




Cranfield
University



Postgraduate
master's course in

Design Thinking MDes

Academic year 2022/23 entry

Cranfield University

We are the UK's only specialist postgraduate university in technology and management, with longstanding relationships with some of the most prestigious global companies. Our close collaboration with industry, and passion for the areas we operate in, will help your career.

Specialist postgraduate

A research-focused professional community

81%

of our research is world-leading or internationally excellent

Research Excellence Framework (REF) 2014



THE QUEEN'S ANNIVERSARY PRIZES FOR HIGHER AND FURTHER EDUCATION 2019

Over **£150 million** of investment in new facilities over the past five years

Six-time winner of the Queen's Anniversary Prize for Higher and Further Education

A professional network of **70,000+** alumni, from 177 countries

5,000+ postgraduate students from 100+ countries

UK Top 5 for Engineering (Mechanical, Aeronautical and Manufacturing) QS World University Rankings by subject, 2021

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

"Looking back over my MDes year, it was filled with a lot of happy memories both academically and socially. The course was varied in terms of content and delivery; some of which were familiar and some were very new. As we progressed through the modules, we got the chance to build up our skillset with a variety of assessment tasks which helped in guiding us towards what areas we would be most interested in for our industry-linked thesis project."

Emma Marks, Research Assistant, Cranfield University, (Design Thinking MDes 2019)



Reasons to study **design** with us

1 A unique design experience

As we look to the future, the need for advancing technologies to stay competitive in the marketplace has never been so important, as we look to provide a positive change in society with sustainable design. On our Design Thinking MDes you will gain hands-on practical experience throughout your course, and by working on industry projects you are not only developing industry relevant skills, but are also building your network for your future career.

2 Projects with industry

During your group and individual projects, you will be able work with our industry connections and apply the technical knowledge you've gained throughout the modules to tackle real-world challenges. Projects are supported by external organisations such as the Bill and Melinda Gates Foundation, Cisco, SABMiller and Unilever.

3 Learning environment

Our design course is run by Cranfield Centre for Creative Competitive Design (C4D), an internationally recognised and award-winning centre of excellence for creative design, strategy and leadership. We operate globally, integrating creativity into business and we are acknowledged as a trusted brand for industry in delivering high-impact research.

4 Global connections

We collaborate with international organisations, by integrating educational and research activities to develop new commercial practices. Our approach has made us the design partner of choice for global brands and innovative businesses.

5 Funding opportunities

We have generous scholarships available to help support you with paying your tuition fees or associated living costs.

6 Outstanding facilities

During your studies you will have access to our on-site state-of-the-art technical workshops with rapid prototyping equipment, which will enable you to create breakthrough solutions to major challenges and convert ideas into industry-ready proof-of-concepts.

7 Research networks

Our leading breakthrough research in the fields of strategic creativity, the Circular Economy, materials development and data-driven projects sets us apart. You can draw on our extensive research networks, including being one of just seven international partner 'pioneer universities' working with the Ellen MacArthur Foundation.

8 Management skills

We work closely with our globally-renowned School of Management through modules, workshops and projects.



Above: Using state-of-the-art CAD to produce early prototype models. 3

Design thinking course

The strategic use of creativity is crucial for the success of any business and often provides competitive advantage across the marketplace. At Cranfield we work closely with leading industry employers.

This ensures that our students are fully trained as professional design thinkers and innovators, who are equipped with a unique skill set that meets the needs of industry now and in the future.

We welcome students from a wide range of disciplines – the most important consideration is a passion for applied design thinking and the desire to make a difference in your chosen industry.

To keep our courses relevant and up-to-date, modules are subject to change. Please see the website for the latest information.

Design Thinking

www.cranfield.ac.uk/designthinking

MDes, PgDip, PgCert
(full-time or part-time)

This course integrates state-of-the-art approaches in design-driven innovation, design management and design research. We will provide you with tools and techniques to capture user insights, visualise complex data flows and develop innovative prototypes.

Compulsory modules

- Consumer Trends,
- Design, Technology and Prototyping,
- Whole Systems Design,
- Creative Enterprise and Entrepreneurship,
- Project Management Introduction.

This course is accredited by the Chartered Society of Designers.

