COURSE SYLLABUS

Advanced Research Methods in Supply Chain Operations Management, 7.5 credits

Advanced Research Methods in Supply Chain Operations Management, 7,5 högskolepoäng

Course Code:	TARR21	**Education Cycle:**	Second-cycle level
Confirmed by:	Dean Mar 1, 2021	**Disciplinary domain:**	Technology
Revised by:	Director of Education Aug 8, 2024	**Subject group:**	IE1
Valid From:	Aug 19, 2024	**Specialised in:**	A1N
Version:	3	**Main field of study:**	Production Systems

Intended Learning Outcomes (ILO)

After a successful course, the student shall

Knowledge and understanding
- display knowledge of central concepts in research philosophy and science
- display knowledge of central concepts in research methods
- demonstrate comprehension of research-methodology knowledge within supply chain operations management (SCOM)

Skills and abilities
- demonstrate skills needed to participate in research and engineering-development projects
- demonstrate the ability to independently design SCOM research
- demonstrate the ability to present research projects in written and oral form

Judgement and approach
- demonstrate the ability to make research decisions within SCOM with regard to scientific aspects, while considering ethical considerations for research and engineering-development projects
- demonstrate the ability to identify needs for further knowledge and take responsibility for his/her own knowledge development
- demonstrate an understanding of the opportunities and limitations of science and the role of science in society

Contents

The main goal is to prepare the student to perform research on graduate and post-graduate levels. The student should be able to independently design, execute and evaluate a smaller research project, and be able to participate in a larger research project, within SCOM. The course aims to make the student familiar with the philosophical and methodological underpinnings of the SCOM field. To reflect SCOM, both quantitative and qualitative research methods will be

included.

The course includes all stages of a research project, from definition of the purpose, to the presentations of the results. This scope includes activities such as literature review, considerations of relevance, preparation, planning and execution of a study, presenting implications and conclusions, and considering the study from a philosophical standpoint.

The course includes seminars and an project and:

- Research ethics
- Report writing and reference management
- Philosophy of science
- Research methodology
- Research methods
- Data types
- Data collection
- Data interpretation
- Analysis
- Research design

Type of instruction

Seminars, lectures, exercises, tutoring.

The teaching is conducted in English.

Prerequisites

The applicant must hold the minimum of a bachelor's degree (i.e the equivalent of 180 ECTS credits at an accredited university) in Engineering or Technology. The bachelor's degree should comprise a minimum of 15 credits in mathematics. Proof of English proficiency is required.

Examination and grades

The course is graded Fail (U) or Pass (G).

The final grade will only be issued after satisfactory completion of all assessments.

Registration of examination:

Name of the Test	Value	Grading
Project	5 credits	U/G
Assignments	2.5 credits	U/G

Course literature

The literature list for the course will be provided two months before the course starts.

Title: Research methodology: for engineers and other problem-solvers
Author: Säfsten, K.; Gustavsson, M. (2020)

Publisher: Studentlitteratur
ISBN: 997891441223O4 (print)