Course Syllabus
International Virtual Innovation Challenge

Course Description

The International Virtual Innovation Challenge is a unique action-learning experience for bachelor students. Students work in international, interdisciplinary teams on real-life problems that matter. We call these real-life problems innovation challenges. Innovation challenges are proposed by public governmental and non-governmental organizations.

The student teams follow an innovation process to tackle the proposed challenges and prototype solutions using digital technologies.

The course includes video lectures, dynamic weekly live sessions for content input, additional tutoring sessions and a weekly team session to discuss progress and remote international teamwork.

Course Goals

You
- learn hands-on intercultural and international collaboration skills.
- 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.

Course Learning Outcomes

The team project and the course materials enable you to
- sharpen your intercultural and international collaboration skills.
- 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.

Course Instructors

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Class Duration
March 24 – May 26, 2021

Class Meets
Online, regular Zoom meetings every Wednesday 5-7 pm CET

5 additional teamwork live sessions with tutoring on Thursdays 5-7pm (see schedule)

3 team coaching sessions scheduled via Doodle (see link on Coaching Practical Information on our learning platform)

Course materials
All course materials are online on a learning platform. Selected students will receive further information on how to register in mid-March. No textbook required.
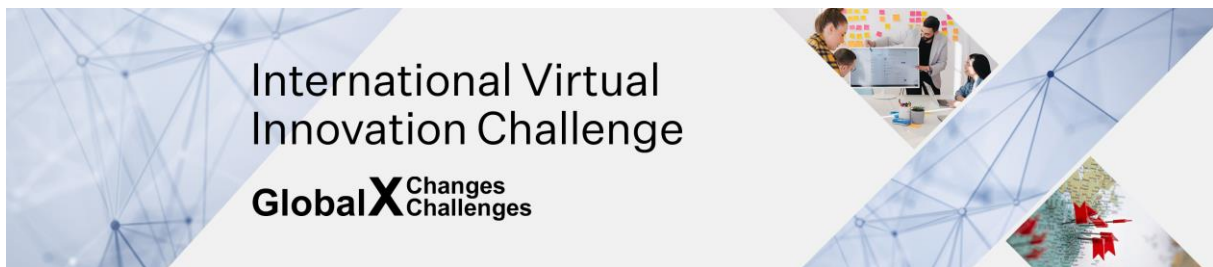
Teaching assistant
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Coach
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Virtual Office Hours
please schedule via email

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
   - Story telling

Course Framework and Required Coursework

The International Virtual Innovation Challenge is an online course. You will find the course schedule, the course materials and course assignments in the learning management system (https://www.deepdive.school/). Once you have been informed by the GXC team about your successful application, please create a user account on the platform using your full name and university e-mail address. You will be given access to our course on March 15th, 2021. The course schedule and the course assignments guide you through the course materials.

The schedule includes a weekly live Zoom session (usually on Wednesday 5-7pm Central European Time (CET) which is 6-8pm Eastern European Time or 8-10am Pacific Standard Time). Course materials are video lectures and reading materials. 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 coaching and tutoring. Attendance is required for the live Zoom sessions as well as the live coaching/tutoring sessions. Please review all course materials before the live sessions and refer to the learning management system on how to prepare for the sessions. Please use the "discussion tab" in the learning management system for all your questions regarding the course materials.

International Teams

All students are assigned to a team before the start of the course. The instructors select the teams such that all teams are international and multidisciplinary. You will have the opportunity to meet students from other teams during the weekly live Zoom sessions.

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 be addressed during the team coaching sessions.
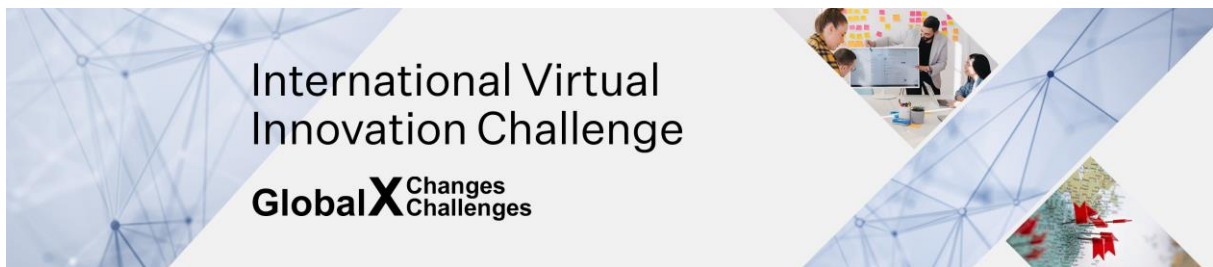
Innovation Challenges

The innovation challenges are proposed by public sector organizations. In spring 2021, teams work on two different challenges. The instructors assign the teams to challenges before the start of the course. Switching teams or challenges is not possible. Your team will decide during the ideation phase which solution to pursue.

