and more for families.

### Working during your studies

Full-time study is intense and part-time work is not recommended. Our part-time courses, often referred to as 'Executive', and mainly attended by UK students, are specifically designed to combine work and learning.

# How to apply

**We welcome applications from students from all over the world for both our taught courses and research.**

Our courses are highly competitive and although there are no set application deadlines, we recommend applying as early as possible to secure your place. This is important if you also want to apply for on-campus accommodation or need to apply for a visa to study in the UK.

## Application process for taught courses

To access our taught course online application system, simply select your course and click the 'Apply now' button to fill in the fields. Students attending a course at Shrivenham will also need to complete the security clearance application – see page 84 and [www.cranfield.ac.uk/securityclearance](http://www.cranfield.ac.uk/securityclearance)

Before starting the application process you need to have:

- your previous education and employment record,
- your current English language standard,
- details about how you intend to fund your studies,
- nominations for your academic references.

Find out more:  
[www.cranfield.ac.uk/taughtapply](http://www.cranfield.ac.uk/taughtapply)



## Application process for postgraduate research programmes

Intake dates for research students are generally in February, June and October.

If you would like to study one of our research degrees, select your area of interest and apply online. Read more about the various entry routes for research on page 22.

You can also send an email with your research proposal to [study@cranfield.ac.uk](mailto:study@cranfield.ac.uk)

Find out more:  
[www.cranfield.ac.uk/researchapply](http://www.cranfield.ac.uk/researchapply)



## Alternative options

### Pre-master's in Engineering

If you do not meet our entry requirements for a master's, you may be eligible for Cranfield's Pre-master's in Engineering course.

[www.cranfield.ac.uk/premasters](http://www.cranfield.ac.uk/premasters)

### European Partnership Programme (EPP)

If you are applying through one of our European partner universities, please contact the international office at your home institution for advice about the application process.

[www.cranfield.ac.uk/EPP](http://www.cranfield.ac.uk/EPP)

### Postgraduate apprenticeships

Cranfield was one of the first universities in the UK to launch apprenticeships at master's level. If your company pays into the UK apprenticeship levy and you are resident in the UK, find out about our Masterships:

[www.cranfield.ac.uk/mastershipscourses](http://www.cranfield.ac.uk/mastershipscourses)

### Kaplan International College

International students may follow a preparation programme for both master's and doctoral level study at our partner college, Kaplan International College in London.

[www.cranfield.ac.uk/kaplan](http://www.cranfield.ac.uk/kaplan)



### Muscat University

We offers six programmes in collaboration with Muscat University in Oman to equip graduates with the postgraduate skills suited to the region's ambitions in infrastructure development, logistics and wider commerce.

[www.cranfield.ac.uk/muscat](http://www.cranfield.ac.uk/muscat)

"It does not hurt to have worked beforehand; you should not be scared to come back into academia. Your PhD subject could determine the rest of your career, so you want to be sure it's interesting."

**Dr Thomas Kissinger,**  
Postdoctoral Research Fellow,  
Cranfield University,  
(Interferometric Signal Processing  
PhD 2015)



# Visa information

## For international applicants from outside Europe.

In addition to applying to Cranfield, you need to ensure that you have the right to study in the UK.

If you do not already have a visa that allows you to remain in the UK for the duration of your course, you will need to apply for a student (Tier 4 General or Short-term study) visa to study in the UK. Current immigration rules set by the UK Government are on the UK Home Office website.

See [www.gov.uk/browse/visas-immigration/student-visas](http://www.gov.uk/browse/visas-immigration/student-visas)

You may need to do this in two stages:

1. Apply for Academic Technology Approval Scheme (ATAS) if applicable
2. Apply for a visa.

### 1 ATAS

Courses that require an ATAS certificate are marked on relevant course pages on our website. You need to obtain this certificate before you apply for a visa. ATAS certificates are processed and issued by the UK Government, it is free to apply and can be completed online. We suggest that you check the current processing times on the ATAS website.

If you transfer to us from a different university or change course while you are here, you may need to make a further ATAS certificate application before you start your course. See [www.fco.gov.uk/atas](http://www.fco.gov.uk/atas)

### 2 Visa

The UK visa application process is under constant review so it is important that you keep up-to-date with developments on how to apply for a visa to study in the UK. Any visa application must be accompanied by a Confirmation of Acceptance for Studies (CAS) number or a support letter from Cranfield University.



