# ENTREPRENEURIAL MODULE DESCRIPTION

***Table:*** *Entrepreneurial module description*

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| **Title of the module** | **Introduction to entrepreneurship** |
| **Aim** | To enhance entrepreneurship skills as a lifelong competency, strengthening collaborative entrepreneurship education, consequently contributing to an enriched Georgian innovation and start-up ecosystem, and to build capacities for promoting the internationalisation of higher education. |
| **Level**  | Entry level / introductory module |
| **Credits**  | 5 ECTS  |
| **Number of hours**  | 125 hours of study |
| **Lecture hours** | 12 hours |
| **Practitioners’ talks** | Two hours(two talks of one hour each) |
| **Individual and group work in class** | 14 hours |
| **Visits to innovation and entrepreneurship landmarks** | 6 hours(Two visits of three hours each, including transportation time) |
| **Project work** | 36 hours |
| **Individual study and work** | 45 hours |
| **Assessment**  | 10 hoursTwo summative assessment exercises of two hours eachTwo peer-assessment exercisesFour formative self- and peer- assessment exercises of one hour each |
| **Pre-requisites** | Being enrolled on a bachelor programme in a Georgian university. Open to all disciplines.  |
| **Inclusion of module in curricula** | The module is designed to be offered as an elective. Universities who wish to include this module as an introductory module in a wider innovation and entrepreneurship programme (e.g. a minor or major in the subject), may do so, adapting the contents as necessary.  |
| **Summary of the module content** | * Introduction: Understanding innovation and entrepreneurship
* Being an innovator and an entrepreneur: key skills
* Creativity and innovation
* Introduction to design thinking
* Team building and project management
* Social entrepreneurship
* Technology-based entrepreneurship
* Sustainable entrepreneurship
* Pitching and presentation skills
* Business model innovation
* Values and principles under the light of responsible innovation
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| **Learning outcomes** | Key learning outcomesStudents will:* Acquire fundamental knowledge about the concept of entrepreneurship, notions of entrepreneurial skills and the specific approaches of social, technology-based and sustainable entrepreneurship.
* Develop, at an initial level, five entrepreneurial skills: opportunity identification, creative problem solving, self-efficacy, teamworking in diversity, and ethical decision making.
* Develop an awareness of the institutional and local/ regional/ national entrepreneurship and innovation ecosystem, and engagement with stakeholders and other actors in this ecosystem.
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| **Learning activities and teaching methods** | The entrepreneurship module uses five main types of learning activities: * **Lectures** to frame the module and to impart the necessary entrepreneurship theory and knowledge relevant to the module.
* **Talks** by local entrepreneurs and stakeholders to share first-hand experiences from practitioners.
* **Visits to local innovation and entrepreneurship landmarks** to gainunderstanding of the local entrepreneurship ecosystem.
* **Group discussions** designed to enhance critical understanding and engagement with the material presented in lectures and talks.
* A **group entrepreneurship project** running throughout the module and designed to enable students to develop entrepreneurship skills through reflective practice, intergroup collaboration, and engagement with actors in the local entrepreneurship ecosystem. Students need to identify and characterise a societal challenge and propose solutions using design thinking tools.
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| **Assessment** | The module will be assessed through a mix of self-, peer-, educator-led and practitioner-led formative assessments and summative assessments aimed at evaluating students’ teamwork and individual attainment. *Formative assessment*This is for feedback and development purposes and does not count towards the module grade. Six formative self- and peer- assessment exercises are proposed for weeks two, five, six, 11, 13 and 18. *Summative assessment*

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| **Form of assessment** | **% of credit** | **Size of assessment (e.g. duration / length)** |
| Individual reflective report/video | 20 | 2500-word report / five-minute video (week 16) |
| Peer review: two peer assessments  | 10 | One hour One Microsoft form for each peer review session(weeks six and nine) |
| Group business model | 20 | 10 page slide deck(week 17) |
| Group work | 50 | Presentation/video and Q&AFirst presentation, week 12 (10%)Final presentation, week 17 (40%) |

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| **Requirements for awarding credits** | Equal or over 70/ 100 points  |

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## Considerations on the module design