Challenges in spring 2021

This semester will have a special edition with two exciting challenges on the **'Future of sports championships'** with a specific focus on "Sustainability and the positive impact of professional mass sports competition events on the localities who host them":

- The European Championships Munich 2022 (https://munich2022.com/) proposes the challenge "How can the European Championships Munich 2022 motivate their visitors and spectators to do more sports and inspire them to lead more active lifestyles, creating a positive impact for local sport clubs and society as a whole?"

- The German Ski Federation (https://www.deutscherskiverband.de/) proposes the challenge "How can the German Ski Federation make use of digital technologies to shape a sustainable future for winter sports?"

All teams will receive information and material from the challenge-giving organization. The teams will review the material and start their own research on the topic. The challenge giving organizations are available for questions during the live Zoom sessions on weeks 3 and 6.

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 challenge givers are available for feedback in week 6. Based on the feedback, the teams refine their prototypes and a simplified 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 (week 10), all teams use their interactive prototype to pitch their challenge contribution.

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 and assignments. Quizzes are individually graded. You can retake every quiz up to three times. All assignment grades are team-based. Grading rubrics are shown with the respective assignments. All assignments are graded based on attainments (= the results). 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)
15	Assignments for team canvas, research in the problem domain and storyboard (weeks 1-4)
20	Digital prototyping and user testing (weeks 5-8)
10	Business model canvas (week 7)
40	Final presentation, report & prototype
100	Total

We use the German grading scheme for the final grade. American letter grades are shown for comparison only. We assign grades on a straight percentage basis.

Final Grade Cutoffs (German grades and American letter grades in parenthesis)										
		1,7 (B+)	87%	2,7 (C+)	77%	3,7 (D+)	67%			
1,0 (A)	93%	2,0 (B)	83%	3,0 (C)	73%	4,0 (D)	60%	5,0 (F)	<60%
1,3 (A-)	90%	2,3 (B-)	80%	3,3 (C-)	70%				

Upon successful completion of the International Virtual Innovation Challenge, HM students and students from international partner universities will be awarded 5 ECTS credits by HM Hochschule München University of Applied Sciences at the end of the summer term 2021 (i.e. August 2021).

International students from partner universities are encouraged to have the credits recognized for their degree programs.

All students will receive a **certificate of participation** upon successful completion.

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 your team coach 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 two weeks of class. 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 1 – The Basics	Welcome live session (March 24, 5-7 pm CET) Setting the stage: • introduction of challenges and teams • introductory videos on innovation, digitalization and working in remote teams 1st Coaching session (1h timeslot to be scheduled via Doodle by the team)	• Quiz 1 • Quiz 2
Week 2 – Challenge Kick-Start	Live session (March 31, 5-7 pm CET) During the week you learn about • The problem domain • How to research	• Team canvas assignment • Quiz 3 • Prepare for challenge giver checkpoint
Week 3 – Nailing the Problem	Challenge giver checkpoint (April 7, 5-7 pm CET) Teamwork live session with tutoring (April 8, 5-7 pm CET)	• Create a problem statement • Create an empathy map
Week 4 – Ideating	Ideation workshop (April 14, 5-7 pm CET): Ideate your contribution Teamwork live session with tutoring (April 15, 5-7 pm CET)	• Storyboard
Week 5 – Prototyping a Solution	Prototyping technologies – live session (April 21, 5-7 pm CET) During the week you learn about • Digital prototyping - how to? • User testing Teamwork live session with tutoring (April 22, 5-7 pm CET)	• Quiz 4
Week 6 – The Feedback Week	Challenge giver checkpoint (April 28, 5-7 pm CET): Demonstrate sprint 1 release 2nd coaching session (1h timeslot to be scheduled via Doodle by the team)	• Sprint 1 release of prototype
Week 7 – The Business side of things	Business modeling – live session (May 5, 5-7 pm CET) During the week you learn about • Business Model Canvas Your team will work on prototyping (Sprint 2). Teamwork live session with tutoring (May 6, 5-7 pm CET)	• Business Model Canvas

Week 8 – Teamwork, Iteration, and Pitching	Reflection – live session (May 12, 5-7 pm CET) During the week you learn about • Pitching your idea Your team will work on prototyping (Sprint 2).	• Quiz 5
Week 9 – The Final Mile	Getting the deliverables ready – live session (May 19, 5-7 pm CET) Your team will create Sprint 2 release of your prototype. Teamwork live session with tutoring (May 20, 5-7 pm CET)	• Sprint 2 release of prototype
Week 10 – The Finishing Line	Final presentation – live session (May 26, 5-7 pm CET) 3rd and last coaching session (1h timeslot to be scheduled via Doodle by the team)	• Final presentation • Final prototype • Final report