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, and a weekly team coaching session with an industry expert to advise on prototyping and mentor students in 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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Professor at Munich University of Applied Sciences (MUAS)
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Entrepreneurship Educator and GXC Program Manager at Strascheg Center for Entrepreneurship (SCE) and Munich University of Applied Sciences (MUAS)
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Class Duration

Oct. 5 – Dec. 11, 2020

Class Meets

Online, regular Zoom meetings every Tuesday at 5 pm CET

Course materials

All course materials are online on a learning management system. Selected students will receive further information on how to register in September. No textbook required.

Teaching assistant

tbc

Coaches

tbc

Virtual Office Hours

Please schedule via email
Key content

This course covers the following topics:

1. Innovation and Entrepreneurship Basics
   - Entrepreneurship
   - Innovation
   - Design Thinking
   - Amazon’s Working Backwards approach

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
Required Coursework

The International Virtual Innovation Challenge is an online course. You find all course materials in the learning management system. Course materials are video lectures and reading materials. Quizzes will check your understanding of the videos and readings.

The course schedule and the course assignments guide you through the course materials. We have a weekly live Zoom session (usually on Tuesday 5-7 pm Central European Time (CET) which is 6-8 pm Eastern European Time or 8-10 am Pacific Standard Time). Each team has an industry expert assigned as a dedicated team coach. All teams schedule weekly meetings with their coaches. Attendance is required for the live Zoom session as well as the live coaching session.

Please review all course materials before the weekly coaching session. Your coach will answer any questions regarding the course materials. Course assignments guide you through the innovation process. Assignments are team assignments. Teams are self-organized and follow agile project principles. You review your team’s progress with your coach.

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 will be resolved in the team coaching sessions.

Innovation Challenges

The innovation challenges are proposed by public sector organizations. In fall 2020, teams work on three 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 fall 2020

1. How can municipalities, through digital solutions, motivate local companies towards climate protection, in times of crisis? – proposed by the City of Munich, Department of Labor and Economic Development
2. How could the German Ski Association digitally engage ski enthusiasts (amateur skiers) in a way that adds value to all stakeholders and leads to an active interconnected ski community? – proposed by Deutscher Skiverband (DSV) – German Ski Association
3. Future of youth engagement: how to empower the youngsters? – proposed by Kreisjugendring München-Stadt - Munich City District Youth Association together with the M:UniverCity Co-Creation-Group
All teams will receive information and material from the challenge-sponsoring organization. The teams will review the material and start their own research on the topic. The challenge sponsoring organizations are available for questions during the Zoom session in week 2 and via email.

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 sponsors 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, 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](http://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](http://github.com) in the 1st week of the course if you do not have an account already.

A Slack channel is available throughout the course.

**Grading**

Your course grade is computed based on quizzes and assignments. 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.

<table>
<thead>
<tr>
<th>%</th>
<th>Course Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>Quizzes to videos and readings (individual grade)</td>
</tr>
<tr>
<td>15</td>
<td>Assignments for team canvas, research in the problem domain and ideation (weeks 1 – 4)</td>
</tr>
<tr>
<td>20</td>
<td>Digital prototyping and user testing (weeks 5-8)</td>
</tr>
<tr>
<td>10</td>
<td>Business model canvas</td>
</tr>
<tr>
<td>40</td>
<td>Final presentation, final report &amp; final prototype</td>
</tr>
<tr>
<td>100</td>
<td>Total</td>
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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) |
|--------------------------|----------------|-------|-------|-------|-------|-------|-------|
| 1.0 (A)                  | 93%            | 1.7 (B+) | 87%   | 2.7 (C+) | 77%   | 3.7 (D+) | 67%   |
| 1.3 (A-)                 | 90%            | 2.0 (B)  | 83%   | 3.0 (C)  | 73%   | 4.0 (D)  | 60%   |
|                          |                | 2.3 (B-) | 80%   | 3.3 (C-) | 70%   | 5.0 (F)  | <60%  |

Upon successful completion of the International Virtual Innovation Challenge, MUAS students and students from international partner universities will be awarded 5 ECTS credits by Munich University of Applied Sciences (MUAS) at the end of the winter term 2020/21.

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, the forum in the learning management system, or the Slack channel 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**

The schedule indicates the topics covered. The schedule is subject to smaller changes until the first few weeks of the course.

<table>
<thead>
<tr>
<th>Week (start on a Tuesday)</th>
<th>Topics</th>
<th>What is due?</th>
</tr>
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<tbody>
<tr>
<td>week 0 (pre-week)</td>
<td>Setting the stage:</td>
<td></td>
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</tbody>
</table>
|                           | • introductory videos on entrepreneurship, innovation, digitalization, working in remote teams
|                           | • introduction to teams and challenges                                 | Quiz 1                                                   |
| week 1 (13 Oct 2020)      | Welcome live session (Oct 13, 5 pm CET)                                 |                                                         |
|                           | • team canvas                                                          |                                                         |
|                           | • the problem domain and how to research                               |                                                         |
|                           | • Team canvas assignment                                               | Quiz 2                                                   |
|                           | • Quiz 2                                                               |                                                         |
|                           | • prepare Challenge sponsor checkpoint                                 |                                                         |
| week 2 (20 Oct 2020)      | Challenge Sponsor Checkpoint (Oct 20, 5 pm CET)                         |                                                         |
|                           | • Ideation assignment (part 1): create a problem statement             |                                                         |
| week 3 (27 Oct 2020)      | Workshop: Amazon’s Working Backwards process (Oct 27, 5 pm CET and Oct 29, 5 pm): Ideate challenge contribution |                                                         |
|                           | • Ideation assignment (part 2): Ideation, Storyboard, Press Release, FAQs |                                                         |
|                           | • Quiz 3                                                               |                                                         |
| week 4 (3 Nov 2020)       | Prototyping Technologies – Live Session (Nov 3, 5pm CET)               |                                                         |
|                           | • Digital Prototyping - how to?                                        | Quiz 4                                                   |
|                           | • Business Model Canvas                                                |                                                         |
| week 5 (10 Nov 2020)      | • Prototyping Sprint 1                                                |                                                         |
| week 6 (17 Nov 2020)      | • Prototyping Sprint 1 – Release Challenge Sponsor Checkpoint (Nov 17, 5pm CET) | prototype 1st release<br>business model canvas |
| week 7 (24 Nov 2020)      | Reflection – Live Session (Nov 24, 5pm CET)                             |                                                         |
|                           | • Prototyping Sprint 2                                                |                                                         |
|                           | • User Testing                                                         |                                                         |
| week 8 (1 Dec 2020)       | • Prototyping Sprint 2 – Release                                       | prototype 2nd release<br>Quiz 5                          |
|                           | • Pitching - how to?                                                  |                                                         |
| week 9 (8 Dec 2020)       | Final presentation – Live Session (Dec 8, 5 pm CET)                     | final presentation<br>final report                       |