



Real Projects DIGITALIZATION | Course Syllabus

Course Description

Real Projects Digitalization is a unique action-learning experience for bachelor students. Students work in interdisciplinary (and potentially international) teams on real-life problems that matter. These real-life problems are innovation challenges contextualized by a partner organization or project. The student teams follow an innovation process to tackle the proposed challenges and prototype solutions using digital technologies. The course is a flipped-classroom, which means that the content is available via video lectures and on our dynamic weekly live sessions, we concentrate on teamwork with coaching. To add an international component to your learning journey, you will have the opportunity to join 5 international live sessions for exchange with international teams from other universities and extra coaching.

Course Goals

You

- learn about innovation processes and entrepreneurial thinking.
- learn how to prototype using digital technologies.
- learn processes and agile organizational skills used in digital projects.
- increase your employability in a modern, global, digital work environment.
- learn hands-on intercultural and international collaboration skills.

Course Learning Outcomes

The team project and the course materials enable you to

- learn how to effectively work in remote teams.
- understand innovation processes.
- learn about ideation including need-finding, and research techniques.
- use agile project management techniques and tools.
- experience the power of digital prototyping.
- learn user testing.
- make effective presentations and pitches.
- sharpen your intercultural and international collaboration skills.

Course Instructors

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Class Duration

October 6 – December 22, 2022

Class Meets

Online, regular [Zoom meetings](#)

every Thursday 10am - 1 pm CET

Additional live sessions with expert keynotes and tutoring on Mondays (See schedule SFF)

Course materials

All course materials are online on the learning platform

(<https://sce.academy>) on a private course. No textbook required.



Key Content

This course covers the following topics:

1. Innovation and Entrepreneurship Basics
 - Entrepreneurship
 - Innovation
 - Design Thinking
2. Digital Transformation Basics
 - Digitalization and Introduction to Digital Transformation
 - Fundamentals of Agile Project Management
3. Remote Team Work
 - Entrepreneurial Teams
 - Remote Team Management
 - Intercultural Communication
 - Team Canvas
 - Using GitHub for working in a remote team
4. Researching the problem domain
 - Open Innovation Theory
 - How to research
 - Need finding
 - Design
 - Creating Empathy Maps
5. Digital Prototyping
 - Low vs high fidelity prototyping
 - Prototyping tools
 - User testing
6. Business Modeling
 - Business Model Canvas
7. Presentation Skills
 - How to pitch
 - How to communicate with external partners
 - Storytelling



Course Framework and Required Coursework

The Real Projects Digitalization is an online-only “Real Projects” Seminar offered as a flipped-classroom. You will find the schedule, the course materials and course assignments in the learning management system (<https://sce.academy/>). Please create an user account on the platform using your full name and university e-mail address. You will be given access to our private course on the first day of class. The course schedule and the course assignments guide you through the course materials.

The schedule includes a weekly live Zoom session (on Thursdays 10am – 1pm, Central European Time (CET) that we use to apply the course materials, which are video lectures and reading materials. Hence, our live sessions is teamwork time. Quizzes will check your understanding of the videos and readings. Course assignments guide you through the innovation process. Assignments are team assignments. Teams are self-organized and follow agile project principles. Each team has access to 5 international live sessions with experts from the European Institute for Innovation and Technology (EIT), a body of the European Union (<https://eit.europa.eu/>), as part of the international program Start For Future.

Attendance is required for all live sessions. The zoom links you find on the learning management system (i.e. the private online course on <https://sce.academy/>). Please review all course materials before the live sessions and refer to the learning management system on how to prepare for the sessions.

Student Teams

All students are assigned to a team before the start of the course. The instructor selects the teams such that all teams are multidisciplinary and if possible, international. You will have the opportunity to meet students from other teams during the weekly live sessions and other international student teams from 7+ universities, during the 5 live sessions of Start For Future.

The teams are self-organized and we value a pro-active team spirit. Team members take pride in putting their best efforts into the teamwork. Conflicts can, and should, be addressed with the team coach or directly with the instructors.

Innovation Challenges

The innovation challenges are proposed by partner organizations or projects. This semester our innovation challenge is presented by the “Impact for Future” project, an initiative of the Social Entrepreneurship Akademie in partnership with Bavarian higher education institutions, including Hochschule München. The Impact for Future project asks: **“How might we leverage digital technologies in education to achieve the Sustainable Development Goals?”**

Information and material about the challenge topic is available on the learning management system. The teams will review the material and start their own research on the topic. A representative from the challenge giving organization/project will answer initial questions during the live Zoom sessions on week 3.



The teams will ideate to generate a contribution relevant to the challenge. The contribution is a solution that addresses parts of the challenge. The teams create digital prototypes to develop and communicate their contribution. Digital prototypes use digital technologies without the need for programming. Students from all majors engage in prototyping the team’s challenge contribution. The representative of the challenge giving organization/project is available for feedback on week 7. Based on the feedback, the teams refine their prototypes and develop a business model until the end of the course. The teams also collect feedback through user testing. Refining the contribution is an iterative process following agile methodologies. At the end of the course in our last live session, all teams use their interactive prototype to pitch their challenge contribution to the partner organization. Additionally, the teams will pitch to the EIT experts on a final international event with teams from other universities.