Find out more:

Ask for our Student guide which has further information on living in the UK, or download it from our website at [www.cranfield.ac.uk/studentguide](http://www.cranfield.ac.uk/studentguide)



Visa applications and ATAS:  
[www.cranfield.ac.uk/visas](http://www.cranfield.ac.uk/visas)



### Useful links for ATAS and visas

- Information for ATAS applications  
[www.fco.gov.uk/atas](http://www.fco.gov.uk/atas)
- Current immigration rules  
[www.gov.uk/government/organisations/uk-visas-and-immigration](http://www.gov.uk/government/organisations/uk-visas-and-immigration)
- Tier 4 student visas  
[www.cranfield.ac.uk/tier4visa](http://www.cranfield.ac.uk/tier4visa)
- Short-term study visa  
[www.gov.uk/study-visit-visa](http://www.gov.uk/study-visit-visa)
- UK Council for International Student Affairs  
[www.ukcisa.org.uk](http://www.ukcisa.org.uk)

For more information, or help with your application,  
please contact  
E: [studentimmigration@cranfield.ac.uk](mailto:studentimmigration@cranfield.ac.uk)



# Course directory

Course title	Award	Study mode FT - Full-time PT - Part-time	Please see page 82 for footnotes
<b>Aerospace</b>			
Advanced Lightweight Structures and Impact	MSc	FT	
Aerospace Computational Engineering	MSc	FT, PT	
Aerospace Dynamics	MSc	FT, PT	
Aerospace Vehicle Design	MSc	FT	
Aircraft Engineering	MSc, PgDip, PgCert	PT	
Astronautics and Space Engineering	MSc	FT, PT	
Autonomous Vehicle Dynamics and Control	MSc, PgDip, PgCert	FT, PT	
Computational and Software Techniques in Engineering	MSc	FT, PT	
Computational Fluid Dynamics	MSc, PgDip, PgCert	FT, PT	
Pre-master's Course in Engineering	PRE	FT	
Robotics	MSc	FT, PT	
Thermal Power	MSc	FT	
Research degrees	PhD, EngD, MPhil, MSc by Research	FT, PT	
<b>Defence and Security</b>			
Communications Electronic Warfare	PgCert	PT	
Cyber Defence and Information Assurance	MSc, PgDip, PgCert	PT	
Cyberspace Operations	MSc, PgDip, PgCert	PT	
Defence Acquisition Management	MSc, PgDip, PgCert	PT	
Defence and Security Engineering <sup>2</sup>	MSc, PgDip, PgCert	FT, PT	
Defence and Security Export	PgCert	PT	
Defence and Security Leadership and Management <sup>2</sup>	MSc, PgDip, PgCert	FT, PT	
Defence and Security Technology <sup>2</sup>	MSc, PgDip, PgCert	FT, PT	
Defence Leadership	MSc, PgDip, PgCert	PT	
Defence Simulation and Modelling	MSc, PgDip, PgCert	FT, PT	
Digital Forensics	MSc, PgDip, PgCert	FT, PT	
Explosives Ordnance Engineering	MSc, PgDip, PgCert	FT, PT	
Forensic Archaeology and Anthropology	MSc, PgDip	FT, PT	
Forensic Ballistics	MSc, PgDip	FT, PT	
Forensic Engineering and Science	MSc, PgDip	FT, PT	
Forensic Explosive and Explosion Investigation	MSc, PgDip	FT, PT	
Forensic Investigation	MSc, PgDip, PgCert	FT, PT	
Guided Weapon Systems	MSc, PgDip, PgCert	FT, PT	
Gun Systems Design	MSc, PgDip, PgCert	FT, PT	

Further information on our fees:  
[www.cranfield.ac.uk/fees](http://www.cranfield.ac.uk/fees)



