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. One student that was not a part of the master's programme was unable to attend all lectures, which negatively impacted their experience as it was difficult to self-study the material as not all PowerPoint slides contained the necessary guidance to find the relevant info themselves. Another student would prefer their project teams to be 3-to-4-member groups instead of 5 member groups, as this would be more productive, and had trouble understanding the rationale behind the project. Also concerning the project, another student highlighted a challenge in getting interviewees. Industrial visits were also suggested as a potential way of seeing how the concepts of the course are applied in practice.

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. Students felt that they have achieved the intended learning outcome during the course with all the support they needed from the professors.

3 Teacher analysis of the course

Course context

Judging by the number of students (n=44), 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. Though, as indicated by the students responses to the course evaluation, the course can be challenging to take on for those who are not a part of the track and have scheduling conflicts.

Changes of the course before this course offering

- Project teams were limited to smaller teams (4-5 students), as this was frequently requested by the students during the previous course offering.
- A project workshop was introduced in the very first week of the course with the aim to facilitate a faster start with the project group assignment

- Lecture content was slightly revised with some new topics and guest lectures based on these.

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:

- The long lectures continue to be a recurring area of improvement in the course evaluation surveys, we continue to 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.

  - Thirdly, as suggested by one student in the survey, some elements of the course could perhaps be more of self-study if preparations for this was made (e.g. text material, video lectures, quizzes etc.).

- 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.

- Project teams were encouraged to book supervision meetings, still, few teams take the opportunity. We should investigate alternative forms of organizing supervision or peer review to promote this during the project. This could potentially solve the perceived lack of feedback that some students indicated.

Proposed changes to the next course round:

For the next round of the course, we will:

- Shorten a substantial number of lectures from four hours to two or three hours instead

- Introduce additional guest lectures to strengthen the connection between theoretical concepts with industry

- Introduce some form of compulsory mid-term project supervision meeting or hand-in to give additional guidance

Additional Comments