



**KTH Architecture and
the Built Environment**

COURSE INFORMATION – PhD Course

Decision Theory & Decision Analysis (AG3006)

December 2017 – May 2018 (7.5 ECTS)

**Division of Urban and Regional Studies
School of Architecture and the Built Environment
KTH Royal Institute of Technology**

Course responsible teacher: Associate Professor Jonathan Metzger
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Course assistant: Åsa Callmer
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General description

This course provides an introduction to decision analysis as it is currently practiced within the critical social sciences. Students in the course will gain a nuanced understanding of established approaches to the analysis of decision making, as well as recent developments in the field. The course introduces a number of key themes in decision theory and also provides opportunities for students to relate this knowledge to their own areas of interest and a basic ability to apply the discussed theories in an analysis of their own research materials.

The course primarily focuses on the application of descriptive analysis of decision making in planning and policy processes within variegated organizational, political and cultural contexts. However, it also more briefly introduces the students to classical normative decision theories, as well as analyses of decision making from the

perspective of the individual. Some of the key themes in the course relate to decision making rationality, rules of decision making, power in decision making, negotiations, complexity and ambiguity, ethics of decision making and decision analysis, tools for decision making and decision engineering. A carrying theme in the course is also sustainability aspects of decision making, which will feature recurrently in the course activities. Throughout the course, these themes function as bases for developing applied analyses of concrete cases of decision making.

Course objectives & learning outcomes

The course will provide participants with a broad and multi-dimensional understanding of decision making processes based upon established and emerging key approaches within the social sciences. Participants will further gain the ability to practically apply these perspectives to the analysis of concrete episodes of decision making. After completing the course participants will also be able to discuss and problematize decision making situations from the perspective of their ethical and sustainability aspects.

After successfully completing the course, participants will be able to:

- Critically discuss and comparatively assess the contextual relevance of classical and contemporary social scientific theories of decision making
- Apply the presented theories of decision making in the analysis of real-life cases of decision making within planning and policy processes
- Analyze how diverse formal and informal contexts influence how decision making processes unfold
- Problematize how ambiguities, complexities and power relations affect decision making processes and their outcomes
- Demonstrate and discuss ethical challenges and dilemmas associated with decision making processes
- Analyze decision making processes from the perspective of sustainability

Course design

The course is primarily based upon the participants' **individual essay** in which the theoretical perspectives presented in the course literature are applied in a thorough analysis of a decision making process of their choice ('case'). Regular seminar **assignments** will function as a support in the development of these analyses, as well as

recurrent **seminars** in which the case analyses-in-progress will be presented and discussed. **Lectures** and **workshops** provide broadened perspectives on the course themes. The finalized case analyses will then be presented for feed back from the course teacher and fellow participants in a **final seminar**.

Literature

Main course book:

March, J.G. (2009 [1994]) *A primer on decision making: how decisions happen*. New York: Free Press. [Approx. 250 p.]

Additional readings:

Brunsson, N. (2007) *The consequences of decision-making*. Oxford: Oxford University Press. [Approx. 100 p.]

Thaler, R. H. & Sunstein, C. R. (2009). *Nudge: improving decisions about health, wealth, and happiness*. Rev. and expanded ed. New York, N.Y.: Penguin Books. [Approx. 150 p.]

In addition to this the invited lecturers will recommend background reading suggestions of around 50 pages per occasion. These will be made available at the start of the course.

Examination

The examination will be based on 1) active seminar participation; 2) completion of seminar assignments; 3) completion of individual assignment. The course is graded Pass/Fail. Any absence from mandatory course activities or failure to deliver assignments according to deadline will demand compensatory work.

How to apply

Application by e-mail to the course assistant (asa.callmer@abe.kth.se). Please send your application as soon as possible and no later than the 1st of December.

Applications from doctoral students at all universities and higher education institutes are welcomed – but please be aware that the number of course participants is limited, and that enrolment into the course cannot be guaranteed. Course fees will not be charged.

Contact: Åsa Callmer , Div. of Urban & Regional Studies, KTH.

Tel.: 08-7909259, E-mail: asa.callmer@abe.kth.se

Additional course details

The purpose of the overall course design is to generate a coherent structure for a cumulative learning process in which the participant step-by-step acquires the skill to conduct a nuanced and context-sensitive descriptive analysis of decision making processes. Integration of various learning activities is achieved with the help of the following elements:

Teaching activities: Are focused to five main 'classroom weeks'. Each classroom week concludes one course theme and introduces another. In between classroom activities students will be required to perform a substantial amount of individual work in the form of reading, completing assignments and commenting upon other course participants' work.

Content: The main learning content of the course is structured in four themes, each in sequence focusing on a central topic within the analysis of decision making according to the structure of the main course book. Each theme is introduced with two learning activities (lectures/workshops) and concludes with a case analysis seminar.

Main course book: The central theoretical perspectives on decision making presented in the course are based on the content of *A primer on decision making: how decisions happen* by James G. March. Each course theme corresponds to one or two chapters in this book.