Location (For Shrivenham, see security clearance requirements on page 84)	Full-time fees (See website for part-time fees)					
	Master's		PgDip		PgCert	
	Home/EU <sup>1</sup>	Overseas <sup>1</sup>	Home/EU <sup>1</sup>	Overseas <sup>1</sup>	Home/EU <sup>1</sup>	Overseas <sup>1</sup>
Cranfield	£10,250	£20,500	n/a	n/a	n/a	n/a
Cranfield	£10,250	£20,500	n/a	n/a	n/a	n/a
Cranfield	£10,250	£20,500	n/a	n/a	n/a	n/a
Cranfield	£11,250	£23,000	n/a	n/a	n/a	n/a
Cranfield	See <a href="http://www.cranfield.ac.uk/fees">www.cranfield.ac.uk/fees</a> for details					
Cranfield	£11,250	£23,000	n/a	n/a	n/a	n/a
Cranfield	£10,250	£20,500	£8,200	£16,605	£4,510	£8,300
Cranfield	£10,250	£20,500	n/a	n/a	n/a	n/a
Cranfield	£10,250	£20,500	£8,200	£16,605	£4,510	£8,300
Cranfield	£8,400	£16,750	n/a	n/a	n/a	n/a
Cranfield	£10,250	£20,500	n/a	n/a	n/a	n/a
Cranfield	£11,250	£23,000	n/a	n/a	n/a	n/a
Cranfield/Shrivenham	See <a href="http://www.cranfield.ac.uk/fees">www.cranfield.ac.uk/fees</a> for details					
Cranfield/Shrivenham	See <a href="http://www.cranfield.ac.uk/fees">www.cranfield.ac.uk/fees</a> for details					
Cranfield/Shrivenham	See <a href="http://www.cranfield.ac.uk/fees">www.cranfield.ac.uk/fees</a> for details					
Cranfield/Shrivenham	See <a href="http://www.cranfield.ac.uk/fees">www.cranfield.ac.uk/fees</a> for details					
Cranfield/Shrivenham	See <a href="http://www.cranfield.ac.uk/fees">www.cranfield.ac.uk/fees</a> for details					
Cranfield/Shrivenham	See <a href="http://www.cranfield.ac.uk/fees">www.cranfield.ac.uk/fees</a> for details					
Cranfield/Shrivenham	See <a href="http://www.cranfield.ac.uk/fees">www.cranfield.ac.uk/fees</a> for details					
Cranfield/Shrivenham	See <a href="http://www.cranfield.ac.uk/fees">www.cranfield.ac.uk/fees</a> for details					
Cranfield/Shrivenham	£21,000	£22,500	£17,200	£17,200	£10,350	£10,350
Cranfield/Shrivenham	£12,000	£20,500	£10,000	£16,400	£5,000	£8,000
Cranfield/Shrivenham	£31,000	£31,000	£21,100	£21,100	£10,550	£10,550
Cranfield/Shrivenham	£12,000	£20,500	£10,000	£16,400	n/a	n/a
Cranfield/Shrivenham	£12,000	£20,500	£10,000	£16,400	n/a	n/a
Cranfield/Shrivenham	£12,000	£20,500	£10,000	£16,400	n/a	n/a
Cranfield/Shrivenham	£12,000	£20,500	£10,000	£16,400	n/a	n/a
Cranfield/Shrivenham	£12,000	£20,500	£10,000	£16,400	£5,000	£8,000
Cranfield/Shrivenham	£31,000	£31,000	£21,100	£21,100	£10,550	£10,550
Cranfield/Shrivenham	£31,000	£31,000	£21,100	£21,100	£10,550	£10,550

Course title	Award	Study mode FT - Full-time PT - Part-time	Please see page 82 for footnotes
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### Defence and Security continued

Information Capability Management	MSc, PgDip, PgCert	FT, PT	
International Defence and Security	MSc, PgDip, PgCert	FT	
Master of Business Administration (Defence Export, Executive)	Exec MBA	PT	
Military Aerospace and Airworthiness	MSc, PgDip, PgCert	PT	
Military Electronic Systems Engineering	MSc, PgDip	FT, PT	
Military Operational Research	MSc, PgDip, PgCert	FT, PT	
Military Vehicle Technology	MSc, PgDip, PgCert	FT, PT	
Security Sector Management	MSc, PgDip, PgCert	PT	
Sensors Electronic Warfare	PgCert	PT	
Systems Engineering for Defence Capability	MSc, PgDip, PgCert	FT, PT	
Research degrees	PhD, MPhil, MSc by Research	FT, PT	

### Design thinking

Design Thinking	MDes, PgDip, PgCert	FT, PT	
Technology Innovation and Management for a Circular Economy	MSc, PgDip, PgCert	PT	
Research degrees	PhD, EngD, MPhil, MSc by Research	FT, PT	

