

Course Name	Course Code	Credit	Institute	Description	Link	Other info
Innovation Pilot	62999	10 CP	DTU	The course is about applying innovation theory and models in practice and solving concrete engineering innovation challenges in collaboration with a company. The course works systematically with innovation as an exploratory process aimed at building up knowledge as a basis for seeing new opportunities. Important parts of this work is to thoroughly investigate the problem and its context and see the problem from different perspectives (reframing). Another important element is to develop value-creating solutions that take into account the context in which the solution should be implemented. Visits and interviews with key stakeholders are an important part of the work and activities out of the house must therefore be expected. The course provides training in delivering a concise, inspiring and informative presentation (pitch) of selected solutions as well as guidance on how the written reports are targeted recipients and intentions. The teaching method is based on blended learning, where a significant part of the theoretical teaching takes place as e-learning and the course days are organized as a mix of workshops, group work and corporate meetings.	<a href="https://kursen.dtu.dk/course/2025-2026/62999">https://kursen.dtu.dk/course/2025-2026/62999</a>	8h/week-hybrid
Innovation Pilot (summer Edition)	62990	10 CP	DTU	The course is about applying innovation theory and models in practice and solving concrete engineering innovation challenges in collaboration with a company. The course works systematically with innovation as an exploratory process aimed at building up knowledge as a basis for seeing new opportunities. Important parts of this work is to thoroughly investigate the problem and its context and see the problem from different perspectives (reframing). Another important element is to develop value-creating solutions that take into account the context in which the solution should be implemented. Visits and interviews with key stakeholders are an important part of the work and activities out of the house must therefore be expected. The course is based on interdisciplinary team work on a company project. Interdisciplinary team work requires that you work together. Consequently, an active attendance is expected to pass the course. Teaching takes place as a combination of project work in teams, e-learning, and workshops.	<a href="https://lifelonglearning.dtu.dk/en/engineering-technology-en/single-course/innovation-pilot-summer-edition/">https://lifelonglearning.dtu.dk/en/engineering-technology-en/single-course/innovation-pilot-summer-edition/</a>	8h/week-hybrid
Innovation space project: innovation and entrepreneurship processes	12M150	10 CP	Eindhoven University of Technology	This course aims develop competences of future engineers by identifying solutions thanks to challenge-based entrepreneurship applied in a set of interdisciplinary student teams, working on open-ended assignments in close interaction with high-tech companies and societal organizations. It combines the design and engineering of a product/service/system and new business development. The course involves no lectures, but studio style group work, self-study and personal and team development. Several out-of-the-box pressure-cooker style workshops will be offered, either online or offline. Students are in the lead of their own learning processes. The course is part of educational innovation in TU/e innovation Space.  The course consists of a large integrative project in which in-depth engineering design skills are developed and previously acquired knowledge and expertise are actively shared with students from different backgrounds. A systems approach, observing the complete system rather than a specific component, is stimulated. The students are encouraged to acquire new knowledge and skills in a hands-on approach during the process of identifying a multi-dimension solution to the challenge.  The challenges are business and societal challenges that are sufficiently open, complex, and innovative to demand for an interdisciplinary collaboration among students. Challenges are offered in collaboration with TU/e innovation Space. Companies, governments, institutes and society as a whole are involved as much as possible. An overview of the current challenges can be found in the education guide, via this link: <a href="https://educationguide.tue.nl/broadening/innovation-space/master/challenges-for-isp-innovation-and-entrepreneurship-processes/?L=2">https://educationguide.tue.nl/broadening/innovation-space/master/challenges-for-isp-innovation-and-entrepreneurship-processes/?L=2</a> .	<a href="https://eduexchange.eu/euroteq/for-students/-dtu/catalog-tue/courses/innovation-space-project-innovation-and-entrepreneurship-processes_b0a78a9e-045e-41a7-b073-42e77226c0ab">https://eduexchange.eu/euroteq/for-students/-dtu/catalog-tue/courses/innovation-space-project-innovation-and-entrepreneurship-processes_b0a78a9e-045e-41a7-b073-42e77226c0ab</a>	8h/week-hybrid
