

Course Manual

Research Methods for Strategic Design

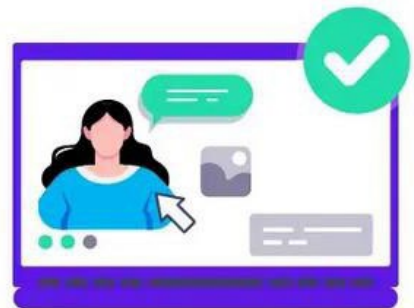
IDEM3102

2024-25

Discover



Explore



Test



Listen



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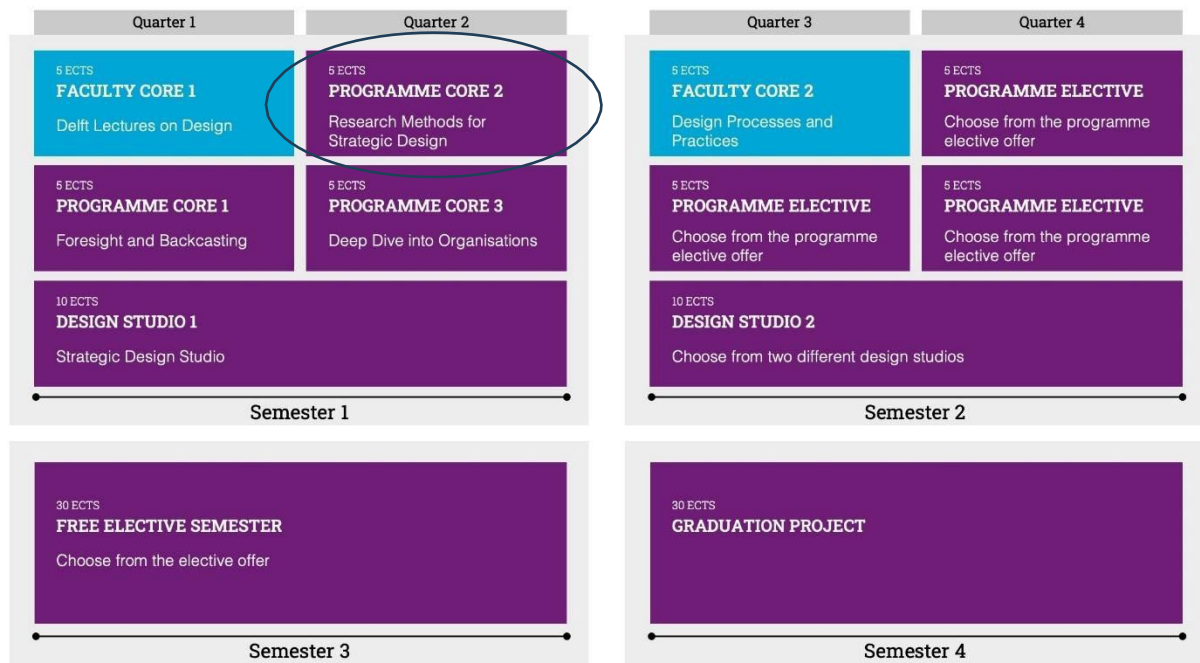
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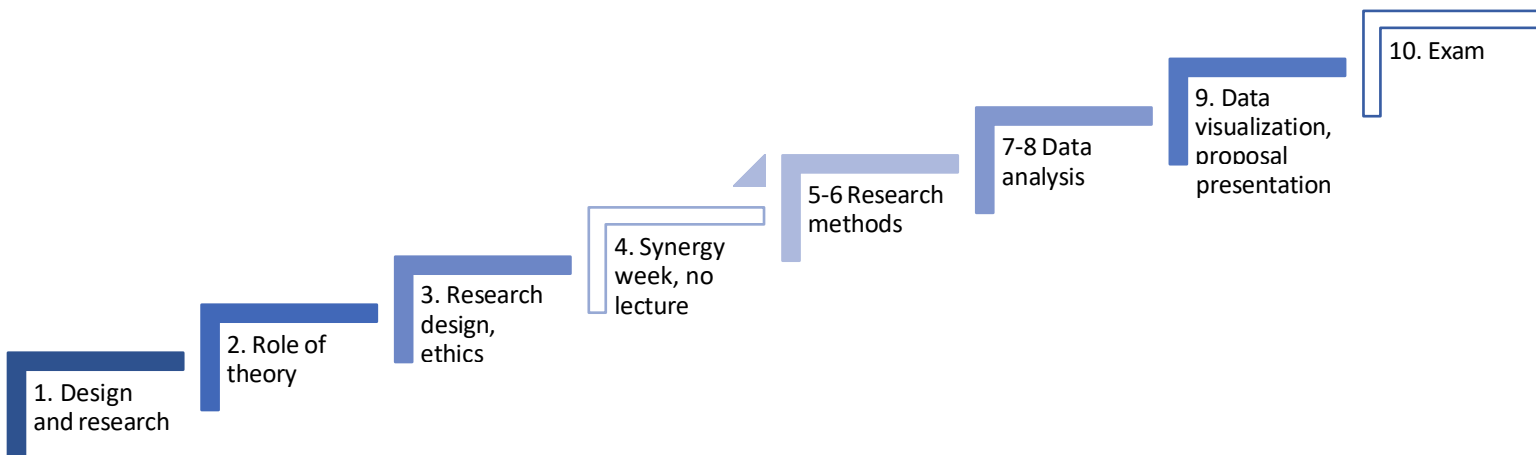
Course description