Case-focus: Participants are provided with the opportunity to continuously apply and test the relevance of the introduced theories of decision making on a case of their own choosing. The development of the case analysis is a continuous and carrying element of the course.

Preparations for the case work: In preparation for the first seminar participants will complete and submit a short description of the case they wish to work with in the course (see further instructions below).

Development of the case work: Throughout the course the participant will progressively add layers of analysis to the chosen case with the help of the course literature and learning activities. Guidance for the development of the case analysis will be provided by the formulation of the seminar assignments.

Seminars: The seminars provide the participants with peer and teacher feedback on how they apply the literature in their own case analyses, as well as an opportunity to raise critical questions regarding the course literature and its practical application. Each seminar focuses on a particular set of issues and theories that are directly connected to some specific theme within the course.

Final seminar: The final seminar in the course will be centered on the participants' presentation of crucial aspects of their own case analyses, followed by feedback and open discussions of each presentation. The purpose of the final seminar is to provide a forum for critical reflection on both the participants own work and the overall content of the course, focused on the applicability and relevance of the presented course content.

Lectures and workshops: The purpose of the lectures and workshops is to further open up and develop the course themes, further deepening the knowledge content of the course and/or introducing aspects of these themes that the course book does not cover adequately. Participation in lectures is non-mandatory but encouraged.

Course management: The course responsible teacher will be present at all the mandatory course activities and will actively safeguard the consistency of the course agenda by introducing the course themes and continuously discussing how the various course components interrelate. Practical questions regarding course management are primarily to be addressed to the course assistant, Åsa Callmer, asa.callmer@abe.kth.se

Course Plan

Course start: basic information

20171214 (Thursday) 10.30-11.30

Location: Seminar Room 4055, Floor 1, Drottning Kristinas väg 30

Purpose: To present the basic course design and provide an opportunity for course participants to ask questions regarding the preparations for the first seminar (assignment/case selection). Participation in this activity is optional/non-mandatory, however – this activity signals the start of the course, and all participants should at this point initiate course activities such as reading and working on their first assignment.

Preparations: Read the instructions for choosing and describing your case (these can be found further below in this document).

Introduction seminar & case presentations

20180130 (Tuesday) 9.30-11.30 and 13.00-15.00

Jonathan Metzger

Location: Seminar Room 4055, Floor 1, Drottning Kristinas väg 30

Purpose: To briefly presented the design and content of the course; to discuss participants' expectations on the course and prior understanding of the subject area; to provide an opportunity for participants to present and receive feedback on their choice of case.

Preparations: Reading of March "Preface"; Brunsson, p. 1-49. Hand-in case presentation (instructions below), no later than the 15th of January. Prepare brief oral comments on two other participants' hand-ins (further instructions will be distributed).

Theme1: Classical theories of decision making – rationality and rule following

2018-01-31 (Wednesday) 10-12 and 13-15

Lectures: the foundations of decision theory from a philosophical perspective

Sven-Ove Hansson

Location: Seminar Room 4055, Floor 1, Drottning Kristinas väg 30

Purpose: Provide an introduction to basic philosophical perspectives on decision theory and decision analysis

Preparations: Background readings will be distributed in advance.

2018-02-20 (Tuesday) 13.00-16.00

Case analysis seminar 1: rationality and rule following

Jonathan Metzger

Location: Seminar Room 4055, Floor 1, Drottning Kristinas väg 30

Purpose: Provides an opportunity for students to receive feedback on their course assignment relating to the analysis of their case from the perspective of rationality and rule following, and to raise critical issues regarding the course literature.

Preparations: Reading of March chps. 1 and 2. Hand in seminar assignment no later than the 14th of February. Prepare brief oral comments on two other participants' hand-ins (further instructions will be distributed).

Theme 2: Multiple actors and power relations in decision making processes

2018-02-21 (Wednesday) 9.00-11.00

Lecture: perspectives on power relations in decision making processes

Nazem Tahvilzadeh

Location: Seminar Room 4055, Floor 1, Drottning Kristinas väg 30

Purpose: Provide a broad introduction to issues regarding power relations in decision making processes

Preparations: Background readings will be distributed in advance.

2018-02-23 (Friday) 9.00-12.30

Lecture/workshop: negotiations in decision making processes

Göran Cars

Location: Seminar Room 4055, Floor 1, Drottning Kristinas väg 30

Purpose: Provide the participants with an opportunity to learn and apply ideas concerning negotiations and cooperation between diverse actors in decision making processes

Preparations: Background readings will be distributed in advance.

2018-03-27 (Tuesday) 13.00-16.00

Case analysis seminar 2: actors and power relations

Jonathan Metzger

Location: Seminar Room 4055, Floor 1, Drottning Kristinas väg 30

Purpose: Provides an opportunity for students to receive feedback on their course assignment relating to the analysis of their case from the perspective of actors and power relations, and to raise critical issues regarding the course literature.

Preparations: Reading of March chps. 3 and 4. Hand in seminar assignment no later than the 14th of March. Prepare brief oral comments on two other participants' hand-ins (further instructions will be distributed).