Producing new sustainable food ingredients - processes and utilizations	23216	10 CP	DTU	The overall aim of this course is to give a theoretical background within production of food ingredients with a specific focus on adding value to raw materials and waste/side streams for production of new food ingredients and supplements in a sustainable manner. Cases will be used as illustrations of applied technologies, production and utilization concepts. The aim is also to give an introductory background on the quality and functionality of the ingredients and their utilization. The student will in the learning process understand and theoretically apply processes (e.g. enzymatically, liquid-liquid and solid-liquid extraction, filtering, drying etc.) to different raw materials/biomasses in order to obtain different new ingredients of higher value such as proteins, polysaccharides, pigments, vitamins and polyphenols. The sustainability of the technologies used will be justified through calculations of e.g. water and energy use. The raw materials and wastes are case studies such as algae, fish side streams, potato waste. Furthermore, the students will briefly learn about the functions of the ingredients such as emulsifiers, antioxidants, colouring agents etc. The teaching will be a mix of aquisition through just in time teaching (f.x. e-learning), team work inquiry and collaboration for the production of hand in posters for each case, student presentations and discussions, in order to form future food engineers with innovative problem solving and solution skills. Evaluation will be based on the ability to discuss and argue for the choices of technologies for the problem solving and solutions.	<a href="https://kursen.dtu.dk/course/2023-2024/23216">https://kursen.dtu.dk/course/2023-2024/23216</a>	8h/week-hybrid
Master Practical Course: Edge Computing and the Internet of Things (IN2106, IN4261)	4490	10 CP	TUM	The Internet interconnCP people globally and allows access to networked services pretty much anytime, anywhere. The notion of the Internet of Things (IoT) extends this to pervasive devices (i.e. the "Things"), which are increasingly networked and connected to the Internet. These devices can act as sensors or actuators can interact with other devices, e.g. including mobile phones, and with the global Internet. Edge Computing is an upcoming infrastructure paradigm where computation is pushed closer to the data source and executed on a broad range of devices ranging from RPIs to small microservers. It enables faster connections, data preprocessing and cleansing, and faster reaction time compared to cloud services. As sensors can create massive amounts of data, the interplay between IoT devices and edge networks assumes a fundamental role in the process of reducing core network saturation by offering an offloading platform where to deploy smart services independent from the cloud. The Edge Computing and the Internet of Things course aims to build local services based on IoT devices relevant to the people at a given place and time using Raspberry Pis and enhanced WLAN access points, mobile devices and local sensors.  The goal of this practical course is threefold: 1. Understand the background and underlying concepts of IoT and Edge Computing based on sensing and Internet connectivity. We will provide introductory lectures and practical sessions for the background and the tools. 2. Conceptualize an application/service that fits some definition of localized IoT and edge computing with particular interest in exploiting sensing and location. 3. Design and implement your idea in a team and demonstrate it at the end of the class by documenting your system.  To illustrate the above, examples of applications could be: * A service to analyse vehicle data inside a vehicle or in an edge computing device, depending on the current load and network condition. * A digital version of geocaching where content can be retrieved and posted via short range radio rather than exchanging physical goods with the cache. * A local music sharing tool that allows exploring what people around you (e.g. in a certain café) would listen to. * A basic edge analytics application using images or video feeds to do people counting (e.g. in a café).  Topics covered during the lectures: * Programming things: IoT OS, hardware abstractions, IoT programming frameworks * Connecting things: lower layers, IPv6, transport protocols * Web of things: REST, MQTT, CoAP * IoT service architectures: Cloud-based, edge-based, device-to-device * IoT services: Mashups, big data, machine learning * Overview of security and IoT: privacy, threat models, attacks, mechanisms  Further details, pre-meeting dates and contacts: <a href="https://www.ce.cit.tum.de/cm/teaching/winter-term-2025-26/edge-computing-and-the-internet-of-things/">https://www.ce.cit.tum.de/cm/teaching/winter-term-2025-26/edge-computing-and-the-internet-of-things/</a>	<a href="https://campus.tum.de/tumonline/wb/v.wbShowLVDetail?pSipSpracheNr=950840639&amp;pSpracheNr=1">https://campus.tum.de/tumonline/wb/v.wbShowLVDetail?pSipSpracheNr=950840639&amp;pSpracheNr=1</a>	