# Course Analysis

## MF2084 Managing Research and Development 6.0cr

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## 1 Course information

The course in Managing Research and Development is a course aiming to make students familiar with models and frameworks used in strategic management and organizing, and to give them in-depth understanding of how these models and frameworks can be skillfully applied in different R&D settings. Students will become skilled in understanding the inter-relationship between business strategies on the one hand and technology-, innovation- and R&D strategies on the other, in order to be able to work with, lead, and improve business-driven research and development activities. Furthermore, students will acquire substantial knowledge about the managerial challenges of organizing R&D activities in industrial firms and learn analytical frameworks, tools, and methods for R&D management. The course comprises a set of lectures, exercises, and case discussion sessions. Moreover, students will perform a project in which they apply the theoretical models and frameworks that have been introduced throughout the course to an R&D management topic of their choice. The project concerns an analysis of specific R&D management issues and challenges in one or more firms, and to point to possibilities for improvement.

**Course responsible teacher:**

Mats Magnusson

**Other teachers in the course:**

Johan Arekrans, Jens Hemphälä

**Examiner:**

Mats Magnusson

**Learning activities:**

The course is carried out in smaller groups for the project and individual written examinations where all the students present their learnings by applying the basic concepts, theories and analytical frameworks related to strategic management.

The project consists of writing a scientific report that treats a specific subject in the management of R&D by applying the learned concepts of R&D Strategy, R&D work methods and tools, and the R&D organization.

**Additional Comments**

## 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.*

**Brief summary of students' responses from the feedback session in the end of the course:**

The course feedback reveals some perceived challenges in the course. Some students felt that they did not receive proper feedback on the project report at an early stage and hence it was difficult for students to understand whether they were on the right track. Students also would prefer their teams to be 3-to-4-member groups instead of 5-to-6-member groups, as this would allow them to focus more narrowly on topics they are interested in and avoid excessive divergence inside the groups. The lectures were found to be very interesting and engaging with the right and concrete examples provided by the professor, though the students felt that the lectures could be shorter. Instead of having continuous 4-hour lectures these would ideally be split into shorter sessions. Students felt that they have achieved the intended learning outcome during the course with all the support they needed from the professors. The bonus points for the case studies were also helpful for the students to get a better grade in their results.

## 3 Teacher analysis of the course

### Course context

Judging by the number of students (n=45), the course is one of the largest in the master's programme Integrated Product Design. While size is less of an issue for more traditional courses, the more activity-based learning the course contains the more size becomes an issue. There are several students from other universities, both foreign and domestic. This heterogeneity makes the students have very different prior skills. The course content in the present course can be challenging for students who primarily have studied technical subjects for their Bachelor's degree. However, as the course is now given in period 2 rather than period 1, the content now seems to be less of a surprise for students from the '*Innovation Management and Product Development'* track than what was the case earlier when it was the first course of the programme.

### Changes of the course before this course offering

- Minor updates to the course main Canvas page to promote the use of relevant articles and additional readings in addition to the lecture material.

- Digital examination on-campus using the Canvas platform

- Course was given primarily on campus, compared to earlier hybrid format due to pandemic.

- Project teams were allowed larger groups (6 students), as this was frequently requested by the students during the previous course offering (max 5 students).

### The course's strengths:

The course has provided students with an understanding of basic concepts of the strategic management with theories, frameworks, and different methods. The students felt that the lectures given by the professors are very engaging and provided good industrial knowledge to the students. The course provided many important insights about managing R&D which can be used in the real-world case analysis, recognized as the key aspect of this course.

By promoting active participation and using real-life examples during lecture discussions, the course seems to do a good job in sparking the interest of students who were previously unfamiliar with the subject of R&D management. The project allows students to get a first contact with industry, as they are encouraged to interview R&D personnel.

### Areas for improvement of the course:

- As the long lectures are a recurring area of improvement in the surveys, we should investigate the possibilities of making the lectures shorter and split it on another day for the week

    - One possible solution could be to split 4h lectures into 2h same day, before and after lunch. However, this may be logistically challenging in relation to other courses.

    - Another possibility would be to combine shorter guest lectures with the more theoretically oriented lectures, in order to get more variation.

- To get additional feedback for course analysis and continuous improvement, we should organize feedback sessions mid-course and after the course with 2-3 students.

- Few project teams take the opportunity to get project supervision meetings, we should investigate alternative forms of organizing supervision to promote this. This could potentially solve the perceived lack of feedback.

- Reduce the number of students in the project group to 4-5 students/group instead of 6 students*

** Note: For two project groups this period, this limit was extended to 7 students. This was due to the fact that several students who were admitted to the course either did not show up, or, were not taking the project assignment as it had been completed previously. Consequently, this made the number of groups (n=6) fewer than expected (n=8), and two students were allowed to participate in groups already formed. Possible remedies and early indications for this scenario should be explored further.*

**Proposed changes to the next course round:**

For the next round of the course, we will improve the course setup and the learning activities corresponding to the areas above.

**Additional Comments**