Theme 3: Complexity and ambiguity in decision making processes

2018-03-28 (Wednesday) 10.00-12.00

Lecture: the complex decision making process concerning the Stockholm Bypass

Lena Norberg

Location: Seminar Room 4055, Floor 1, Drottning Kristinas väg 30

Purpose: Provide a discussion of complexities and ambiguities in decision making processes regarding infrastructure investments

Preparations: Background readings will be distributed in advance.

2018-04-09 (Monday) 13.00-15.00

Lecture: complexity and ambiguity in the formulation of global sustainability goals

Måns Nilsson

Location: Seminar Room 4055, Floor 1, Drottning Kristinas väg 30

Purpose: Provide a discussion of complexities and ambiguities in decision making processes regarding the formulation of global sustainability goals

Preparations: Background readings will be distributed in advance.

2018-04-24 (Tuesday) 13.00-16.00

Case analysis seminar 3: complexities and ambiguities

Jonathan Metzger

Location: Seminar Room 4055, Floor 1, Drottning Kristinas väg 30

Purpose: Provides an opportunity for students to receive feedback on their course assignment relating to the analysis of their case from the perspective of complexities and ambiguities, and to raise critical issues regarding the course literature.

Preparations: Reading of March chp. 5 and Brunsson chps. 7 and 8. Hand in seminar assignment no later than the 16th of April. Prepare brief oral comments on two other participants' hand-ins (further instructions will be distributed).

Theme 4: Tools and methods for decision making, and their ethical implications

2018-04-25 (Wednesday) 9.30-11.30 and 13.00-15.00

Workshop: Tools for decision making

Elisabeth Ekener & invited guests

Location: TBA

Purpose: Provide an introduction to some commonly used decision support tools, such as CBA (cost-benefit analysis), MCDA (multi-criteria decision analysis), future studies and others, in a 'conversation' format that provides participants with the possibility for interactive discussions with topical experts.

Preparations: Background readings will be distributed in advance.

Final examination seminar

2018-05-29 (Tuesday) 9.30-15.30 and 2018-05-30 (Wednesday) 9.30-12.30

Jonathan Metzger

Location: Seminar Room 4055, Floor 1, Drottning Kristinas väg 30

Purpose: Provides a forum for critical reflection on both the participants own work and the overall content of the course, focused on the applicability and relevance of the presented course content.

Preparations: Read March chp. 6 and Thaler and Sunstein, "introduction" and chps. 1-5 and 16-18. Hand in your individual essay no later than the 16th of May (further instructions to follow). Prepare a 15 minute oral presentation of your case and brief oral comments on two other participants' hand-ins (further instructions will be distributed).

Describing your case study

The case study will be used throughout the course, and is an essential element in the learning process. Therefore, we recommend you to put effort into developing a good framing of it. It is furthered recommended that you choose it from your own area of research work, as the final text you are going to write in the course then might be directly or indirectly used in your cover essay (or monograph). However, it is not essential for the learning process in the course to pick the case from your work.

Any case that can be sufficiently described according to the criteria listed below will enable your learning. It can be anything from a complex decision making process relating to a major infrastructure investment, such as a new railway line or bridge, to more mundane decision making situations, such as individual consumer choices ('should I take the car today or not?'). However, independent of the scale of the process, it must be a situation that you are able to grasp contextually, i.e. not just an imagined generic situation understood from the perspective of a single decision actor, but a situation that can be placed in a real cultural, political and geographical context. Thus, if you choose to focus on e.g. the decision making situation 'should I take the care today or not', you also need to position this decision as a situation pertaining to this choice of e.g. 'a middle-aged, full-time employed, Swedish woman with children living in a suburb without commuter train connection', or – even better – the decision of a specific woman, in a specific, named, suburb. The more concretely the situation is specified, the easier it will be for you to make an interesting analysis of the case.

It is wise to pick a case that you are reasonably familiar with. As the case will be analyzed from different decision-making perspectives, you need to have some prior understanding of the case. Should you choose something rather new to you, you will have to put additional effort, on top of what is expected from course related tasks, to achieve understanding of the case and be able to analyze it in light of the different perspectives.

To help you formulate the case, please answer each of the following questions in order using 2-3 pages in total:

1. Choose a descriptive name for your case
2. Describe the general context of the case: when and where does this decision making process occur?
3. Describe the situation of choice involved; a decision must be made regarding some course of action, and there are some alternatives/options to be considered. What does the decision concern? What is the background to the decision: why does it have to be made? What are the alternatives/options that are considered, and why? Are you aware of any other alternatives, not considered?

4. Briefly describe the actors that are affected by, and affecting, the decisions eventually made. Who is directly involved in the process? Who is indirectly involved or affected by the decision? Why are the actors that are directly involved engaged in the process? Are there actors who would like to be involved who are not?
5. Is the outcome of the decision making process known yet? If so, what is your impression of what happened and why?

Submit by e-mail to Jonathan Metzger, no later than the 15th of January. Also be prepared to offer oral comments on two other participants' hand-ins (further instructions will be provided).