- This 5-ECTs course is a Programme Core course in the Strategic Product Design Master programme, meaning that it is compulsory for those who are following this master's programme.
- The course aims to bring you to a higher level of research skills needed for good design. Its goal is to introduce the fundamentals of robust, reliable, and valid social scientific research related to strategic design and guide you through the process from topic selection to data presentation. You will learn the differences between research for/about/through design, how to use theories in research, how to create strong research questions, how to choose a fitting research design, how to define participants, how to design reliable research instruments, and finally, how to collect, analyse and present data. You will practice the learned material by concrete assignments. These research skills will become handy when performing your graduation process at the end of your Master's study.
- The course will cover qualitative and quantitative academic research methods for the two key phases of innovation in which strategic designers operate, namely the fuzzy front end and the muddy back end. In particular, the qualitative part will cover interview techniques, focus groups and ethnography applied to research topics relevant to strategic design research projects (e.g., drivers of smart products adoption, organisational and personal drivers in sustainable transitions, understanding stakeholders' needs in healthcare ecosystems). Besides this, the quantitative part will focus on building reliable surveys for research topics relevant to the muddy back end (e.g., market introduction of smart projects, concept evaluation, tool probing). The course will put particular emphasis on creating solid arguments through research data by taking validity, reliability, generalizability and research ethics into account.
- Every week, there are two hours booked for lectures and two hours for working on guided assignments. The presence in the first lecture is compulsory. We strongly advise being present during the lectures and the guided assignments as well, especially during the peer review sessions, for optimal learning. The course is based on various didactic methods. You will need to read parts of the course book before the lectures, and we will discuss some essential aspects of these (Flipped classroom), receive research cases related to the weekly topics from the guest lecturers and apply your knowledge by doing the guided assignments (Prepare, Participate & Practice). Your active participation in discussions is expected, while preparations for the lectures are strongly recommended to avoid a last-minute rush before the exam.
- This course provides possibilities for making choices. You can choose from research topics offered by the course lecturers, work on those during the course, and prepare a detailed research proposal.
- In Q4, you can choose from the elective Quantitative and/or Qualitative Research Methods courses to deepen your research skills and to perform actual research projects.