* **Target audience.** The module is open to bachelor students from all disciplines. This offers opportunities for developing multidisciplinary work groups for project activities, alongside possible multidisciplinary teaching teams or educators’ communities of practice.
* **Mode of instruction**. The module’s activities are designed for a face-to-face provision. Institutions may adapt the delivery to online or blended modalities if needed.
* **Hours’ distribution**. Each university may adapt the distribution of hours according to their own needs and preferences. For example, visits to landmarks and venues can be expanded or reduced; assessment exercises can vary according to the institutional requirements; project work and lecture hours can be re-balanced responding to alternative theoretical-practical approaches, and considering complementary educational activities.
* **Stakeholder engagement.** As practice-oriented activities, leading EE initiatives worldwide incorporate the engagement of external partners active in real-world entrepreneurship activities. This includes employers and entrepreneurship associations, policy makers, start-ups and spin-offs where students can exercise skills.
* The successful development of this Introduction to Entrepreneurship module requires the involvement of internal and external stakeholders. Organisations supporting the entrepreneurship module include the Georgian Chamber of Commerce and Industry (GCCI) and Enterprise Georgia. Ways in which local stakeholders may participate in the module, and more generally in EE activities, include:
1. Offer perspectives about relevant entrepreneurship skills for university graduates, considering industrial and societal needs, to support curricular design.
2. Provide students with information on the country’s support structures and policy instruments for entrepreneurs.
3. Organise inspirational talks by entrepreneurs sharing their career paths, motivations, challenges and achievements.
4. Mentor students in real-world project work, advising on the identification and characterisation of challenges to tackle, and on the ideation, development, piloting and presentation of possible solutions.
5. Serve as evaluators of students’ project work.
6. Provide support to educators in the organisation for active learning activities, including coordination with societal actors for project work.
7. Organise visits for students and educators to entrepreneurship landmark venues.
8. Coordinate networking events with key national actors involved in EE, promoting a local community of practice.
* **Institutional resources.** Experiential education and action learning requires additional resources than traditional lecturing. This includes time from the education team to develop learning tools, monitor experiential learning activities, organise partnerships and activities in collaboration with external stakeholders, among others. Thus, it is suggested that universities offering the module make available appropriate educational resources and recognise educators’ additional workload.
* **Teaching-learning culture and train the trainer.** Action and induction learning also requires a teaching-learning culture that recognises the value of learners’ autonomy, self-direction and experiential processes. This may imply changes in educators’ roles and pedagogical tools, therefore possibly requiring train the trainer activities.
* **Student maturity**. This is an introductory module aiming to enhance an entrepreneurial mindset. Ideally, students will have the opportunity of further developing their entrepreneurial skills and knowledge in other modules; an entrepreneurship learning track is desirable.
* **Institutional collaboration.** Innovation and entrepreneurship benefit from diverse mindsets. Also, as discussed above, experiential education can be more costly. Institutional collaboration in the module’s provision may enhance its impact.

# Weekly plan

The planning of the entrepreneurship module considers an 18-week term:

1. Introduction: understanding innovation and entrepreneurship
2. Being an innovator and an entrepreneur: key skills
3. Creativity and innovation
4. Introduction to design thinking
5. Team building and project management
6. In the shoes of an entrepreneur 1
7. Social entrepreneurship
8. Technology-based entrepreneurship
9. Sustainable entrepreneurship
10. Innovation and entrepreneurship ecosystems: visit to innovation and entrepreneurship landmark 1
11. Pitching and presentation skills
12. First project presentations
13. Talk: in the shoes of an entrepreneur 2
14. Business model innovation
15. Values and principles under the light of responsible innovation
16. Innovation and entrepreneurship ecosystems: visit to innovation and entrepreneurship landmark 2
17. Final project presentations
18. Concluding session and feedback

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| **Week 1**  | **Introduction: understanding innovation and entrepreneurship** |
| **Description** | The module is presented, introducing the key complex multi-faceted concepts of innovation and entrepreneurship, and the module’s work plan.  |
| **Objectives**  | * To present the module’s aims, structure and learning outcomes, engaging students in their learning experience.
* To introduce the notions of innovation and entrepreneurship.
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| **Activities**  | * Presentation of the module.
* Introduction to project work.
* Presentation of participants.
* Lecture on key concepts. Discussion on essential reading.
 |
| **Preparation** | Mandatory:* Drucker, P. F. (1985). Innovation and entrepreneurship: Practice and principles (Rev. ed). Routledge.
* Chesbrough, H., Bogers, M., 2014. Explicating Open Innovation, in: Chesbrough, H., Vanhaverbeke, W., West, J. (Eds.), New Frontiers in Open Innovation. Oxford University Press, pp. 3–28. [https://doi.org/10.1093/acprof:oso/9780199682461.003.0001](https://doi.org/10.1093/acprof%3Aoso/9780199682461.003.0001)