### Energy and Power

Advanced Chemical Engineering	MSc, PgDip, PgCert	FT, PT	
Advanced Mechanical Engineering	MSc, PgDip, PgCert	FT, PT	
Energy Informatics	MSc	FT, PT	
Energy Systems and Thermal Processes	MSc	FT, PT	
Master of Business Administration (Energy)	MBA	FT	
Offshore Engineering	MSc, PgDip, PgCert	FT, PT	
Process Systems Engineering	MSc, PgDip, PgCert	FT, PT	
Renewable Energy	MSc, PgDip, PgCert	FT, PT	
Research degrees	PhD, EngD, MPhil, MSc by Research	FT, PT	

### Environment and Agrifood

Applied Bioinformatics	MSc	FT, PT	
Atmospheric Emission Technology	MSc, PgDip, PgCert	FT	
Cleantech Entrepreneurship	MSc, PgDip, PgCert	FT	
Environmental Engineering	MSc, PgDip, PgCert	FT, PT	
Environmental Management for Business	MSc, PgDip, PgCert	FT, PT	
Food Chain Systems	MSc, PgDip, PgCert	FT, PT	
Future Food Sustainability	MSc, PgDip, PgCert	FT, PT	
Geographical Information Management	MSc, PgDip, PgCert	FT, PT	
Research degrees	PhD, EngD, MPhil, MSc by Research	FT, PT	

Location (For Shrivenham, see security clearance requirements on page 84)	Full-time fees (See website for part-time fees)					
	Master's		PgDip		PgCert	
	Home/EU <sup>1</sup>	Overseas <sup>1</sup>	Home/EU <sup>1</sup>	Overseas <sup>1</sup>	Home/EU <sup>1</sup>	Overseas <sup>1</sup>
Cranfield/Shrivenham	£19,000	£19,000	£15,300	£15,300	£7,650	£7,650
Cranfield/Shrivenham	£19,000	£19,000	£15,300	£15,300	£7,650	£7,650
Cranfield/Shrivenham	See <a href="http://www.cranfield.ac.uk/fees">www.cranfield.ac.uk/fees</a> for details					
Cranfield/Shrivenham	See <a href="http://www.cranfield.ac.uk/fees">www.cranfield.ac.uk/fees</a> for details					
Cranfield/Shrivenham	£31,000	£31,000	£21,100	£21,100	n/a	n/a
Cranfield/Shrivenham	£21,000	£22,500	£17,200	£17,200	£10,350	£10,350
Cranfield/Shrivenham	£31,000	£31,000	£21,100	£21,100	£10,550	£10,550
Cranfield/Shrivenham	See <a href="http://www.cranfield.ac.uk/fees">www.cranfield.ac.uk/fees</a> for details					
Cranfield/Shrivenham	See <a href="http://www.cranfield.ac.uk/fees">www.cranfield.ac.uk/fees</a> for details					
Cranfield/Shrivenham	£19,000	£19,000	£15,300	£15,300	£7,650	£7,650
Cranfield/Shrivenham	See <a href="http://www.cranfield.ac.uk/fees">www.cranfield.ac.uk/fees</a> for details					
Cranfield	£10,250	£20,500	£8,200	£16,605	£4,510	£8,300
Cranfield	See <a href="http://www.cranfield.ac.uk/fees">www.cranfield.ac.uk/fees</a> for details					
Cranfield/Shrivenham	See <a href="http://www.cranfield.ac.uk/fees">www.cranfield.ac.uk/fees</a> for details					
Cranfield	£10,250	£20,500	£8,200	£16,605	£4,510	£8,300
Cranfield	£10,250	£20,500	£8,200	£16,605	£4,510	£8,300
Cranfield	£10,250	£20,500	n/a	n/a	n/a	n/a
Cranfield	£10,250	£20,500	n/a	n/a	n/a	n/a
Cranfield	£39,000	£39,000	n/a	n/a	n/a	n/a
Cranfield	£10,250	£20,500	£8,200	£16,605	£4,510	£8,300
Cranfield	£10,250	£20,500	£8,200	£16,605	£4,510	£8,300
Cranfield	£10,250	£20,500	£8,200	£16,605	£4,510	£8,300
Cranfield/Shrivenham	See <a href="http://www.cranfield.ac.uk/fees">www.cranfield.ac.uk/fees</a> for details					
Cranfield	£10,250	£20,500	n/a	n/a	n/a	n/a
Cranfield	£10,250	£20,500	£8,200	£16,605	£4,510	£8,300
Cranfield	£12,000	£20,500	£10,000	£16,400	£5,000	£8,000
Cranfield	£10,250	£20,500	£8,200	£16,605	£4,510	£8,300
Cranfield	£10,250	£20,500	£8,200	£16,605	£4,510	£8,300
Cranfield	£10,250	£20,500	£8,200	£16,605	£4,510	£8,300
Cranfield	£10,250	£20,500	£8,200	£16,605	£4,510	£8,300
Cranfield	£10,250	£20,500	£8,200	£16,605	£4,510	£8,300
Cranfield/Shrivenham	See <a href="http://www.cranfield.ac.uk/fees">www.cranfield.ac.uk/fees</a> for details					

