

DM565 Innovation part

Innovation

Some interlinked **definitions**:

- ▶ Creativity = getting new ideas
- ▶ Innovation = creation of new products
- ▶ Entrepreneurship = creation of new companies

“Innovation” in DM565 means all of these, but the focus is mainly on the last two.

Why a course on innovation?

Motivation for Teaching Innovation:

- ▶ Entrepreneurship is a possible career path.
- ▶ Particularly in IT (relatively low start-up costs).

- ▶ SDU *requires* teaching entrepreneurship/innovation in all study programmes.
- ▶ Previous course for all of NAT did not work well.

IMADA CS solution

Assumption: Learning innovation is more fun if

- ▶ The teaching is related to and exploits the actual skills from your study.
- ▶ You actually create something concrete.

Main idea of the IMADA CS solution:

- ▶ Focus on innovation and value creation by combining public data sources.
- ▶ Exploit tools from DM565 (and DM566, DM564, DM550, DM571, ...).

Concrete tasks

1. Develop an idea for an IT product (app, web site, program,...) which creates new value by combining data from different data sources.
2. Present and evaluate the idea as a basis for a possible start-up company, using the nine focus points of the *Business Model Canvas* method.
3. Program a (proto-)prototype of the idea.

As illustration, here is one example of creating new value by combining available data: <https://www.dingeo.dk/>

Components of the DM565 innovation part

- ▶ Group work (2-4 persons).
- ▶ Overview lecture, Rolf Fagerberg.
- ▶ Guest lecture with real-life examples of start-up creation: Jonatan Møller Gøttcke, former IMADA PhD-student and serial IT-entrepreneur.
- ▶ Lecture on Business Model Canvas, Rolf Fagerberg.
- ▶ Workshop on idea generation: Peter Bækgaard Von Lehnburg.
- ▶ Innovation cafés (consultancy): Peter Bækgaard Von Lehnburg.
- ▶ Mid-way seminar: pitching to, and feedback from, other groups: Peter Bækgaard Von Lehnburg, Rolf Fagerberg.
- ▶ Exam: project report (max. 10 pages) and oral exam/presentation: Peter Bækgaard Von Lehnburg, Rolf Fagerberg.

Full schedule at:

<https://imada.sdu.dk/~kslarsen/dm565/innovation.php>

Details of mid-way seminar

Date: Wednesday, November 29.

Format: Three groups present/pitch to each other and give feedback.

Planning: One hour per three groups. Sign-up for the available times via Google doc (later).

Details of exam

Deadline for report: Monday, December 18, 08:00 am.

Exam date: Thursday, December 21.

Planning: Sign-up for the available times via Google doc (later).

Format: Group exam: Presentation of idea for product and business case. Demo of prototype. Questions on presentation and report.

Grading: Based primarily on:

- ▶ Analysis via the Business Model Canvas method
- ▶ Use of relevant and non-trivial CS competences in the prototype

as perceived from the report, the presentation at exam, and the answers at exam.

The oral exam result will be part of the final grade of DM565. The written exam (on the curriculum from the first 11 weeks) weights the highest, but can be moved ± 1 grade step by the innovation part. Both parts (written exam and innovation part) must be above passing level.

TODO right now (this week)

- ▶ Form groups of size 2–4 (preferably 3).
- ▶ Sign up for one workshop (either Tue or Wed next week) via link in ITS.
- ▶ Check sources of data as inspiration before workshop.

Some examples of data sources

- ▶ Open Data Denmark Portal: <https://www.opendata.dk/>
- ▶ EU Open Data Portal:
<https://data.europa.eu/data/datasets?locale=da>
- ▶ OpenStreetMap:
https://wiki.openstreetmap.org/wiki/Downloading_data
- ▶ Rejseplanen Labs:
<https://help.rejseplanen.dk/hc/da/categories/201728005>
- ▶ Open Weather API: <https://openweathermap.org/api>
- ▶ Kaggle: <https://www.kaggle.com/datasets>
- ▶ Some public APIs:
<https://github.com/public-apis/public-apis>
- ▶ API for computer science publication database:
<https://dblp.uni-trier.de/faq/13501473>
- ▶ Web service for Chuck Norris jokes:
<https://api.chucknorris.io/>

Curriculum

The curriculum is

- ▶ Rolf Fagerberg's slides on the *Business Model Canvas* method for evaluating ideas for (products for) start-ups.
- ▶ The Wikipedia page for Business Model Canvas at https://en.wikipedia.org/wiki/Business_Model_Canvas.

Last advice

Have fun!