Suggested: * Schumpeter, J. A. (1994). Capitalism, socialism and democracy (First published 1943). Routledge.
* Mazzucato, M. (2018). Mission-oriented innovation policies: Challenges and opportunities. Industrial and Corporate Change, 27(5), 803–815. <https://doi.org/10.1093/icc/dty034>
* Bogers, M., Zobel, A.-K., Afuah, A., Almirall, E., Brunswicker, S., Dahlander, L., Frederiksen, L., Gawer, A., Gruber, M., Haefliger, S., Hagedoorn, J., Hilgers, D., Laursen, K., Magnusson, M.G., Majchrzak, A., McCarthy, I.P., Moeslein, K.M., Nambisan, S., Piller, F.T., Radziwon, A., Rossi-Lamastra, C., Sims, J., Ter Wal, A.L.J., 2017. The open innovation research landscape: established perspectives and emerging themes across different levels of analysis. Industry and Innovation 24, 8–40. <https://doi.org/10.1080/13662716.2016.1240068>
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| **Week 2** | **Being an innovator and an entrepreneur: key skills**  |
| **Description** | Essential skills of entrepreneurs are discussed, highlighting the value of diverse teams – with varied skills – for creative solutions and successful start-ups.  |
| **Objectives**  | * To introduce key models of entrepreneurship skills, especially EntreComp: The Entrepreneurship Competence Framework.
* To facilitate self-reflection processes on the personal development of entrepreneurship skills.
 |
| **Activities**  | * Lecture on innovation and entrepreneurship skills.
* **Formative self-assessment** on entrepreneurship skills. Discussion in pairs on strengths and opportunities for development.
 |
| **Preparation** | Mandatory:* European Commission. Joint Research Centre. (2016). EntreComp: The entrepreneurship competence framework. Publications Office. <https://data.europa.eu/doi/10.2791/593884>
* European Commission. Joint Research Centre. (2018). EntreComp into action: Get inspired, make it happen. Publications Office. <https://data.europa.eu/doi/10.2760/574864>

Suggested: * European Commission & ICF. (2015). Entrepreneurship education, a road to success: A compilation of evidence on the impact of entrepreneurship education strategies and measures. Publications Office. https://data.europa.eu/doi/10.2769/408497
* Global Entrepreneurship Monitor. (2023). Global Entrepreneurship Monitor 2022/2023 Global Report: Adapting to a “New Normal”. GEM.
* Lackéus, M. (2015). Entrepreneurship in Education. What, why, when, how. Entrepreneurship 360, background paper. OECD, European Commission.
* Kucel, A., Róbert, P., Buil, M., & Masferrer, N. (2016). Entrepreneurial Skills and Education-Job Matching of Higher Education Graduates: European Journal of Education. European Journal of Education, 51(1), 73–89. <https://doi.org/10.1111/ejed.12161>
* Wagner, T., Compton, R.A., 2012. Creating innovators: the making of young people who will change the world, 1st Scribner hardcover ed. ed. Scribner, New York.
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| **Week 3** | **Creativity and innovation**  |
| **Description** | The notion of creativity is presented as a process where new ideas emerge, permitting innovation. Creative problem solving is analysed, exploring the benefits of teamworking in diversity.  |
| **Objectives**  | * To understand and reflect on creative processes, nurturing innovation and entrepreneurship.
* To practice creative group problem solving.
 |
| **Activities**  | * Lecture on creativity and innovation.
* Practical exercise.
* Group formation for project work.
 |
| **Preparation** | Mandatory:* [Creativity and innovation management: How to inspire original ideas](https://online.stanford.edu/creativity-and-innovation-management)
* Trilling, B., Fadel, C., 2009. 21st century skills: learning for life in our times, 1st ed. ed. Jossey-Bass, San Francisco
* Dyer, J., Gregersen, H.B., Christensen, C.M., 2011. The innovator’s DNA: mastering the five skills of disruptive innovators. Harvard Business Press, Boston, Mass