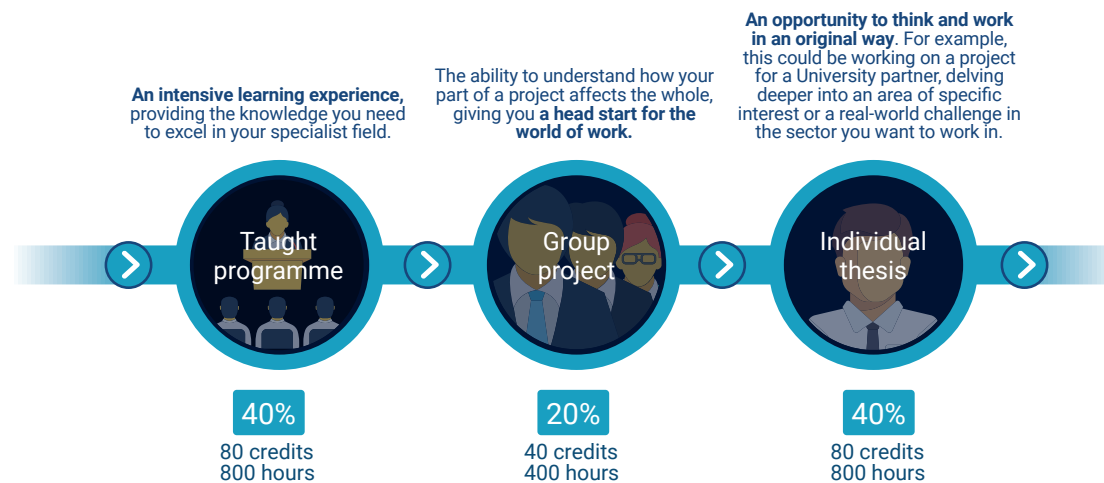


MDes students engaging in a practical session for the Design, Technology and Prototyping module.

Course structure

Our specialist, sector-facing master's courses are set up and developed in close collaboration with industry partners, ensuring the content of our courses remain industry-relevant and employers remain impressed with your business-readiness.

This diagram illustrates the course structure for our full-time Design Thinking MDes. Please check the course structure online for more detailed information, including the weight of each phase and part-time course structure variations.



Registration ----->----- 200 credits, 2,000 hours ----->----- Completion

Industry-sponsored group projects

Cranfield's group project experience provides you with the opportunity to take responsibility for a consultancy-type project while working under academic supervision.

Some recent projects include:

- Development of Waste Electrical and Electronic Equipment (WEEE) material separation technology for the remanufacture of consumer goods for **Environcom**.
- Fast moving consumer goods: Creative design and innovation project for **SABMiller**.
- Transforming the landscape of consumer goods through big data and redistributed manufacture for **Cisco** and **Dragon Rouge**.

Industry connections

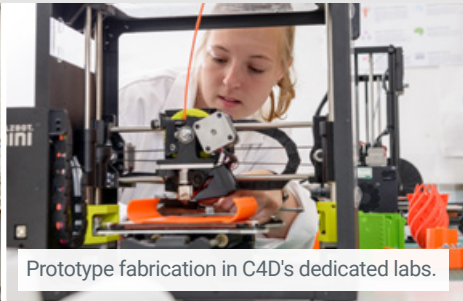
Cranfield has unrivalled links with industry. You will benefit from our extensive contacts and track record of close collaboration with governments and the design sector. These links include project sponsors and our extensive alumni network.

Working with industry

The group and individual projects that you will take as part of your course, are often run in collaboration with our industrial partners. More information about group projects can be seen on page 5 and some of our partners are shown on the back cover of this brochure.



Students working on a prototype for the Nano Membrane Toilet.



Prototype fabrication in C4D's dedicated labs.

Careers

The design sector offers a wealth of stimulating employment opportunities for ambitious graduates with the mix of advanced knowledge and practical experience that a Cranfield degree provides.

We are proud of our alumni community. Here are some examples of the type of roles our graduates have gone on to, and the organisations they work for:

Roles:

- Business Development Manager,
- Design Consultant,
- Design Engineer,
- Design Strategy Manager
- Head of Design,
- Innovation Researcher,
- Mechanical Design Engineer,
- UX/UI Designer.

Organisations:

- Dell,
- Deloitte,
- Electrolux,
- Rolls-Royce,
- The Ellen MacArthur Foundation,
- Unilever.



Making an impact

Developing a breakthrough innovation for Procter & Gamble (P&G)

We were asked by American multinational consumer goods company Procter & Gamble (P&G) to conceive and develop a technology which many of their experts felt was 'impossible'. Within two years, we had not only found a solution, but developed this revolutionary new technology into a complete working system ready for handover.

Key facts

- The solution was developed in our Breakthrough Innovation Lab – which sits within C4D. The lab is used to better understand the nature of breakthrough innovations through a combination of cutting-edge industry and academic collaborations.
- We are continuing to work with P&G to take this new technology to higher levels of performance and its ultimate conclusion as a fully-integrated system within their world-leading production lines.
- Like much of our breakthrough innovation work being undertaken, it remains confidential due to its commercial sensitivity and value.

