

PhD course

## ***Design science perspectives on innovation & entrepreneurship research***

16-19 January 2023

Brochure

*This PhD course is offered by the [ITEM](#) group of the School of Industrial Engineering at Eindhoven University of Technology (TU/e), in cooperation with [EuroTech](#) Universities, and is endorsed by the TU/e Graduate Program Industrial Engineering.<sup>1</sup>*

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<sup>1</sup> This course is offered every two years, with earlier versions running in 2021, 2019, and so forth. The Jean-Baptiste Say Institute for Entrepreneurship (ESCP, Berlin) will offer a similar course on design science in the other years; accordingly, the first course in Berlin will be offered in early 2024.

## Aim and Learning Goals

This intensive course is specifically designed for students in a PhD or MPhil program. It is assumed that students have extensive knowledge of basic theories of entrepreneurship, business design and innovation management. The PhD course provides participants with in-depth knowledge of Design Science (DS) approaches in the field of innovation and entrepreneurship. The main objective is that doctoral students become familiar with and develop an in-depth understanding of the key frameworks, concepts, models, and paradigms that collectively form the DS foundation for research in this field. In addition, participants learn how to review DS-based articles and how to publish work informed by DS in top journals in the field of innovation and entrepreneurship. This PhD course will also offer opportunities for a limited number of participants to present and get feedback on papers or dissertation proposals. After we ran the course fully online in early 2021, we'll return to on-campus mode for the course running from Monday 16 January to Thursday 19 January 2023.

## Program

The program outline of the course is given below. Registered participants will receive a detailed course manual (with readings and assignments) six weeks before the start of the course. All sessions are conducted on-campus:

Monday 16 January, 10:00-12:00 CET

### **Entrepreneurship, innovation and design (Georges Romme)**

Studies of entrepreneurship, innovation and design are increasingly complementary and feeding on each other. This also reflects Herbert Simon's idea of business research as a design science (DS) that promotes the interaction between science- and design-oriented research. This introductory session serves to discuss several DS notions and frameworks.

Monday 16 January, 13:30-16:30 CET

### **Designing boundary objects (Georges Romme)**

This session focuses on the design and development of boundary objects between research and practice. Several example projects in which instrumental models and tools operate as boundary objects are discussed, to explore why this kind of work is valuable, how to engage in it, and so forth. The underlying 'boundary object' theories and implementation strategies are also elaborated.

Tuesday 17 January, 9:00-12:00 CET

### **Design principles in design science (Isabelle Reymen)**

This session explores several DS outputs and specifically the pivotal role of design principles in DS: how can design principles be shaped, based on systematic literature reviews and/or empirical findings? How do design principles inform the development and prototyping of solutions, etcetera? Furthermore, recent design-oriented work on decision-making logics in new business development is discussed.

Tuesday 17 January, 13:30-16:30 CET

### **Participants present & receive feedback from panel**

This session provides the opportunity for participants to receive feedback on either a draft version of their PhD research proposal (for 1<sup>st</sup> year PhD students) or a working paper, based on design science (for 2<sup>nd</sup> to 4<sup>th</sup> year PhD students). The panel in this session includes *Isabelle Reymen and Georges Romme*.

Wednesday 18 January, 9:00-12:00 CET

### **Front end of new product development (*Fred Langerak*)**

The front end of new product development (NPD) involves activities such as opportunity identification, ideation, concept development, and concept evaluation and testing. This session serves to discuss recent work on NPD at the interface of science and design, focusing on the question why some new products are more successful than others and how the front end contributes to this success.

Wednesday 18 January, 13:30-16:30 CET

### **Open Innovation (*Marcel Bogers & Jason Li-Ying*)**

Open innovation entails a distributed innovation process that involves knowledge flows across organizational boundaries. This session explores the state of the art of open innovation research, considering various conceptual and empirical perspectives. We also discuss the implications for designing innovation processes as well as the organizational systems in which these processes take place.

Thursday 19 January, 9:00-12:00 CET

### **Design experiments in new product development (*Philip Cash*)**

The theoretical and methodological rigor of NPD work is often rather limited. This session explores how design driven NPD research can become more theory-driven and experimental in nature. Various examples of recent work drawing on so-called 'design experiments' are discussed.

Thursday 19 January, 13:30-16:30 CET

### **Participants present & receive feedback from panel**

This session provides the opportunity for participants to receive feedback on either a draft version of the PhD research proposal (for 1<sup>st</sup> year PhD students) or a working paper, based on design science (for 2<sup>nd</sup> to 4<sup>th</sup> year PhD students). The panel includes *Philip Cash, Marcel Bogers and Georges Romme*.

## **Instructors and Panel Members**

- *Marcel Bogers* is full professor of Open & Collaborative Innovation at Eindhoven University of Technology.
- *Philip Cash* is associate professor of Behavioral Design at the Technical University of Denmark (DTU).

- *Isabelle Reymen* is full professor in Design of Innovation Ecosystems at Eindhoven University of Technology.
- *Fred Langerak* is full professor of Management of Product Development at Eindhoven University of Technology.
- *Jason Li-Ying* is full professor of Innovation & Corporate Entrepreneurship at the Technical University of Denmark (DTU).
- *Georges Romme* is full professor of Entrepreneurship & Innovation at Eindhoven University of Technology.

## Administrative and Application Details

The participation fee is €750 for external participants. This fee covers participation in all sessions and access to all course materials.

Participants successfully completing the course will obtain a certificate. The course has a study load of 6 ECTS. The maximum number of participants is 25.

Interested students should apply **before November 7, 2022**. Doctoral students of EuroTech universities are given priority, but only if the application is received before the deadline with all the required documents (see below). Your application by email to [item.ieis@tue.nl](mailto:item.ieis@tue.nl) should contain the following documents (as attachments to your email message):

- Motivation letter
- Curriculum vitae
- *Optional:* your PhD research proposal or a working paper you want to present and get feedback on.

Notably, the last point is not a formal requirement in applying for this PhD course. If you're a first-year PhD student seeking feedback on your (DS-based) research proposal, you can add a draft of this proposal to the application. If you're a more senior PhD student seeking feedback on work-in-progress, you can add either the full manuscript or its abstract. The program includes two sessions offering the opportunity for participants to present and get feedback on work-in-progress or doctoral research proposals.

Please send your application by e-mail, with your personal details (name, address, affiliation) and the required attachments to [item.ieis@tue.nl](mailto:item.ieis@tue.nl)

## Cancellations

The ITEM group, as the organizer of this course, retains the right to cancel the course up to 6 weeks in advance. All registered (non-EuroTech) participants will then get their registration fee reimbursed. Registered participants can cancel their registration (with full reimbursement of the fee) until 20 December 2020. No reimbursement on cancelled registrations will be possible after that date.

## Organizer

The prime organizer of this doctoral course is the [ITEM](#) group of the TU/e department of Industrial Engineering & Innovation Sciences. Course coordinator: Georges Romme ([a.g.l.romme@tue.nl](mailto:a.g.l.romme@tue.nl)). Administrative support: Astrid Baltus ([item.ieis@tue.nl](mailto:item.ieis@tue.nl)), +31-40-2472170