Suggested: * Csikszentmihalyi, M., 2010. Creativity: the Psychology of Discovery and Invention. Harper, New York.
* van Tassel-Baska, J., 2013. From creativity education to innovation education: what will it take?, in: The Routledge International Handbook of Innovation Education. Routledge, Abingdon, Oxon, pp. 111–127.
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| **Week 4** | **Introduction to design thinking** |
| **Description** | The design thinking approach is presented as a tool to conduct innovation processes based on well-defined needs. Divergent and convergent thinking are practiced as key design thinking elements.  |
| **Objectives**  | To familiarise students with the process of design thinking, practicing the design thinking double diamond process to discover and define a problem, and to develop and deliver a solution.  |
| **Activities**  | * Lecture on design thinking, key concepts and processes.
* In project groups, analyse a case of design thinking from the preparatory work and then start ‘discovering’ a problem.
 |
| **Preparation** | Mandatory:* [Design thinking 101](https://www.youtube.com/watch?v=6lmvCqvmjfE&t=44s), [Design thinking 102](https://www.youtube.com/watch?v=LJBavFyEl1g&t=28s)
* [IDEO Design thinking](https://designthinking.ideo.com/)
* [Problem definition](https://www.unhcr.org/innovation/wp-content/uploads/2017/07/DDG_ProblemDefinition.pdf)
* Kelley, T., Littman, J., 2008. The ten faces of innovation: IDEO’s strategies for beating the devil’s advocate & driving creativity throughout your organization. Profile, London.
* Reflect on the key tools and processes of deign thinking to be discussed and practiced in class.

Suggested: * [Principles of human-centred design](https://www.youtube.com/watch?v=rmM0kRf8Dbk)
* Johansson‐Sköldberg, U., Woodilla, J., & Çetinkaya, M. (2013). Design Thinking: Past, Present and Possible Futures. Creativity and Innovation Management, 22(2), 121–146. <https://doi.org/10.1111/caim.12023>
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| **Week 5** | **Team building and project management** |
| **Description** | The session is devoted to understanding the dynamics of team working and tools for project management in innovation and entrepreneurship contexts.  |
| **Objectives**  | * Introduce tools for teamworking and project management.
* Prepare for practicing these tools in the group project work.
 |
| **Activities**  | * Introductory lecture on team building and project management.
* Based on Kelley & Littman’s model, **formative** **self-assessment** on the ‘faces’ that one tends to take more naturally.
* In project groups, discuss the ‘faces’ that each group member tends to take more naturally and how the different roles adopted may or not complement each other.
* In project groups, discuss and define key guidelines for the project work that will facilitate effective collaboration during the module.
 |
| **Preparation** | Mandatory:* Kelley, T., Littman, J., 2008. The ten faces of innovation: IDEO’s strategies for beating the devil’s advocate & driving creativity throughout your organization. Profile, London.
* Prince, M., & Felder, R. (2006). Inductive Teaching and Learning Methods: Definitions, Comparisons, and Research Bases. Journal of Engineering Education, 95(2), 123–138. <https://onlinelibrary.wiley.com/doi/10.1002/j.2168-9830.2006.tb00884.x>

