USE – Technology & Entrepreneurship

This learning line will be redesigned in 2024-2025. Transitional arrangements will become available for students who started in 2023-2024.

Technology & Entrepreneurship	
Offered by	Department of Industrial Engineering & Innovation Sciences
Language	English
Primarily interesting for	All students.
Prerequisites	Required courses: Recommended courses:
Contact person	1ZEUB0: prof.dr.ir. M. L. A. M. Bogers, m.l.a.m.bogers@tue.nl 1ZSUC0: dr. A. Markus, a.markus@tue.nl 1ZAUB0: assistant professor A.S.A. Bobelyn, a.s.a.bobelyn@tue.nl

Content and composition

Provide a description of the content and composition of the elective package.

Course code	Course name	Level classification	Last year course is offered
1ZEUBO	Introduction to technology entrepreneurship	Basic	2023-2024
1ZSUC0	Organizing entrepreneurship	Advanced	2023-2024
1ZAUB0	Entrepreneurship in action	Expert	2023-2024

Course description

1ZEUB0, Introduction to technology entrepreneurship

In this course you will be introduced to the topic of technology entrepreneurship. It concentrates on the basics of entrepreneurship, including understanding of the entrepreneurial process, identifying and developing entrepreneurial opportunities, and designing a business model for a selected entrepreneurial opportunity. The course will be framed in a particular challenge, which you will work on with your student team throughout the course. The course will be taught via a blend of lectures and interactive sessions.

1ZSUC0, Organizing entrepreneurship

We will discuss how entrepreneurship can be a kind of management and helps traditional businesses to innovate and build new products, services and business models. The course builds on ideas and theories of entrepreneurship, strategic management, organization management, organizational behaviour, open innovation, business models, technology innovation, and organizational psychology. The lectures are interdisciplinary and apply entrepreneurship to a corporate setting.

The first part of this course discusses how established firms engage in entrepreneurial activities. We will discuss the context for corporate entrepreneurship and investigate the different schools and definitions of corporate

entrepreneurship, as well as business strategies supporting corporate entrepreneurship. We will also assess the organizational structure and culture supporting corporate entrepreneurship.

The second part of this course explains how intellectual property plays a role for large companies to be innovative. Building on what you have already learned about this subject from the previous USE course in general and with regard to tech start-ups, is in this course extended to IP management practices as part of large tech enterprise business. Over the past three decades the rise of open innovation has created an awareness of IP not only as a cost driver, but also as a revenue driver which opened the way to new business models, particularly for research organizations to exploit their knowledge base. The third part of this course discusses the social and psychological conditions of corporate entrepreneurship and specifically focuses on individuals and teams. This part explains how a manager works as an entrepreneurial leader in the organization and discusses how teams in organizations can work on intrapreneurship projects. Additionally, it will be addressed how personality may impact entrepreneurial activities. All topics will be illustrated by business cases, practical examples, and guest speakers. The knowledge obtained in this course is important in business settings in two ways. Firstly, for aspiring entrepreneurs the course is of importance as it addresses the challenge of how to remain entrepreneurial in a corporate environment. Secondly, those that seek careers in established companies may gain fundamental skills of how corporate entrepreneurship can improve firm performance.

1ZAUB0, Entrepreneurship in action

In this last project course of the USE sequence "Technology Entrepreneurship" you apply the theoretical knowledge gained from the previous two USE courses. The ultimate goal of this project course is the development of a value proposition for a technological innovation. Each student team will come up with a unique solution and concept based on given technologies.

The development of a value proposition contains the examination of the technical feasibility, a thorough situation analysis, and the segmentation, targeting, and positioning of the product based on a solid business model. Hence, the final report consists of three parts that you will work on in parallel and in different roles within a multidisciplinary team. All teams will receive feedback on the progress of their projects every two weeks in personal feedback sessions with professional coaches. In the interim presentations, you present the progress of your project to a larger group of students and receive feedback from your peers and from the coaches. The feedback from the coaches must be used to further improve the project that will be presented in the final report. At the end of the course, you will make an informed decision about whether or not to continue with a product.

Due to this course's multidisciplinary setup, all teams consist of usually five students from different departments. This course design ensures a variety of backgrounds and prior knowledge to optimally work on a value proposition. A peer review within the team minimizes the possibility of free riding.

The overall goal of this course is to (further) develop your entrepreneurial mindset. You will improve your opportunity creation, evaluation and exploitation skills. You receive feedback from the coaches and from each other.

The final report is evaluated on the thorough and comprehensive analysis during the process and at the end. Furthermore, it is essential that you can back up your decisions with reliable sources and show strong accountability for your decisions in the course. You have to anticipate the consequences of your decisions and be able to provide convincing rationales for your choices and implications. The presentations will be evaluated by a committee of experts in terms of clarity, persuasion, and excitement.