Place of course in the curriculum



Course outline



If you registered for this course, you must be present during the first lecture. If you cannot be present during the first lecture for any serious reason, please get in touch with us via the RMSD email address. Otherwise, you will lose your right to participate in the course any further.

Staff

- Lecturers: Eva Kalmár, Judith Rietjens, Ellis van den Hende, Suzanne Hiemstra-van Mastrigt and Giulia Granato
- Teaching Assistants: Heimin Kang and Avanti Deshpande
- Course email: rmsd-ide@tudelft.nl

Course materials

- The course book is *Gjoko Muratovski's Research for Designers: A Guide to Methods and Practice*. You will need to read chapters from this book. Please make sure you have it or rent it digitally via [Vitalsource](#).
- Other readings and online material are provided on Brightspace.

Learning objectives

By finishing this course, you can

- LO1: create a research plan and justify the methodological decisions by describing the importance, benefits, and limitations of different research designs in the context of strategic design.
- LO2: identify valid, ethical, and reliable research methods and incorporate these issues into the research design.
- LO3: use theories in the various phases of the research process.
- LO4: apply basic quantitative and qualitative methods to the given research context and perform a fundamental analysis of qualitative and quantitative research data.

Course structure

Week 1	12 th November
Topics of the week	Introduction to the course The Relationship between Design and Research, Research through Design
Lecture	8.45-9.30 9.45-10.30
Guided assignment	Collecting research methods used for design Read the research topics
Self-study	Choosing a topic, read p56-57 from book for next week

Week 2	19 th November
Topics of the week	Role of theory in Research and Design
Lecture	8.45-9.30 9.45-10.30
Guided assignment	Literature search, collecting theories already learned
Self-study	Read Chapter 4, Research Essentials (p52-70) from the book – 30 minutes

Week 3	26 th November
Topics of the week	Research design, Research question and Ethics
Lecture	8.45-9.30 Guest lecture Ellis 9.45-10.30 Judith Rietjens van den Hende
Guided assignment	Judging RQs, coming up with criteria for good RQs Creating your research questions Peer feedback on RQ
Self-study	For week 5 Read Chapter 7, Quantitative research (p139-196) from book – 1h 30 min Revise your RQ based on the feedback

Week 4	3 rd December	NO ACTIVITY
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Week 5	10 th December
Topics of the week	Qualitative and Qualitative Research methods
Lecture	8.45-9.30 Guest lecture Guilia 9.45-10.30 Guest lecture Suzanne Granato Hiemstra-van Mastrigt
Guided assignment	Operationalisation, Creating instrument
Self-study	Read Chapter 5, Ethnographic research (p80-101) and Chapter 6, Qualitative research (p108-131) from book – 1h 30 min

Week 6	17 th December
Topics of the week	Qualitative and Qualitative Research methods, peer feedback on methods
Lecture	8.45-9.30 9.45-10.30
Guided assignment	Creating instrument, Peer feedback on methods
Self-study	Watch videos and read materials on Brightspace – 1h 30 min

Christmas Holiday

Week 7	7 th January	
Topics of the week	Qualitative data analysis	
Lecture	8.45-9.30	9.45-10.30
Guided assignment	QUAL analysis In computer room, Using AtlasTi	
Self-study	Watch videos and read materials on Brightspace – 1h 30 min	

Week 8	14 th January	
Topics of the week	Qualitative data analysis	
Lecture	8.45-9.30	9.45-10.30
Guided assignment	QUANT analysis, In computer room, Using SPSS	
Self-study	Read again p68-69 from the book about research proposals and the assignment description, download and fill in assignment form - 1h 30 min	

Week 9	21 th January	
Topics of the week	Data visualization Peer feedback on the proposal	
Lecture	8.45-9.30	9.45-10.30
Guided assignment	Peer feedback on research plan Finalizing research plan	
Self-study	Finalizing the proposal	

Week 10	27 th November	EXAM
	28 th January	ASSIGNMENT DEADLINE

Assessment

The lecturers will assess whether you have reached the learning objectives of this course through two summative assessments:

1. an individual assignment, which is a detailed research plan
2. and an individual written exam.