Suggested: * Perrenet, J. C., Bouhuijs, P. A. J., & Smits, J. G. M. M. (2000). The Suitability of Problem-based Learning for Engineering Education: Theory and practice. Teaching in Higher Education, 5(3), 345–358. <https://doi.org/10.1080/713699144>
* Stefanou, C., Stolk, J. D., Prince, M., Chen, J. C., & Lord, S. M. (2013). Self-regulation and autonomy in problem- and project-based learning environments. Active Learning in Higher Education, 14(2), 109–122. <https://doi.org/10.1177/1469787413481132>
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| **Week 6** | **In the shoes of an entrepreneur 1** |
| **Description** | One-hour talk and Q&A session from a local/national/ international entrepreneur (can be online). Invitation to present his/her entrepreneurial career. Include insights into drivers; attempts, failures and successes; essential skills; collaboration experiences; and lessons.  |
| **Objectives**  | To engage and reflect on the relevance of entrepreneurial skills through a real-life case and through personal reflection.  |
| **Activities**  | * Talk offered by practitioner.
* **Summative peer-assessment** on innovation and entrepreneurship skills (5%); group discussion on key concepts.
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| **Preparation** | Mandatory:* Review the profile of the guest speaker. Prepare a question that strengthens your understanding of the concepts reviewed so far in the module.
* Review the material from the previous sessions and be prepared to actively participate in the group activities.
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| **Week 7** | **Social entrepreneurship** |
| **Description** | The concept of social entrepreneurship, alongside social innovation, is introduced theoretically and discussed through practical cases. Students identify and discuss challenges (possibly) tackled entrepreneurially.  |
| **Objectives**  | * To understand the key elements of social entrepreneurship and how to apply design thinking tools when defining the social need to be tackled entrepreneurially.
* To exercise opportunity identification in the local context.
 |
| **Activities**  | * Lecture on social entrepreneurship: key concepts linked to global trends and challenges. Emphasis on understanding the context.
* Group discussion on social entrepreneurship case studies. In groups of three to four students, present the cases of social entrepreneurship reviewed as preparatory work. Discuss the identification, characterisation and definition of the social need addressed in each case. Select one group reporter and present to the class.
* Work in pairs on opportunity identification. Reflect on your local context and identify one challenge that could be tackled with a social entrepreneurship approach. Characterise the challenge using empathy tools from design thinking.
* Project work: 15-minute Q&A with educator.
 |
| **Preparation** | Mandatory:* Case study. Search and analyse a case of social entrepreneurship. Prepare a three-minute summary to present to small groups. Source: ASHOKA, <https://www.ashoka.org/>
* Global Entrepreneurship Monitor 2015. Special Topic report on Social Entrepreneurship. <https://www.gemconsortium.org/report/gem-2015-report-on-social-entrepreneurship>
* What Is Empathy and Why Is It So Important in Design Thinking?
* <https://www.interaction-design.org/literature/article/design-thinking-getting-started-with-empathy>

Suggested: * Mulgan, G., Tucker, S., Ali, R., Sanders, B., 2007. Social innovation: what it is, why it matters and how it can be accelerated. Young Foundation, London.
* <https://www.youngfoundation.org/our-work/publications/social-innovation-what-it-is-why-it-matters-how-it-can-be-accelerated/>
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| **Week 8** | **Technology-based entrepreneurship** |
| **Description** | The concept of technology-based entrepreneurship is introduced, raising contemporary issues on AI. The value of interdisciplinary research and innovation for creative solutions is discussed.  |
| **Objectives**  | * To understand the principles of technology-based entrepreneurship.
* To reflect on the value of team working and diversity for developing creative solutions.
 |
| **Activities**  | * Lecture on technology-based entrepreneurship: highlight issues of scalability, and the role of AI and its ethical aspects. Link to responsible innovation, further discussed in week 15.
* Group discussion on technology-based case studies. In groups of three to four students, present the cases of key technology-based entrepreneurship reviewed as preparatory work. Discuss how different disciplines and cultures can bring complementary perspectives to enrich the creative problem-solving process. Select one group reporter and present to the class.
* Project work: 15 minute Q&A.
 |
| **Preparation** | Mandatory:* Case study. Search and analyse a case of intensive technology-based entrepreneurship. Prepare a three-minute summary to present to small groups.
* Investigate the development of a technology that you use daily. When and how was it developed? How were novel and radical perspectives reached?
* von Schomberg, R., 2012. Prospects for technology assessment in a framework of responsible research and innovation, in: Dusseldorp, M., Beecroft, R. (Eds.), Technikfolgen abschätzen lehren. VS Verlag für Sozialwissenschaften, Wiesbaden, pp. 39–61. <https://doi.org/10.1007/978-3-531-93468-6_2>

