MedTech
INNOVATION & ENTREPRENEURSHIP MSc
As an expert on the Psychology of Entrepreneurship, Professor Stephan explores how individuals and societies can thrive through entrepreneurship. Professor Stephan’s research explores culture and institutions, social entrepreneurship and entrepreneurial motivation, well-being, and mental health. Her research is published in international leading scientific journals in management, entrepreneurship, international business and psychology.

Her research has won multiple international awards, attracted over £3 million in funding from the European Commission, the UK Government, UK research councils, charities and German government institutions; and has been featured in the media including the Financial Times, The Times, The Guardian, Wall Street Journal, Forbes, WIRED, BBC, AlJazeera, Bloomberg and others.

Professor Stephan has also led projects commissioned by UK Government Departments on social entrepreneurship and entrepreneurial aspirations. She currently leads a 30-country study on Entrepreneurship & Covid-19, and is also a lead investigator of the 10-country Social Enterprise as a Force (SEFORIS) and its predecessor the SELUSI project.

With a unique journey into the world of MedTech, Professor Jha is a physician-engineer-entrepreneur-editor-inventor. He has successfully created an ecosystem for innovating medical devices and technologies in Australia, Finland, India, Japan, and the UK.

He co-founded the School of International Biodesign (SiB) at the All India Institute of Medical Science (AIIMS) and the Indian Institute of Technology (IIT). Professor Jha also created and co-founded BMJ Innovations, the world’s first general medical journal on innovations in healthcare.

Professor Jha has created many pioneering products using his 5D model: Discover, Define, Design, Develop and Deploy, including orthopaedic immobilisers for fractures and tools to make surgery more efficient.

As well as supporting King’s students, Prashant advises medical device corporations, design studios, NGOs and MedTech start-ups on strategies and projects for innovating value-conscious and value-creating products and services.

The programme builds on King’s strengths to teach both crucial business knowledge and know-how in developing novel medical technologies that address unmet clinical needs.

With unparalleled access to our National Health Service (NHS) hospitals, our students will develop a deep appreciation of healthcare delivery and quality improvement processes to apply their knowledge for developing novel medical technologies and a fulfilling career as a MedTech entrepreneur, innovator, consultant, advisor or a leader in the medical technology industry.

The MSc is delivered jointly by King’s Business School and the Faculty of Medicine and Life Science’s School of Biomedical Engineering and Imaging Sciences.

Do you accept the world as it is or do you question it?

Join us to engineer better health for the world.
The healthcare landscape is constantly evolving. As we are living longer than ever before, we need to continue focusing on maintaining a high quality of life for our global population. We need to continue improving patient value relative to cost and enhance the patient experience. This is in addition to ensuring efficient functioning of our hospitals and healthcare providers.

“MedTech is more than tech. Innovation should be coupled with understanding of patients needs and clinical use. Getting something to the patients needs regulatory understanding and vision of the commercialisation pipeline. Engineers can be trained to know these things – and that’s what this MSc offers,” says Dr Christos Bergeles, Senior Lecturer, Biomedical Engineering & Imaging Sciences.

From undergraduate students to thriving entrepreneurs, Nitya and Shreya applied their biomedical engineering learnings and developed their ISO certified company Ru Medical following the success of CoolZEN. A smart, wearable device to alleviate the effects of Hot Flashes in menopausal women, CoolZEN provides an innovative solution in a market that does not offer much in terms of non-pharmaceutical solutions. Ru Medical’s mission is not to just alleviate the symptoms of hot flashes but to restore confidence in women who are in the prime of their careers.

Nitya and Shreya won the LondonTech Week 2021 and F-Factor awards, and also published a paper in one of the biggest women’s health journals in the world – the first undergraduate students to do so.

CoolZEN will be a game-changer in the way women manage and treat their menopausal symptoms. – Shreya Kalyanasundaram, co-founder

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Young Entrepreneur’s case study: CoolZEN

A novel wearable medical device, CoolZEN, was developed by undergraduate Biomedical Engineering students Nitya Dintakurti and Shreya Kalyanasundaram. From undergraduate students to thriving entrepreneurs, Nitya and Shreya applied their biomedical engineering learnings and developed their ISO certified company Ru Medical following the success of CoolZEN.