Tools

All course materials are provided on the learning management system. Student teams work on github.com. GitHub is a repository for all artifacts created throughout the course. GitHub also provides agile boards to track progress, issues for tracking tasks, as well as a wiki to document team progress and results. Please register on github.com in the 1st week of the course if you do not have an account already.

Grading

Your course grade is computed based on quizzes, the final presentation and report, which combines the class assignments. Quizzes are individually graded. You can retake every quiz up to three times. The final presentation and report grades are team-based and grading rubrics are shown for it. We expect all team members to put in their best efforts to the teamwork. Skills related to your majors/degree programs are valued.

%	Course Component
15	Quizzes to videos and readings (individual grade)
35	Final Presentation to partner organization (15. December, 10am-1pm)
50	Final report, which is the combined assignments on GitHub (22. December)
100	Total

This seminar is a 5 ECTS course that counts towards the Certificate Entrepreneurial Thinking and Handling. For more information on this certificate, see [here](#).

Students that attend the 5 live-sessions from Start for Future will receive a **certificate of participation** from this international program backed by the European Institute for Innovation and Technology (EIT) and the European Commission.



Administrative policies

DEADLINES

Due dates for all coursework are shown on the learning management system. You submit all assignments in your team repository on github.com. Your work is time-stamped automatically when you put it on github.com. Late assignments receive no credit. Do NOT submit anything via e-mail.

If unexpected circumstances will prevent you from submitting your assignment before the deadline, you may request an extension. Send an email message to the instructor before the due time asking for an extension of the due date.

ACADEMIC INTEGRITY

This course involves both individual quizzes and collaborative work. As a team member, you submit work that is your own. You respect your team members and you contribute to your team according to your best efforts. Your team will create a novel solution/contribution to a challenge. You research other solutions, but you cannot plagiarize an existing solution.

GETTING ASSISTANCE

Please use email or the forum in the learning management system for any communication with the instructors or coaches. Feel free to address any questions or concerns.

DROP/WITHDRAWAL POLICY

You may drop this course any time during the first 2 weeks. Leaving the course later is not fair to your team. Your team counts on you.



Course Schedule

Week	Topics and Appointments	What is due?
Week 0	Welcome session (October 6, 10am-1pm CET) Setting the stage: <ul style="list-style-type: none"> introduction of challenge introductory videos on innovation, digitalization and working in remote teams 	<ul style="list-style-type: none"> Course Material: Introduction and Basics
Week 1 – The Basics	Welcome live session (October 13, 10am-1pm CET) <ul style="list-style-type: none"> introduction of teams team building 	<ul style="list-style-type: none"> Course Material: Week1 Quiz 1
Week 2 – Challenge Kick-Start	Live session (October 20, 10am-1pm CET) During the week you learn about <ul style="list-style-type: none"> The problem domain How to research <i>1st Live-session Start For Future (October 17, 4-5:30 pm CET)</i>	<ul style="list-style-type: none"> Course Material: Week 2 Team canvas Quiz 2
Week 3 – Nailing the Problem	Challenge giver checkpoint (October 27, 10am-1pm CET) <i>2nd Live-session Start For Future (October 24, 4-6 pm CET)</i>	<ul style="list-style-type: none"> Course Material: Week 3 Problem statement Quiz 3
Week 4 – Ideating	Ideation workshop (November 3rd, 10am-1 pm CET): <ul style="list-style-type: none"> Ideate possible solutions 	<ul style="list-style-type: none"> Course Material: Week 4 Empathy map
Week 5 – Prototyping a Solution	Prototyping technologies – live session (November 10, 10am-1 pm CET) During the week you learn about <ul style="list-style-type: none"> Digital prototyping - how to? User testing 	<ul style="list-style-type: none"> Course Material: Week 5 Storyboard
Week 6 – The Business side of things	Business modeling – live session (November 17, 10am-1 pm CET) During the week you learn about <ul style="list-style-type: none"> Business Model Canvas <i>3rd Live-session Start For Future (November 14, 4-5 pm CET)</i>	<ul style="list-style-type: none"> Course Material: Week 6 Quiz 4
Week 7 – The Feedback Week	Challenge giver checkpoint (November 24, 10am-1 pm CET): Demonstrate sprint 1 release	<ul style="list-style-type: none"> Course Material: Week 7 Sprint 1 release of prototype
Week 8 – Teamwork, Iteration, and Pitching	Reflection – live session (December 1, 10am-1 pm CET) During the week you learn about <ul style="list-style-type: none"> Pitching your idea Your team will work on prototyping (Sprint 2). <i>4th Live-session Start For Future (November 28, 4-5 pm CET)</i>	<ul style="list-style-type: none"> Course Material: Week 8 Quiz 5 Business Model Canvas
Week 9 – The Final Mile	Getting the deliverables ready – live session (December 8, 10am-1 pm CET) Your team will create Sprint 2 release of your prototype.	<ul style="list-style-type: none"> Course Material: Week 9 Sprint 2 release of prototype
Week 10 – The Finishing Line	Final presentation – live session (December 15, 10am-1 pm CET) <i>5th Final Live-session Start For Future (December 12, 3:30-5:30 pm CET)</i>	<ul style="list-style-type: none"> Final presentation Final prototype Final report