Course title	Award	Study mode FT - Full-time PT - Part-time	Please see page 82 for footnotes
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## School of Management

Master of Business Administration	MBA	FT	
Master of Business Administration (Executive)	Exec MBA	PT	
Master of Business Administration (Defence Export, Executive)	Exec MBA	PT	
Master of Business Administration (Energy)	MBA	FT	
Business and Strategic Leadership	MSc, PgDip, PgCert	PT	
Design Thinking	MDes, PgDip, PgCert	FT, PT	
Finance and Management	MSc	FT	
Investment Management	MSc	FT	
Logistics and Supply Chain Management	MSc	FT	
Logistics and Supply Chain Management (Executive)	MSc, PgDip, PgCert	PT	
Procurement and Supply Chain Management	MSc	FT	
Supply Chain Practice	PgCert	PT	
Management	MSc	FT	
Management and Corporate Sustainability	MSc	FT	
Management and Entrepreneurship	MSc	FT	
Management and Human Resource Management <sup>2</sup>	MSc	FT	
Management and Leadership <sup>2</sup>	MSc	PT	
Retail and Digital Banking <sup>2</sup>	MSc	PT	
Strategic Marketing	MSc	FT	
Technology Innovation and Management for a Circular Economy	MSc, PgDip, PgCert	PT	
Research degrees	PhD, DBA, MPhil, MSc by Research	FT, PT	

## Manufacturing

Advanced Materials	MSc	FT, PT	
Aerospace Manufacturing	MSc, PgDip, PgCert	FT, PT	
Aerospace Materials	MSc, PgDip, PgCert	FT, PT	
Applied Nanotechnology	MSc, PgDip, PgCert	FT, PT	
Cyber-Secure Manufacturing	MSc, PgDip, PgCert	FT	
Design Thinking	MDes, PgDip, PgCert	FT, PT	
Engineering and Management of Manufacturing Systems	MSc, PgDip, PgCert	FT, PT	
Engineering Competence	MSc, PgDip	PT	
Global Product Development and Management	MSc, PgDip, PgCert	FT, PT	
Knowledge Management for Innovation	MSc, PgDip, PgCert	FT, PT	
Management and Information Systems	MSc, PgDip, PgCert	FT, PT	
Manufacturing Technology and Management	MSc, PgDip, PgCert	FT, PT	
Metal Additive Manufacturing <sup>2</sup>	MSc	FT	
Operations Excellence	MSc	PT	
Technology Innovation and Management for a Circular Economy	MSc, PgDip, PgCert	PT	

