"Project Scoping with AI Assistance"

These two, web-based, short courses introduce conceptual modeling tools to promote system understanding when dealing with complex issues, such as societal resource management where multiple disciplines, stakeholders and processes are involved. In the introductory course, we will use problem-based learning to identify and relate critical variables within the system. Following this, scenario support modelling can provide decision support, especially regarding feasible project opportunities, appropriate methods and data needs, i.e. "project scoping" (see figure on next page). Using AI to strengthen system modeling in this first course (A) is favorable and will be introduced, but it is the modeling structure and manual treatment of the case studies that will be stressed.
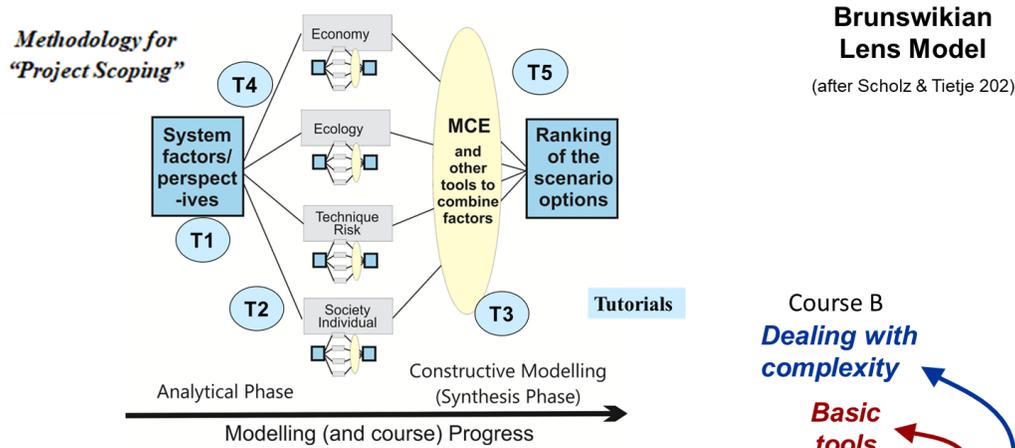
On the other hand, the second, complementary course (B) will give greater focus on AI assistance in project scoping course. Complex issues often require multidisciplinary and multi-sectoral solutions. Since project groups do not often reach this diversity, AI can help fill the gaps. AI can assist in each modeling step - from brainstorming to system analysis and decision support, as well as data-based verification of modeled scenarios. A human-centered AI perspective can also facilitate transparent information transfer in all directions and help recognize both benefits and risks. Using the same conceptual modeling approach, knowledge of AI tools will be mainly obtained by hands-on, AI co-modeling of the project scoping steps, especially when adding descriptive detail, data and perspectives (e.g. steps 4 & 5). AI use for various case studies will be discussed, illustrating the benefits, risks and user controls that need to be adapted for specific systems and goals (AI for project scoping).

The general approach is applicable to most any type of problem and within a range of disciplines. Research, educational and societally applied collaboration can be facilitated by case-study modeling. Considering the diversity of applications areas and the specificity of each individual case study, the methodology intends to provide general but adaptable procedural guidance for initial project development. The short courses will be followed by 1-2 focused workshops in May, where the case studies and AI applications will be presented and discussed, hopefully with good representation from stakeholders related to the diverse case-study issues and future implementation.

These are very much "hands-on" courses, and the participants are expected to actively get involved in the development of a case study related to their own interests or separately proposed. Mentors/advisors with experience and research interest for the case studies will assist. It is envisioned that project scoping can lead to thesis ideas and research project proposals. Similar and very successful project-scoping activities were completed in 2022, 2023, 2024 and 2025, and we will build upon this experience.

These courses can be followed separately or jointly, although the introductory course is strongly recommended for orientation. Individually, the courses are considered equivalent to 2 ECTS credits each, which can be increased to 4 with oral and poster presentations. Certificates of participation and completion will be given, but credits should be coordinated by the individual home institutes. Advanced training for staff, which would involve both theory and group advising and evaluation, can also be possible within some partner institutes.

For more information and registration contact Rodney Stevens, stevens@gvc.gu.se
Project and course website: https://kermitcooperation.wixsite.com/platform
Webinar site: https://gu-se.zoom.us/my/rodneystevens

Methodology for "Project Scoping"

Brunswikian Lens Model

(after Scholz & Tietje 202)

Modeling Stepts/Tutorials

1. System Sketch – defining and describing the system
2. System structural analysis – studying the internal relationships
3. Multi-criteria evaluation – predicting the impact of the variables
4. Functional Facies Classification – subdividing and simplifying complex systems
5. Risk Ranking – predicting relative impact in complex systems

Course B
Dealing with complexity

Basic tools
Course A

Schedule - 2026

Webinars will be 14.00 – 15.30 EEST (13.00-14.30 in Sweden).

Course A – Mainly Tuesdays, Course B – Mainly Wednesdays

	"Project Scoping" - Short Course A
7/4	**Introduction to both courses (A – *"Project Scoping"*, B – *"AI for project Scoping"*)**
9/4	**Step 1. "System Sketch" examples (step 1).**
14/4	**Step 2. System structural analysis (theory and examples).**
16/4	**Step 3. Scenario Modeling for Decision Support (e.g. MCE).**
12/5	*Case-Study Workshop (both courses)*
	Schedule and content to be announced later
14/5	*AI Workshop*
	Schedule and content to be announced later

	AI for Project Scoping" - Short Course B
21/4	**Introduction to both courses (A – *"Project Scoping"*, B – *"AI for project Scoping"*)**
23/4	**Step 4. Functional Facies (theory and examples) for modeling scenario details.** AI discussion (Co-modeling structure and prompts, AI ethics).
28/4	**Step 5. Risk Analysis / Decision Support related to case-study goals.** AI discussion (testing robustness of models).
30/4	**Integrating AI in case-study scenarios and their implementation (e.g. using system game models or stakeholder AI agents)** AI discussion & planning for case-study presentations.
12/5	*Case-Study Workshop (both courses)*
	Schedule and content to be announced later
14/5	*AI Workshop*
	Schedule and content to be announced later