Suggested: * Sidhu, I., Singer, K., Johnsson, C., & Suoranta, M. (2015). Introducing the Berkeley Method of Entrepreneurship – a Game-Based Teaching Approach. 2015 ASEE Annual Conference and Exposition Proceedings, 26.1030.1-26.1030.8. <https://doi.org/10.18260/p.24367>
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| **Week 9** | **Sustainable entrepreneurship** |
| **Description** | The concept of sustainable entrepreneurship is discussed, connected to ethical decision making. Opportunities for students’ engagement in sustainable entrepreneurship initiatives are promoted.  |
| **Objectives**  | * To introduce the concept of sustainable entrepreneurship.
* To develop awareness of opportunities to act entrepreneurially in the institutional/local/ national context encouraging sustainable development.
 |
| **Activities**  | * Lecture on sustainable entrepreneurship: key concepts framed in the green transition.
* Group brainstorming on SDG-related possible interventions in the local ecosystems (based on homework). What problem can be tackled? What resources are needed? What networks can be leveraged? What impact can be produced? Draft a possible group action plan.
* **Summative peer-assessment** on participation in discussion about entrepreneurship models (5%).
* Project work: 15 minute Q&A.
 |
| **Preparation** | Mandatory:* Review the 17 UNESCO Sustainable Goals (SDGs)
* <https://en.unesco.org/sustainabledevelopmentgoals>
* Reflect on a feasible way to support the work on one SDG in your local context. What can you do?
* Inaugural Address of Professor Kim Poldner - Entrepreneuring a regenerative society: <https://www.youtube.com/watch?v=mwG0sP43aN8>
* Rosário, A., Raimundo, R., & Cruz, S. (2022). Sustainable Entrepreneurship: A Literature Review. Sustainability, 14(9), 5556. <https://doi.org/10.3390/su14095556>

Suggested: * Lans, T., Blok, V., & Wesselink, R. (2014). Learning apart and together: Towards an integrated competence framework for sustainable entrepreneurship in higher education. Journal of Cleaner Production, 62, 37–47. <https://doi.org/10.1016/j.jclepro.2013.03.036>
* Ploum, L., Blok, V., Lans, T., & Omta, O. (2018). Toward a Validated Competence Framework for Sustainable Entrepreneurship. Organization & Environment, 31(2), 113–132. <https://doi.org/10.1177/1086026617697039>Schaltegger, S., & Wagner, M. (2011). Sustainable entrepreneurship and sustainability innovation: Categories and interactions. Business Strategy and the Environment, 20(4), 222–237. <https://doi.org/10.1002/bse.682>
* Schaltegger, S., & Wagner, M. (2011). Sustainable entrepreneurship and sustainability innovation: Categories and interactions. Business Strategy and the Environment, 20(4), 222–237. <https://doi.org/10.1002/bse.682>
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| **Week 10** | **Innovation and entrepreneurship ecosystems:** **visit to innovation and entrepreneurship landmark 1** |
| **Description** | First group visit to an innovation and entrepreneurship landmark of the local ecosystem. It can be a start-up based in the university, a business incubator/accelerator, a public agency devoted to promoting business development or managing intellectual property policies, etc. Ideally, the visit includes a short talk by a key stakeholder followed by a Q&A session and a visit to the venue.  |
| **Objectives**  | To raise awareness of the local/regional/national entrepreneurship and innovation ecosystem, engaging with key stakeholders of the ecosystem. |
| **Activities**  | Up to three hour visit, including transportation to innovation and entrepreneurship landmark.  |
| **Preparation** | Mandatory:* Visit to landmark. Investigate on the origins and relevance of the landmark. Prepare one question for local stakeholders.
* Etzkowitz, H., & Leydesdorff, L. (Eds.). (2001). Universities and the global knowledge economy: A triple helix of university-industry-government relations. Continuum.
* Carayannis, E. G., & Campbell, D. F. J. (2012). Mode 3 knowledge production in quadruple helix innovation systems: 21st-century democracy, innovation, and entrepreneurship for development. Springer.