	Location (For Shrivenham, see security clearance requirements on page 84)	Full-time fees (See website for part-time fees)					
		Master's		PgDip		PgCert	
		Home/EU <sup>1</sup>	Overseas <sup>1</sup>	Home/EU <sup>1</sup>	Overseas <sup>1</sup>	Home/EU <sup>1</sup>	Overseas <sup>1</sup>
	Cranfield	£39,000	£39,000	n/a	n/a	n/a	n/a
	Cranfield	See <a href="http://www.cranfield.ac.uk/fees">www.cranfield.ac.uk/fees</a> for details					
	Cranfield	See <a href="http://www.cranfield.ac.uk/fees">www.cranfield.ac.uk/fees</a> for details					
	Cranfield	£39,000	£39,000	n/a	n/a	n/a	n/a
	Cranfield	See <a href="http://www.cranfield.ac.uk/fees">www.cranfield.ac.uk/fees</a> for details					
	Cranfield	£10,250	£20,500	£8,200	£16,605	£4,510	£8,300
	Cranfield	£23,000	£25,000	n/a	n/a	n/a	n/a
	Cranfield	£23,000	£25,000	n/a	n/a	n/a	n/a
	Cranfield	£13,000	£23,500	n/a	n/a	n/a	n/a
	Cranfield	See <a href="http://www.cranfield.ac.uk/fees">www.cranfield.ac.uk/fees</a> for details					
	Cranfield	£13,000	£23,500	n/a	n/a	n/a	n/a
	Cranfield	See <a href="http://www.cranfield.ac.uk/fees">www.cranfield.ac.uk/fees</a> for details					
	Cranfield	£15,000	£26,000	n/a	n/a	n/a	n/a
	Cranfield	£12,000	£20,500	n/a	n/a	n/a	n/a
	Cranfield	£12,000	£20,500	n/a	n/a	n/a	n/a
	Cranfield	£12,000	£20,500	n/a	n/a	n/a	n/a
	Cranfield	See <a href="http://www.cranfield.ac.uk/fees">www.cranfield.ac.uk/fees</a> for details					
	Cranfield	See <a href="http://www.cranfield.ac.uk/fees">www.cranfield.ac.uk/fees</a> for details					
	Cranfield	£13,000	£23,500	n/a	n/a	n/a	n/a
	Cranfield	See <a href="http://www.cranfield.ac.uk/fees">www.cranfield.ac.uk/fees</a> for details					
	Cranfield/Shrivenham	See <a href="http://www.cranfield.ac.uk/fees">www.cranfield.ac.uk/fees</a> for details					
	Cranfield	£10,250	£20,500	n/a	n/a	n/a	n/a
	Cranfield	£10,250	£20,500	£8,200	£16,605	£4,510	£8,300
	Cranfield	£10,250	£20,500	£8,200	£16,605	£4,510	£8,300
	Cranfield	£10,250	£20,500	£8,200	£16,605	£4,510	£8,300
	Cranfield	£10,250	£20,500	£8,200	£16,605	£4,510	£8,300
	Cranfield	£10,250	£20,500	£8,200	£16,605	£4,510	£8,300
	Cranfield	£10,250	£20,500	£8,200	£16,605	£4,510	£8,300
	Cranfield	£10,250	£20,500	£8,200	£16,605	£4,510	£8,300
	Cranfield	£10,250	£20,500	n/a	n/a	n/a	n/a
	Cranfield	See <a href="http://www.cranfield.ac.uk/fees">www.cranfield.ac.uk/fees</a> for details					
	Cranfield	See <a href="http://www.cranfield.ac.uk/fees">www.cranfield.ac.uk/fees</a> for details					

Course title	Award	Study mode FT - Full-time PT - Part-time
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### Manufacturing continued

Through-life System Sustainment	MSc	PT
Welding Engineering	MSc, PgDip, PgCert	FT, PT
<b>Research Degrees</b>	PhD, EngD, MPhil, MSc by Research	FT, PT

### Transport Systems

Advanced Motorsport Engineering	MSc	FT
Advanced Motorsport Mechatronics	MSc	FT
Air Transport Management	MSc	FT
Air Transport Management (Executive)	MSc, PgDip	PT
Airport Planning and Management	MSc	FT
Airworthiness	MSc, PgDip, PgCert	PT
Automotive Engineering	MSc	FT
Automotive Mechatronics	MSc	FT
Connected and Autonomous Vehicle Engineering (Automotive) <sup>2</sup>	MSc	FT
Safety and Accident Investigation (Air Transport)	MSc, PgDip, PgCert	PT
Safety and Accident Investigation (Marine Transport)	MSc, PgDip, PgCert	PT
Safety and Accident Investigation (Rail Transport)	MSc, PgDip, PgCert	PT
Safety and Human Factors in Aviation	MSc, PgCert	FT, PT
<b>Research Degrees</b>	PhD, EngD, MPhil, MSc by Research	FT, PT

### Water

Environmental Water Management	MSc, PgDip, PgCert	FT, PT
Water and Sanitation for Development	MSc, PgDip, PgCert	FT, PT
Water and Wastewater Engineering	MSc, PgDip, PgCert	FT, PT
<b>Research Degrees</b>	PhD, EngD, MPhil, MSc by Research	FT, PT

<sup>1</sup> See page 70 for fee status notes.

<sup>2</sup> This course is currently going through the University's validation process, please check the website.

**Deposits** - please note that some taught courses and research degrees require a deposit. Please see [www.cranfield.ac.uk/fees](http://www.cranfield.ac.uk/fees) for details.