Impact of our research

- We managed to overturn 100 years of stagnation in production line technology with a breakthrough innovation in less than two years.
- Such was the difficulty of the challenge that, as a result of the efforts undertaken, new avenues of research were identified for the study of creative behaviour associated with developing breakthrough innovations.

Academic staff

You will be taught by a wide range of subject specialists from the University and industry professionals who draw on their research and industrial expertise to provide stimulating and informed input to your learning experience.

Here are some of the staff you will be taught by:



Dr Adriana Encinas-Oropesa, Lecturer in Design and Materials
Adrianna's research interests include the strategic development and evaluation of materials and methodologies as innovative solutions through a sustainable vision. She has over 15 years of experience evaluating performance and degradation of materials.
www.cranfield.ac.uk/aencinas-oropesa



Paul Lighterness, Programme Director, Lecturer in Breakthrough Innovation
Paul is an experienced multidisciplinary designer, who has worked on a variety of international projects as a consultant, design strategist and design professional. He is experienced in pushing the boundaries in bringing exciting new products to market through user-centric research, ideation, product testing and fabrication.
www.cranfield.ac.uk/paullighterness



Dr Trung Hieu Tran, Lecturer in Data Analytics
Trung is trained in analysis, design and implementation of mathematical programming models, meta-heuristic algorithms and multi-criteria decision-making techniques in the areas of production planning and scheduling, logistics and supply chain management, port operations and urban planning.
www.cranfield.ac.uk/ttran



Dr Enes Unal, Lecturer in Circular Economy and Innovation
Enes organises and leads the short courses on Circular Innovation, leveraging expertise in sustainability-oriented and design-driven innovations.
www.cranfield.ac.uk/eunal



Professor Leon Williams, Head of the Centre for Competitive Creative Design (C4D)
Leon has successfully worked with globally acknowledged organisations such as IBM, P&G, SABMiller and Whirlpool and has led more than 50 research projects funded by industry and/or governments that operate on a global scale.
www.cranfield.ac.uk/lwilliams

Key facts and statistics

Course information



Full-time
One year



Part-time
Up to three years
See the course page for more information about part-time study.



Start date
October



MDes/PgDip/PgCert



Fees
Please see the individual course pages on our website for full fee information and full-time or part-time options. Terms and conditions apply.

See www.cranfield.ac.uk/fee-information

Cohort profile*



Geographic spread
20% UK
20% EU
60% Rest of world



Typical cohort age
20-30 years



Average cohort size
Five

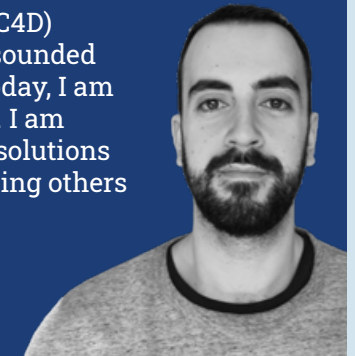


80% Female
20% Male

*These figures give an indication of the course make-up at registration across our design thinking course for the entry year 2020-2021.

"The Centre for Competitive Creative Design (C4D) introduced me to design which, at that time, sounded fascinating but I didn't know how to use it. Today, I am using Design Thinking in my work every day. I am applying human-centred design to technical solutions and even business applications and I am helping others to adopt this mindset."

Konstantinos Karagiannis, Technology Architecture Delivery Analyst, Accenture, (Innovation and Creativity in Industry MDes 2018)



Financing your studies

If you need advice on funding your course, we can provide information and a range of online tools to help you put together the funding package you need for your course and living costs.

There is more information on our website:
www.cranfield.ac.uk/funding

How to apply

Read more about our entry requirements and how to apply.

www.cranfield.ac.uk/apply



Life at Cranfield

A welcoming, professional campus community.

Located just over an hour from London in the English countryside, Cranfield's campus environment supports close, working relationships between our multinational postgraduate students and academic and industry experts.

www.cranfield.ac.uk/visit



Take a virtual tour to see inside some of our facilities:

virtualltour.cranfield.ac.uk



Centre for Competitive Creative Design (C4D)

Cranfield University works with over

1,500 businesses and governments
based in over 40 countries

These organisations include:



For a full list of Cranfield courses, please see our prospectus and website.

www.cranfield.ac.uk/designthinking

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blogs.cranfield.ac.uk

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. Photographs in this publication were taken prior to and during the coronavirus pandemic. We continue to monitor the pandemic and take all the necessary steps to ensure the health, safety and wellbeing of our Cranfield community.

See www.cranfield.ac.uk/coronavirus SWEE-D-September 2021.