

COURSE INFORMATION

PM3: RESEARCH METHODOLOGY IN PRODUCT REALISATION (7.5 hec)

Introduction

Research methodology in product realisation is a research supportive course offered within Production 2030. The course aims to give students a comprehensive knowledge of various kind of research methods, and in-depth knowledge of the methods that are relevant for the individual student. The main goal of the course is to improve the competence among the participants to scientifically and systematically collect, treat, analyse and present different kinds of data required for research and inquiry projects.

Learning outcome

Upon successful completion of the course, participants should:

Knowledge and understanding

- have knowledge about and be able to discuss different research approaches and their suitability
- demonstrate knowledge of scientific methods in general (relevant for research in product realisation) and of methods relevant in the own field of research in particular
- have knowledge about and be able to discuss different techniques for data collection and data analysis

Skills and abilities

- demonstrate an ability to identify and formulate issues and to plan with appropriate methods a research task

Judgement and approach

- demonstrate an ability to judge the appropriateness of research methods and techniques for data collection in different situations
- demonstrate insight into the possibilities and limitations of science

Examination and grades

The course is graded Fail or Pass. Examination includes oral and written parts within three assignments, of which one is individual and one is a group assignment.

Name of the test	Value	Grading
Assignments	7,5 hec	U/G

Assignments

Assignment 1: Plan and conduct a seminar on selected research method

The students are responsible for a seminar where a selected research method is addressed in depth. The preparation is carried out in small groups, formed based on research interest/research questions. The assignment is examined based on the oral seminar. A detailed description of the assignment is handed out separately.

Assignment 2: Analysis of thesis with focus on the method section

The students should in group select a doctoral thesis using “their” research method (the selected method for Assignment 1). With clear support from literature: create a foundation for the analysis (a “checklist” on how to evaluate a thesis/research). Focus of the analysis should be the method-section, in relation to problem formulation, result, discussion and conclusion. The assignment is examined based on the written checklist and the written and oral presentation of the analysis. A detailed description of the assignment is handed out separately.

Assignment 3: Method chapter in licentiate/doctoral thesis

Throughout the course, the students shall individually work on a draft method section of the licentiate/doctoral thesis. This assignment is carried out with the support of from the supervisors and presented at a concluding seminar. The assignment is examined based on the written text, opposition, and oral presentation. A detailed description of the assignment is handed out separately.

Course literature

Karlsson, C. (2016) *Research Methods for Operations Management*, Routledge, Taylor & Francis, Inc.

Additional reading will be added.

Research Methods Online

As an additional source of information the online course Research Method Online is available for all participants via Ping Pong. Here you can find additional readings, recorded lectures, and much more.

Teachers

Course responsible and examiner is Professor Kristina Säfsten, School of Engineering, Jönköping University.

E-mail: kristina.safsten@ju.se, phone 036-101639.

Guest lectures will be invited.

Ping Pong

PingPong is used to store material and also provide a complementary online resource (Research Methods Online). You will all be invited to the activity.

Activity in PingPong: PM3 Research methodology in product realisation

Password: TBA

Schedule 2019 (preliminary)

MEETING 1 Introduction		
To do before the meeting: Read the course book, prepare a short (max 2 slides and 5 minutes) presentation about your research with focus on the used research methods		
22/10 2019 9.30-17.00 JTH	Introduction	Introduction of the course
	Examination	Examination of the course book
	Presentation	Presentation of participants
	Form groups	Groups are formed based on the interest among the participants
	Exercise	"The box"
MEETING 2 Assignment 1		
To do before the meeting: In group, prepare a seminar on the selected research method (assignment 2).		
20-21/11 2019 10-17, 9-16 JTH	Assignment 1	Seminars on different research methods based on the need in the group
	Research methods and techniques for data collection	Additional lectures and exercises on research approaches, research methods and techniques for data collection
MEETING 3 Assignment 2		
To do before the meeting: In group, carry out analysis of a thesis and create a checklist for how to evaluate a thesis/research (assignment 2).		
16-17/12 2019 10-17, 9-16 JTH	Assignment 2	Seminar based in assignment 3
	Techniques for data collection, analysis of data	Additional lectures and exercises on techniques for data collection and tools for data analysis
MEETING 4 Final examination (assignment 3)		
To do before the meeting: Write your method section (assignment 1), read the other's assignment 1 and prepare opposition on two of them (according to separate schedule).		
16-17/1 2020 9-17, JTH	Final seminar	Presentation and discussion of assignment 3 (1 or 2 days depending on the number of participants)