MUO-E8016 Knowledge-Making for Sustainability

Syllabus, amended and uploaded 16.04.2019

Teachers

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with Marko Keskinen (marko.keskinen@aalto.fi)

17.4. - 22.5. (except 1.5.) 9:15-12:00 in Väre Lecture Room F101

Note, staff will try to answer emails as best they can, but the best way to catch them will be before and after teaching sessions.

Course Content

This is an advanced studies course of 2 ECTS and is compulsory for all Master's degree students of Creative Sustainability.

The course explores forms of knowledge used in sustainability debates. After the course, students will be able to better plan and argue for their own research activities within Creative Sustainability and understand the role of knowledge in promoting sustainability more generally. It offers:

• An overview of different forms of sustainability-related research and their implications.
• An understanding the role of knowledge in policy and decision-making.
• Practice in examining how research knowledge relating to sustainability is created and contested.

Learning takes place through lectures, reading and varied assignments in class and beyond, both individually and in groups. Successful course completion will also require attending and reflecting on two doctoral dissertations relevant to the study of Creative Sustainability.

Evaluation is based on participating across all the components of the course. Regular attendance is expected and 80% is non-negotiable to receive credit. The required submissions are:

- an individual assignment at the start of the course
- a 'learning passport' to collate your reflections on the doctoral dissertations (instructions will follow) at the end
- group work to be presented on 15.5.

If you miss more than one session, supply documentation of legitimate reasons.

The course is marked on a pass-fail basis. Bear in mind the following criteria of excellent or good work: clearly identifying and communicating issues around the production of knowledge; showing evidence of critical (including self-critical) thought; and, where applicable, showing familiarity with the course readings and lecture contents, and applying these thoughtfully to the task at hand. Students should include references to source material in work that is handed in.

Work load

15h Participating in course sessions
20h Reading course material
19h Group work and individual assignments (including attending doctoral defences).

Course materials, including selected readings and online links, will be provided. Check MyCourses for updates. Students should read assigned texts BEFORE each lecture and come prepared to discuss them.

IMPORTANT: Attending doctoral dissertations
Below is a copy of an email circulated to prospective students 2. October 2018 by Naoko, giving important guidance on preparing your learning passport:
Dear future participants of the Knowledge Making for Sustainability course starting in April. One of the tasks you'll need to complete is attend two relevant doctoral defences and document them in a learning passport.
…
Here is what you should do when you find an interesting defense that you want to use for the assignment.
Go to the venue in good time. They are rather formal events and the audience is expected to be there well in advance. You may not use electronic devices but you can take notes on paper. For the learning passport write up about 500 - 600 words about what you learned. This can relate to anything that you can reasonably understand under the heading "knowledge making for sustainability". That includes what the PhD candidate and the examiner (called "opponent" in the Finnish system) say during the event, but you can also include your thoughts on the format if you find that interesting. There will be further instructions on how to complete the assignment.

Information about upcoming doctoral examinations is available online at https://www.aalto.fi/listing/137421 and, for the University of Helsinki, at https://helsinginyliopisto.etapahtuma.fi/kalenteri/english.aspx. You need not confine your choice to your department.

SESSIONS
17.4. Introduction
24.4. Disciplinarities in practice (Marko Keskinen)
8.5. What kind of research for what kind of problems? (Mikko Jalas)
15.5. Knowledge making and democracy
22.5. Pathways to sustainability – roles for academic research

17.4. Introduction to knowledge making for sustainability

READING Henke, C. R. and T. F. Gieryn (2008) 'Sites of Scientific Practice: The Enduring Importance of Place', in Hackett, E. J. et al (eds) *Handbook of Science and Technology Studies*, 3rd Ed. (Read this BEFORE the session).

SUPPLEMENTARY READINGS (will be mentioned in the lecture but not required reading)

Grove, R. (1992) 'Origins of Western Environmentalism', *Scientific American*, Vol.267 n.1 p.42-47.