	Location (For Shrivenham, see security clearance requirements on page 84)	Full-time fees (See website for part-time fees)					
		Master's		PgDip		PgCert	
		Home/EU <sup>1</sup>	Overseas <sup>1</sup>	Home/EU <sup>1</sup>	Overseas <sup>1</sup>	Home/EU <sup>1</sup>	Overseas <sup>1</sup>
	Cranfield/Shrivenham	See <a href="http://www.cranfield.ac.uk/fees">www.cranfield.ac.uk/fees</a> for details					
	Cranfield	£10,250	£20,500	£8,200	£16,605	£4,510	£8,300
	Cranfield/Shrivenham	See <a href="http://www.cranfield.ac.uk/fees">www.cranfield.ac.uk/fees</a> for details					
	Cranfield	£10,250	£20,500	n/a	n/a	n/a	n/a
	Cranfield	£10,250	£20,500	n/a	n/a	n/a	n/a
	Cranfield	£11,250	£23,000	n/a	n/a	n/a	n/a
	Cranfield/Singapore	See <a href="http://www.cranfield.ac.uk/fees">www.cranfield.ac.uk/fees</a> for details					
	Cranfield	£10,250	£20,500	n/a	n/a	n/a	n/a
	Cranfield	See <a href="http://www.cranfield.ac.uk/fees">www.cranfield.ac.uk/fees</a> for details					
	Cranfield	£10,250	£20,500	n/a	n/a	n/a	n/a
	Cranfield	£10,250	£20,500	n/a	n/a	n/a	n/a
	Cranfield	£10,250	£20,500	n/a	n/a	n/a	n/a
	Cranfield/Shrivenham	See <a href="http://www.cranfield.ac.uk/fees">www.cranfield.ac.uk/fees</a> for details					
	Cranfield/Shrivenham	See <a href="http://www.cranfield.ac.uk/fees">www.cranfield.ac.uk/fees</a> for details					
	Cranfield/Shrivenham	See <a href="http://www.cranfield.ac.uk/fees">www.cranfield.ac.uk/fees</a> for details					
	Cranfield	£21,500	£23,000	£17,200	£18,400	£9,750	£10,350
	Cranfield/Shrivenham	See <a href="http://www.cranfield.ac.uk/fees">www.cranfield.ac.uk/fees</a> for details					
	Cranfield	£10,250	£20,500	£8,200	£16,605	£4,510	£8,300
	Cranfield	£10,250	£20,500	£8,200	£16,605	£4,510	£8,300
	Cranfield	£10,250	£20,500	£8,200	£16,605	£4,510	£8,300
	Cranfield/Shrivenham	See <a href="http://www.cranfield.ac.uk/fees">www.cranfield.ac.uk/fees</a> for details					

Further information on our fees:  
[www.cranfield.ac.uk/fees](http://www.cranfield.ac.uk/fees)



# Important information before you apply

**Our prospectus is prepared annually, which may mean it is produced several months before you are due to commence your studies. Every effort is made to ensure that the prospectus is correct at the time it is printed.**

We believe that our education should remain current and relevant. To achieve this, we periodically review and update our academic provision. We will, wherever possible, ensure that the overall education experience for you, our student learners, is enhanced as a result of any changes.

It is important that our review process includes feedback from our learners, our staff and our external stakeholders. Other changes, for example to facilities or fees, may become necessary as a result of staff and facility changes; for academic reasons; or owing to external factors including changes to the law and Government policy.

Cranfield will make every effort to keep any changes to a minimum, except where the changes are in your favour. For these reasons, changes can take place in the lead-up and sometimes during your studies. This may include changes to the academic provision and/or its assessment, staffing and/or facilities.

You should check the website for updates. Where changes occur during your studies, the University has established processes for consulting and informing you of these.

Admission to Cranfield University is subject to the requirement that you will comply with our registration procedure and will duly observe the provisions of the regulations and other guidance of the University which apply during your period of study.

**The terms and conditions applicable to an offer of a place at Cranfield are available at:**

**Taught degrees:**

[www.cranfield.ac.uk/taughtapply](http://www.cranfield.ac.uk/taughtapply)

**Research degrees:**

[www.cranfield.ac.uk/researchapply](http://www.cranfield.ac.uk/researchapply)

**Also see:**

[www.cranfield.ac.uk/importantnotes](http://www.cranfield.ac.uk/importantnotes)

## Security clearance for Shrivenham

Some Cranfield University courses are delivered at the Defence Academy of the United Kingdom, Shrivenham which is a Ministry of Defence (MOD) site.