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The 5D model has evolved and been refined over the last ten years. Initially it was only intended for people who wanted to create start-ups. Now it’s for anyone who wants to become more entrepreneurial in their thinking, as well as intrapreneurs who want to improve processes where they are employed.

**Step 1: Discover**

How do you find a problem worth solving?

Discover is the first step of the 5D model. It is about falling in love with a problem that you are inspired to solve. Anyone who follows the 5D model is not afraid of failure. If you fail, you fail fast, fail small and fail early. There is no need to burn energy and spend years of your career creating something without purpose.

**Step 2: Define**

If Discover is about falling in love with a problem, Define is about finding a problem that you are going to get married to. The secret to Discover is deciding on the one problem that you are going to get married to. The one problem that you’re going to dedicate your time to fixing. You need to determine which problem you can solve within the constraints you face.

**Step 3: Design**

The secret to Discover is deciding on a problem where a less-than-perfect solution will sell. People are so frustrated they will need your solution. Enter FlexiOH, a product that was created with students, clinicians and an engineer who were looking for an alternative for plaster casts for broken bones. The key problems: they’re bulky, you can’t scratch, and they’re not pretty. The key problem with plaster casts is that they’re not pretty. The key problem is when you scratch, you can’t sleep. FlexiOH overcomes another problem too. There aren’t many options for people who are looking for an alternative for plaster casts. The key problem with plaster casts is that they are slippery. The key problem is when you scratch, you can’t sleep. FlexiOH is not slippery. The key problem with plaster casts is that they are uncomfortable. FlexiOH is not uncomfortable. The key problem with plaster casts is that they are expensive. FlexiOH is not expensive.

**Step 4: Develop**

Your solution is ready to be released into the world. Sales start. The unit is fully-fledged. Or your own organisation. Your solution is ready to be released into the world. Sales start. The unit is fully-fledged. Or you own or service is released into the world. Sales start. The unit is fully-fledged. Or your own organisation.

**Step 5: Deploy**

Deploy is the period of joy where your product or service is released into the world. Sales start. The unit is fully-fledged. Or your own organisation. Your solution is ready to be released into the world. Sales start. The unit is fully-fledged. Or your own organisation. Your solution is ready to be released into the world. Sales start. The unit is fully-fledged. Or your own organisation.

**The importance of empathy**

Anyone who follows the 5D model is not given a set of instructions. They are given guidance, but it is up to them to find a problem that they are inspired to solve. There is one aspect in particular that completely differentiates this approach from others – the role of empathy. Students meet the people who need them to listen to a solution that works. Discovering this is even more challenging with the first step of the 5D model.

Discover students fix real-world problems. They have united medicine and business to help solve those problems. W e are not the case with this programme. W e have designed to help students through the 5D model. Traditionally you pick a course that sits under one Faculty. That is no longer the case with this programme. W e have united medicine and business to help solve real-world problems.

It involves compassionate people who have gone on to create successful start-ups, and it’s for anyone who wants to become more entrepreneurial in their thinking, as well as intrapreneurs who want to improve processes where they are employed.

**Learn what you love. Apply what you learn.**

Our MSc MedTech Innovation & Entrepreneurship at King’s College London has been designed to help students through the 5D model. Traditionally you pick a course that sits under one Faculty. That is no longer the case with this programme. W e have united medicine and business to help solve real-world problems.

To be a change maker, you need to find what you love. You should be able to navigate your career with purpose. W e help students fix real-world problems.
Course overview

Our MSc presents a unique opportunity to students looking to make a tangible difference to healthcare.

Professor Sebastien Ourselin FREng, Head, School of Biomedical Engineering & Imaging Sciences

Course Benefits

- Unrivalled location in the centre of London
- The course is a unique combination of core entrepreneurship and innovation (i.e. ‘business’) content with dedicated health-care and MedTech content
- Students will have hospital access through King’s Hospitals and partnerships with the NHS, so students are able to immerse in real-world healthcare settings shadowing clinicians and other healthcare practitioners. This will help them collaborate and develop innovations and start-up projects based on a deep understanding of real-world medical and patient requirements.
- The course is strongly connected into King’s industry networks and provides a practical route for students and partners to ideate, test, innovate and develop their ideas and launch innovation projects or start-ups in the UK and around the world.
- Students will be offered an option to work on live projects with the medical-technology industry in the UK, Europe and around the globe.
- The course offers a unique opportunity to learn from medical practitioners, industry professionals, innovators, entrepreneurs, and study across business and engineering schools at King’s College London.