Funtowicz, S., and J. Ravetz (2003) 'Post-normal science. Internet Encyclopaedia of Ecological Economics.' *International Society of Ecological Economics (ISEE)*. http://www.isecoeco.org/pdf/pstnormsc.pdf

Pohl, Christian: Pius Krütl: Michael Stauffacher (2017) 'Ten Reflective Steps for Rendering Research Societally Relevant', *Gaia: Okologische Perspektiven in Natur-, Geistes- und Wirtschaftswissenschaften* · January 2017 https://www.researchgate.net/publication/315504388_Ten_Reflective_Steps_for_Rendering_Research_Societally_Relevant

TAKE-HOME ASSIGNMENT

On your own, in a library you have never used before spend 60 minutes learning to use an electronic resource with which you are not familiar. Note how much you can learn/achieve in that time. Write up and submit short report (1 side of A4 max).

24.4. Disciplinarities in practice – lecture by Marko Keskinen, Aalto Department of Built Environment

READING Cairns, G; G. Wright; P. Fairbrother (2016) 'Promoting articulated action from diverse stakeholders in response to public policy scenarios: A case analysis of the use of "scenario improvisation" method', *Technological Forecasting and Social Change*, 103 (2016) 97-108.

SUPPLEMENTARY READINGS Keskinen M (2010) *Bringing Back the Common Sense? Integrated approaches in water management: Lessons learnt from the Mekong*, Dissertation for the degree of Doctor of Science in Technology. Particularly pages 27-32, full text available at: https://aaltodoc.aalto.fi/handle/123456789/4822

Minkkinen, M. (2019). 'The anatomy of plausible futures in policy processes: Comparing the cases of data protection and comprehensive security'. *Technological Forecasting and Social Change,* https://doi.org/10.1016/j.techfore.2019.03.007.

8.5. What kind of research for what problems? Lecture by Mikko Jalas

READING Sachs, Wolfgang (1999) *Planet Dialectics*, chapter 7: 'The blue planet – on the ambiguity of a modern icon'.

SUPPLEMENTARY READINGS Hardin, G (1968) 'The Tragedy of the Commons', *Science, New Series*, Vol. 162, No. 3859: 1243-1248.

Ostrom, E. et al. (2009) 'A General Framework for Analyzing Sustainability of Socio-Ecological Systems', *Science*, 352: 419-422.

Millstone, E. (2015) 'Invoking "science" in debates about green transformations: A help or hindrance?', in Scoones, I., M. Leach and P. Newell (eds) *The Politics of Green Transformations.*

ASSIGNMENT in groups brainstorm and visualise the knowledge making landscape of an environmental problem. Details to follow.

15.5. Knowledge making and democracy

READING Polanyi, M. (1962) 'The Republic of Science.' *Minerva* 1 (1): 54–73.

SUPPLEMENTARY READINGS Nelkin D (1975) 'The Political Impact of Technical Expertise', *Social Studies of Science,* 5 pp. 35-54.

Jasanoff, S. (2012) *Science and Public Reason*. (An excellent collection of essays by a key figure in the debate) and (2016) *The Ethics of Invention.*

PRESENTATIONS, in class, of group work (posters).

22.5. Pathways to sustainability – roles for academic research, with Mikko Jalas

READING Miller, T.R., Wiek, A., Sarewitz, D. et al. (2014) 'The future of sustainability science', *Sustainability Science* 9: 239. https://doi.org/10.1007/s11625-013-0224-6

SUPPLEMENTARY READINGS Soini, Katriina, et al. "Universities responding to the call for sustainability: A typology of sustainability centres." *Journal of Cleaner Production* 170 (2018): 1423-1432.

Rau, H., Goggins, G., & Fahy, F. (2018). From invisibility to impact: Recognising the scientific and societal relevance of interdisciplinary sustainability research. *Research Policy, 47*(1), 266-276.

Geels F W, F Berkhout & DP van Vuuren (2016) Bridging analytical approaches for low-carbon transitions. *Nature Climate Change*, *6*(6), 576.

NOTE: Final assignment due 31.5: A 'learning passport' with commentaries on the doctoral defences you heard plus a short reflection (no more than one side of A4) about what the course readings have taught you about researching socio-technical change.