Course Analysis MF2088/MF2089

Innovation and Product Development/Challenge Driven Innovation for Sustainable Development
Fall 2021

Date and author: [2022-03-03 by Gunilla]

1   Course information

In the course, a real innovation and product development project in collaboration with a sponsor, or a student-initiated development project, is carried out. The work is carried out in groups, and in the course, the work is supported through seminars and supervision, with focus on both the process and deliveries. The students design their innovation process and organisation themselves, based on their innovation challenge utilizing documented working methods in innovation work. Examples of methods are design thinking, lean start-up and triple layered business model canvas. The deliveries in the course is that the students develop business models, business plans and included solution in the form of concepts and prototypes.

In the course, seminars are are also carried out, where organisation and management of the projects are discussed and critically reviewed, as well as seminars about the progress in the innovation and product development solutions.

Intended learning outcomes

After passing the course, the student should be able to:

Innovation process: LM1: Design, apply, evaluate and adapt processes and working methods to handle complex (vague, ambiguous) innovation projects.

LM2: Use methods to handle social factors in project teams.

LM3: Analyse and evaluate ones own practical implementation of innovation work and put it in relation to research.

Innovation deliveries: LM4: Develop, justify, evaluate and communicate business models and business plans.

LM5: Develop, justify, evaluate and communicate solution proposals in the form of concepts and prototypes.

LM6: Analyse and evaluate innovation solutions based on economic, environmental and social sustainability.

Course responsible teacher:

Gunilla Ölundh Sandström

Other teachers in the course:

Jens Hemphälä, Mats Magnusson and guest lecturers

Examiner:

Gunilla Ölundh Sandström

Learning activities:

The course is related to a real innovation project and the students work actively on their project during the course and get support in seminars. The students develop, lead and execute an innovation project using methotds, tools and ways of working learned in the program and the course.

2   Students' view of the course

Summary of students´ view of the course based on for example LEQ survey and/or interviews or other activities.

Response rate of LEQ course evaluation survey:

The evaluation of the course has been made with I wish/I like workshops during the course to get students perspectives and we also have continuous dialogue with the project teams via project meetings each week. A LEQ survey were sent out but only generated four answered.

Brief summary of students' responses from the LEQ survey and/or other types of course evaluation:

The course activities:

Comments on the course:

Aspects that were appreciated:

Students appreciate the course set-up working on real cases and also that they are given trust and freedom to act as project leaders and organize their work. They also appreciate the interaction with teachers on getting feedback.

- Working on live projects from existing company brings lot of understanding in challenges and how they overcome. Some challenges does not have a quick solution, how they slowly work towards better position than yesterday is fascinating.

- The ability to work with industry for a real case scenario was very exciting and we had good training from KTH innovation on how to present yourselves.

- I would say that there was a good amount of guidance throughout the course for the project.

- That students gets to challenge their knowledge and apply that to a more realistic scenario. During most years of our studies, we learn what to do with what we are given. But in this

course we get to take what we have learned and understand more how it really works. Nothing is perfect and you for The most of the time dont have everything.

- That we hade the opportunity to decide our schedule and our strategy all by ourselves.

- Continuous meetings with teachers to get feedback on progress and tips

- Trust and freedom of the course. I liked the freedom and trust with this course. It lets students put their knowledge to the test and its great to prepare us for the master thesis.

- Getting inspired and leaning from each other   I liked the discussions during the seminar because we got to learn and get inspired from from each other.

Improvements areas:

- I have no suggestion as the challenges are the interesting aspect of this course.

- The companies were not paying enough attention to this project as they kind of only see this as a college project and aren't seriously realizing what innovation can students produce. It would be great if the companies value students more.

- More individual feedback. Give students an opportunity to book a feedback session (If they want to), where you can disscus how The student is doing.

    o   Have the first session after Lessons learned 1, focus on what the student have written and what goal the student have, what challenges the student may feel like They have.

    o   Have the second session after the project has been presented and before lessons learned 2. Give feedback connected to what you spoke of the first session and focus on what to improve and what they have learned. This will also let the studnet reflect before writing lessons learned 2.

- Some of the literature exercises feel a bit forced / its just literature for the sake of literature

- More examples from earlier projects for inspiration

- Team composition. Some students get to do their own projects and choose the ones they work with and other teams are set-up in the fall. The ones getting to their own projects get a head start.

3   Teacher analysis of the course

Changes of the course before this course offering:

The course was affected by Covid-19. The major changes in the course were therefore related to this. The schedule and the project were the same as it would have been without Covid-19 but the format of seminars was on-line when it included activities for the whole class. Project activites and project supervision were performed in person, so the students had the possibility to meet with and work together with their team. That was not possible Fall 2020.

The course's strengths (based on the students' experiences and the teacher analysis):

The major strength in the course is the course design and that student get to run an open innovation project that they have full responsibility for. They get to do and reflect on innovation work. The mix of examination forms were not only result but also the process and individual learnings are examined.

Areas for improvement of the course (based on student experiences and teacher analysis):

Regarding the team set-up for the projects this is tricky. We want to keep the option for students to run their own projects and need to prepare for that in the spring. This does not give them a head start in the course or different grading and we can make that more clear.

The supervisors meet the teams each week and also have an individual meeting half way through the project and give feedback on individual work and Lessons Learend 1 and discuss suggestions for improvement for the reflective individual hand-in Lessons Learned 2. We could ask the students if they would like more opportunities for individual feedback.

Regarding the project partners involvement, the discussions between the project partners and the project partners needs to be thoroughly made so that expectations, activities and roles are clear. Sometimes the project wants to move faster than the project partner is able to support them with for example contacts and this is a balance were of course the partners should do their part but also the students understanding what the companies can do in a specific time frame and their responsibilities vs the responsibilities of the students. This can be discussed even more for the project were it is needed with further discussions during the course.

We can improve giving seminars on financial issues and include an introduction seminar on prototypes that complements the already given supervision session with an industrial designer.

We can also invite former students of company representatives to present their view of innovation process.

Proposed changes to the next course round:
- This issue is still an issue in the course. Seminar on financial issues related to start-up or innovation work within a company (or it can be included in courses prior to this course)

- Invite previous students and/or company representatives

- Ask students if they want more options for individual feedback

- Be more clear on the set-up of student driven projects and projects performed with project partners.