Suggested: * Autio, E., & Thomas, L. D. W. (2014). Innovation Ecosystems: Implications for Innovation Management? In M. Dodgson, D. M. Gann, & N. Phillips (Eds.), The Oxford Handbook of Innovation Management (1st ed.). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199694945.001.0001>
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| **Week 11** | **Pitching and presentation skills** |
| **Description** | Appropriate communication skills are essential in entrepreneurship contexts, as the business ideas need to be clearly, convincingly and succinctly conveyed. The session aims at practicing pitching and presentation skills of business ideas.  |
| **Objectives**  | To present and practice some tools and communication approaches used in innovation and entrepreneurship contexts; notably, concise pitches and presentations aimed at possible investors.  |
| **Activities**  | * Explanation of pitching and presentation techniques.
* Group practice.
* **Formative group peer-assessment** on pitching skills.
 |
| **Preparation** | Mandatory:• [TED series "Before public speaking…"](https://emea01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.ted.com%2Fplaylists%2F226%2Fbefore_public_speaking&data=02%7C01%7CT.C.vanderSpek%40hhs.nl%7C15d9f27c7c50418daab908d6a3d382ff%7Ca2586b9bf8674b3c93635b435c5dbc45%7C0%7C0%7C636876526164476156&sdata=uhxiAAz%2BkgBgPteAJms69Kjvl0K72oHsSYJmJnwuRgo%3D&reserved=0)• [Pixar Storytelling Rules (10 rules for effective storytelling)](https://www.youtube.com/playlist?list=PLY6PCL9ylnRSaO608L0ocvzxusr_35XfC)• [The Irresistible Power of Storytelling as a Strategic Business Tool](https://hbr.org/2014/03/the-irresistible-power-of-storytelling-as-a-strategic-business-tool)Suggested: • [7 Storytelling Techniques Used by the Most Inspiring TED Presenters](https://visme.co/blog/7-storytelling-techniques-used-by-the-most-inspiring-ted-presenters/) |

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| **Week 12** | **First project presentations** |
| **Description** | Project groups present their progress in the ‘problem space’ of the design thinking method: * Discovering the question, defining the research area and methods (divergent phase).
* Defining and characterising the problem (convergent phase).
 |
| **Objectives**  | * To practice key elements of the design thinking method in the development of a potential business idea.
* Develop the skills of identifying opportunities, creative problem solving, self-efficacy, teamworking in diversity, and ethical decision making.
 |
| **Activities**  | * First group project presentations.

**Summative assessment**: * Group work presentations (or video and Q&A) (10% of grade).
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| **Preparation** | Mandatory:* Preparation of group presentations.
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| **Week 13** | **Talk: In the shoes of an entrepreneur 2** |
| **Description** | One-hour talk and Q&A session from a local/national/international entrepreneur (can be online). Invitation to present his/her entrepreneurial career. Include insights into drivers; attempts, failures and successes; essential skills; collaboration experiences; and lessons. |
| **Objectives**  | To engage and reflect on the relevance of entrepreneurial skills through a real-life case and through personal reflection.  |
| **Activities**  | * Talk offered by practitioner.
* **Formative peer-assessment** and group debrief on project presentations from last week; personal reflection on social, technology-based and sustainable entrepreneurship; group discussion on these concepts.
 |
| **Preparation** | Mandatory:* Review the profile of the guest speaker. Prepare a question that strengthens your understanding of the concepts reviewed so far in the module.
* Review the material from the previous sessions and be prepared to actively participate in the individual and group activities.
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| **Week 14** | **Business model innovation** |
| **Description** | The concept of business model innovation and the business model canvas tool are introduced. The canvas is applied to group work.  |
| **Objectives**  | * To understand the meaning of innovating in business models that can lead to successful entrepreneurship.
* To practice and review the nine elements of the business model canvas as a simple tool to model potential new scalable businesses.
 |
| **Activities**  | * Introduction to business model innovation and the business model canvas.
* Practical exercise: using the business model canvas in groups.
 |
| **Preparation** | Mandatory:* Osterwalder, A., Pigneur, Y., & Clark, T. (2010). Business model generation: A handbook for visionaries, game changers, and challengers. Wiley.
* Group work: draft a business model canvas for your project.
* <https://www.strategyzer.com/library/the-business-model-canvas>