All applicants to courses that are wholly or partially delivered at Shrivenham must complete the HMG Baseline Personnel Security Standard V4 April 2014 (BPSS) prior to registration on the course or must already hold a security clearance to this level or higher.

Your application and BPSS clearance application will be shared during the application process with the MOD. All personal data provided by you will be shared with the MOD for it to undertake its own assessment. The MOD has ultimate discretion over whether to admit applicants to the Shrivenham site. This information will be returned by the MOD to Cranfield University after checks are completed and no copies will be retained by the MOD. BPSS checks may involve confirmation of the following:

- Identity (e.g. Photo ID),
- Proof of current address,
- Nationality and immigration status,
- Employment/academic history (covering the past three years),
- Criminal record (unspent convictions only).

Additionally, applicants are required to give a reasonable account of any significant periods (six months or more in the past three years) of time spent abroad.

This may be revised from time to time, dependent on national security requirements. For more details, please consult the guidance which you can find at [www.cranfield.ac.uk/securityclearance](http://www.cranfield.ac.uk/securityclearance)

Applicants are advised to allow additional time for BPSS clearance applications to be processed following submission of a course application. Inability to access the Shrivenham site as a result of failure to meet security clearance requirements will result in a withdrawal of offer, or, if already registered, a termination of registration.

**For more information, visit the relevant course page: [www.cranfield.ac.uk/study](http://www.cranfield.ac.uk/study)**

# How to find us

## Cranfield – MK43 0AL, UK

**The Cranfield campus is located just outside the village of Cranfield on the Bedfordshire-Buckinghamshire border, between Milton Keynes and Bedford.**

**By air:** London Luton is around 30 minutes' drive from Cranfield campus, while London Heathrow, London Stansted, East Midlands and Birmingham airports can be reached in 90 minutes. The campus also has its own airport, used by private aircraft owners.

**By rail:** Direct trains from Bedford and Luton to London St Pancras International and fast trains from Milton Keynes to London Euston take just over 30 minutes.

**By road:** Cranfield campus is located ten minutes from the M1 motorway and can be accessed from either junction 13 or 14.



## Shrivvenham – SN6 8LA, UK

**Cranfield University at Shrivvenham is located on the edge of Shrivvenham village just off the A420 between Oxford and Swindon. Swindon is approximately 10km west of the site and Oxford is around 34km east.**

**By air:** The major UK airports are easy and quick to reach – Heathrow is less than two hours by road and Gatwick, Luton, Bristol, Southampton and Cardiff airports are within easy reach.

**By rail:** Nearby Swindon is the best rail link to London (less than an hour); the Great Western Trains service also links Swindon with South Wales and other services provide easy access to the Midlands and North.

**By road:** Cranfield University at Shrivvenham is close to the M4 motorway, which links London and South Wales.

For more information, visit  
[www.cranfield.ac.uk/visit](http://www.cranfield.ac.uk/visit)



# Your roadmap

Now you have made your decision to further your career, here is your step-by-step guide.

There is more information on the following pages and on our website.

MSc, MDes, PgDip, PgCert,  
Master of Business  
Administration (MBA)

Find out more:  
[www.cranfield.ac.uk/study](http://www.cranfield.ac.uk/study)

Taught  
degrees

1

2

3

4

Research  
degrees

PhD, EngD, MSc by Research,  
MPhil, Doctor of Business  
Administration (DBA)

Find out more:  
[www.cranfield.ac.uk/research](http://www.cranfield.ac.uk/research)

Visit our website to find out more about the work we do in each of our sector-facing specialisms.

Decide on your study route

(see pages 12-25)

Choose your taught or research degree

(see pages 76-83)

Consider how you will fund your studies

(see pages 70-71)

# to Cranfield

Join us at an Open Day or visit us at a recruitment event around the world:

[www.cranfield.ac.uk/events](http://www.cranfield.ac.uk/events)



5

**Apply**

(see pages 72-73)

6

**Find out about the local area and the accommodation options**

(see pages 62-67)

7

**Accept your offer**

8

**Obtain any visas or other paperwork that you will need**

(see pages 74-75)



**Begin your studies**

We work with over **1,500** businesses and governments based in over 40 countries

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 2015 & 2017

Every effort is made to ensure that the information in this brochure is correct at the time it is printed. Please check our website for the latest information.  
 September 2018.