This course also offers formative assessments in the form of peer reviews, planned for weeks 3, 6 and 9. During the peer review sessions, you will give feedback to and get feedback from two students following this course. Formative assessments do not count towards the final mark and are not compulsory.

Individual Assignment

Please write a detailed research project plan, including a description of the research strategy, methods, and reflection regarding validity, reliability, and ethical aspects, by filling out the Research Methods for Strategic Design Course Proposal Form. Please attach the created research instruments, such as questionnaires, interview setup, observation protocol, or a detailed stepwise description of any other instrument, to the appendix. Please also add the filled-in ethical checklist to the appendix.

Please fill in all elements in the form, and adhere to the word limit given in the different sections of the Proposal Form. You can add the attachments to this form or upload them separately to Brightspace. Word documents and PDFs are accepted as document types for this assignment.

This is an individual assignment. All handed-in assignments will be subject to a plagiarism check. Any similarities with other proposals will be detected and taken seriously. Although not preferred, you are allowed to use generative AI as long as you reference it correctly and include the prompts you used. Please be aware that you need to explain the choices you made based on arguments, and AI is not reliable for coming up with factual arguments.

This assignment is compulsory and will be graded. The grade will count as 50% of the final grade for this course. Only assignments uploaded to Brightspace will be graded. The deadline for uploading the assignment is January 28th, 2025, at 12:00. If you fail to meet the submission deadline, your work will not be assessed. Requesting a deadline extension is only possible one week before the deadline or in very exceptional situations. Please always contact the course email address. Please find the assessment criteria on Brightspace.

Exam

An individual written exam will test your understanding and application of the research methods knowledge. You are expected to know the parts of the course book that were handled during the course, the lecture materials, and the extra readings.

Calculation of the grade

The individual assignment and the individual exam are both assessed with a mark rounded off to one decimal place. The results of these summative assessments are taken into account when determining the final mark for the course. In doing so, the following applies:

- The final mark for the course is only calculated if at least a 5.0 is obtained for both the exam and the individual assignment. If this is not the case, the final mark 'NVD' (= *niet voldaan*, fail) is registered in OSIRIS.
- If you meet this minimum requirement, the final mark can be calculated. For this calculation, both assessments count for 50% of the final mark. The final mark will be rounded up to a half or whole mark, in line with the faculty's rules for rounding up marks. If the final mark is 6.0 or more, you have passed the course.
- If your final mark is lower than 6.0, you have the right to an additional opportunity to finish the course. If you failed the exam or want to achieve a higher mark, the resit exam is offered during the next exam period, on April 15th, 2024. Please check "My timetable" for potential changes! Suppose you obtained a mark between 5.0 and 5.9 for the individual assignment. In that case, you can rewrite the research plan, taking into account the feedback you received from the lecturers, and submit the new version no later than the 15th of April, 2024. With this latter additional opportunity, you can upgrade your mark for the individual assignment to a maximum of 6.
- If you have not passed the course but passed either the exam or the individual assignment, the partial mark for that part remains valid in this academic year (in 2024/2025). On 31 August 2025, any partial mark that has been obtained will expire. However, if the content and form of the course will not change in the 2025/2026 academic year, the interim assessments for which a mark of 6.0 or higher has been obtained can be extended. These extended marks will be entered into OSIRIS at the start of the next course and will have a result date that is the same as the first day of the term in which the course starts. A partial mark can only be extended once.

After the mark for the project plan has been published, you have the right to discuss your assessed work within 20 working days. Please contact the course email address to make an appointment.

Suspicious of any form of [fraud](#) will be reported to the Board of Examiners. Should fraud be detected, no result for this course will be recorded in any instance, and the Board of Examiners will investigate the case and may take measures.