Suggested: * Ramdani, B., Binsaif, A., & Boukrami, E. (2019). Business model innovation: A review and research agenda. New England Journal of Entrepreneurship, 22(2), 89–108. <https://doi.org/10.1108/NEJE-06-2019-0030>
* Joyce, A., & Paquin, R. L. (2016). The triple layered business model canvas: A tool to design more sustainable business models. Journal of Cleaner Production, 135, 1474–1486.
* <https://doi.org/10.1016/j.jclepro.2016.06.067>
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| **Week 15** | **Values and principles under the light of responsible innovation** |
| **Description** | Values, principles and ethical issues in innovation and entrepreneurship are introduced, drawing on the concept of responsible research and innovation (RRI).  |
| **Objectives**  | * To convey the complex and necessary collective steering of innovation and entrepreneurship processes, acknowledging they can have both positive and harmful potentials.
* To reflect on the values that may support responsible innovation and entrepreneurship.
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| **Activities**  | * Lecture on responsible innovation.
* Discussion based on the prepared cases. In groups of four to five students, discuss the identified cases. Select one, reflect on critical and possibly competing values present in the innovation commercialisation, and present to the class.
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| **Preparation** | Mandatory:* Stilgoe, J., Owen, R., & Macnaghten, P. (2013). Developing a framework for responsible innovation. Research Policy, 42(9), 1568–1580. <https://doi.org/10.1016/j.respol.2013.05.008>
* Owen, R., Macnaghten, P., Stilgoe, J., 2012. Responsible research and innovation: From science in society to science for society, with society. Science and Public Policy 39, 751–760. <https://doi.org/10.1093/scipol/scs093>
* Reflect on a radical innovation case, accessible and commercialised in your local context, and identify what skills may be useful in directing its use responsibly.
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| **Week 16**  | **Innovation and entrepreneurship ecosystems:** **Visit to innovation and entrepreneurship landmark 2** |
| **Description** | Second group visit to an innovation and entrepreneurship landmark of the local ecosystem. It can be a start-up based in the university, a business incubator/accelerator, a public agency devoted to promoting business development or managing intellectual property policies, etc. Ideally, the visit includes a short talk by a key stakeholder followed by a Q&A session and a visit to the venue. |
| **Objectives**  | To raise awareness of the local/regional/national entrepreneurship and innovation ecosystem, engaging with key stakeholders of the ecosystem. |
| **Activities**  | Up to three hour visit, including transportation to innovation and entrepreneurship landmark.  |
| **Preparation** | **Summative assessment:** * Submit individual reflective report/video: 2500-word report / five minute video (20% of grade).

Mandatory:* Jongbloed, B., Enders, J., Salerno, C., 2008. Higher education and its communities: Interconnections, interdependencies and a research agenda. High Educ 56, 303–324. <https://doi.org/10.1007/s10734-008-9128-2>
* Toner, P., 2011. Workforce skills and innovation: an overview of major themes in the literature (OECD Science, Technology and Industry Working Papers No. 2011/01).

Suggested: * Tijssen, R.J.W., 2006. Universities and industrially relevant science: Towards measurement models and indicators of entrepreneurial orientation. Research Policy 35, 1569–1585. <https://doi.org/10.1016/j.respol.2006.09.025>
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| **Week 17** | **Final project presentations** |
| **Description** | Project groups present their work in five minute pitches to an audience composed of students, a lecturer and two to three external stakeholders, who are part of the local entrepreneurship ecosystem. Project groups present a summary of the ‘problem space’ of the design thinking method (previously presented) and further detail of the ‘solution phase’: * Developing ideas for solutions such as a minimum viable product (MVP), rapid prototyping and storytelling (divergent phase).
* Delivering the solution (convergent phase).
 |
| **Objectives**  | * To further practice key elements of the design thinking method in the development of a potential business idea.
* To further develop the skills of identifying opportunities, creative problem solving, self-efficacy, team working and diversity, and ethical decision making.
 |
| **Activities**  | **Summative assessment**: * Group work presentations (or video and Q&A) (40% of grade).
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| **Preparation** | **Summative assessment**: * Submit group business model: 10 page slide deck (20% of grade).

Mandatory:* Group preparation of the business model.
* Group preparation for the project presentation.
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| **Week 18** | **Concluding session and feedback** |
| **Description** | The session is devoted to an open evaluation of the module and to resolving any questions that students may have on the contents. |
| **Objectives**  | * To clarify content questions.
* To promote individual self-reflection and group discussion on the learning process and skill development throughout the modules.
 |
| **Activities**  | * **Peer-assessment** in pairs, then integrating previous self-reflection.
* Open discussion and feedback.
 |
| **Preparation** | Mandatory:* Self-reflection: what did I learn in the module? What entrepreneurship skills did I develop? What would I have liked to learn/develop that I did not? What were the highlights of the module? What could be improved?
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