In addition, students take 15 credits from a range of optional modules which include:

- Value driven technologies for global health
- Entrepreneurial Leadership (15 credits)
- Medical Technology Design and Development Pathways from Idea to Impact (15 credits)
- Project development (dissertation) (60 credits)

Core Modules

You are required to take:

- MedTech innovation, ideation, design, and research methodologies (30 credits)
- Foundations of entrepreneurship and management I: Entrepreneurial strategy and growth (15 credits)
- Foundations of entrepreneurship and management II: Entrepreneurial finance & marketing (15 credits)
- Entrepreneurial Leadership (15 credits)
- Medical Technology Design and Development Pathways from Idea to Impact (15 credits)
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Optional Modules

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King’s College London reviews the modules offered on a regular basis to provide up-to-date, innovative and relevant programmes of study. Therefore, modules offered may change. We suggest you keep an eye on the course finder on our website for updates.
About
School of Biomedical Engineering & Imaging Sciences

We believe in a truly integrated approach to healthcare engineering, which is why our collaborative research projects encompass everything from the development of novel imaging tracers right through to micro-robotic and artificial intelligence solutions.

A set of departments comprising physicists, chemists, biologists, engineers, computer scientists, mathematicians and clinicians, our combined expertise allows us to see clinical challenges from all angles to develop patient-focused solutions. Our expert advisors support the development process at every step of the way, from proof-of-concept studies all the way to Phase III clinical trials, to ensure translation to the clinic can happen wherever possible.

We undertake groundbreaking research that improves the way people do business. And we engage with organisations around the world to create real value for society.

Since 1989, King’s Business School has grown into a leading management institution – and one of the largest in London. We are ranked 8th in the UK for our highly regarded original research in business and management.

We're a friendly, diverse community committed to the highest quality teaching and research. People from over 80 countries come here to study with us, and we're proud of the varied perspectives they bring to our School.

Being in the heart of London, our students and academics have unlimited opportunities for collaboration, research, and developing their career prospects. From bold new start-ups to multinational conglomerates, businesses inform our teaching and benefit from our work.

From undergraduate students to patient volunteers, clinical academics to professional services, every member of the School contributes to making this vision a reality.

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Apply now
Join us to engineer better health for the world.

Interested in engineering better health? Learn more on our course pages and apply today. You can also chat to students and lecturers to get an even better sense of the course.

Apply online or find out more

www.kcl.ac.uk/study/postgraduate-taught/courses/medtech-innovation-entrepreneurship
I measure success of innovations by only one metric – the number of human lives it touched. The joy you will have from healing lives through technology and business innovations would be incredible. Join us in making the world a healthier place.”

Professor Prashant Jha

Entrepreneurship and innovation are essential career skills to navigate and thrive in the dynamic world with all its challenges in the 21st century. We will support you in developing these skills in the growth markets of MedTech and healthcare. Both for your benefit and for the benefit of society.

Professor Ute Stephan

Spring School

This 15-credit module is offered during either the Spring/Summer/Autumn and is suitable for anyone interested in learning the art and science of innovating novel healthcare technologies and services.

You’ll be coached by clinicians, designers, engineers, business consultants, academics, scientists, and entrepreneurs in developing an understanding of discovering unmet healthcare needs, defining the constraints in which the unmet healthcare need must be solved, and applying human-centric design principles to design novel healthcare technologies and services.

You’ll be visiting healthcare facilities at Guys and St Thomas’ hospitals and King’s College Hospital and you’ll interact with healthcare practitioners from all over the world. This type of access will allow you to rally develop an appreciation of interconnectedness and interdependencies of the healthcare system. From the Entrepreneurial side of things, you’ll learn from designers and intellectual property experts on various facets of creating and protecting new technologies. Plus, you will be coached by King’s Entrepreneurship Institute in pitching new ideas and by King’s Business School in creating business plans that focus on affordability at the core of innovation.

This module can help usher you into a career in MedTech innovation, research and development, management consulting as well as setting-up a MedTech start-up.

The 15 credits earned post successful completion of this module can be used towards the credit requirements of the King’s MSc in MedTech Innovation and Entrepreneurship program.