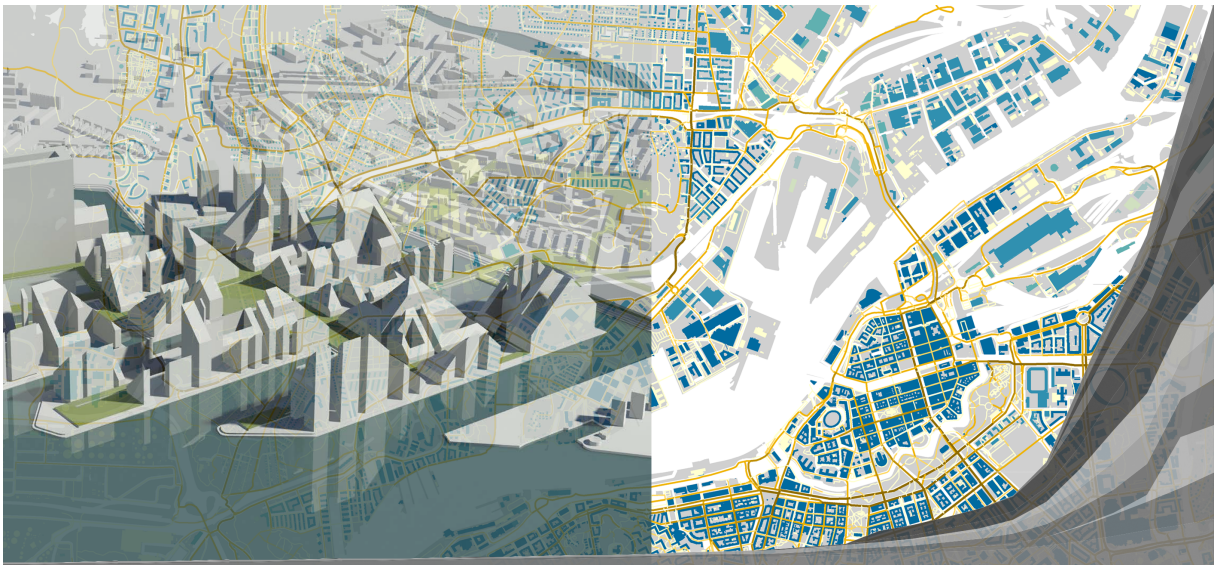
Course PM, ARK641, Master´s thesis preparation course 3p
Autumn semester, 2020

Direction Social Ecological Urbanism



This course will be a digital course.

Purpose, method and process

The purpose of the preparation course is to develop and finalize your project plan. under the guidance of assigned examiner(s) and supervisor(s). During the preparation course, you explore specific theories and design methods associated with social-ecological urbanism. This will help you to formulate your thesis project sharply based on an understanding how the urban environment affects human health and wellbeing, ecosystem services, economic activities, etc. We will help you to not only formulate the problem and design strategies, but also build on urban theories and methods to formulate a hypothesis and methods to evaluate your design strategies so that the project truly steers the development of cities in directions of greater sustainability and resilience. The use of advanced spatial analysis will for many projects be important and tutorials are available for those with no prior knowledge of GIS.

The final deliverance in the preparation course is a project plan.

Direction Social-Ecological Urbanism

This direction is an urban design and planning direction engaged in the form and structure of cities and how their design can be used to create urban environments that promote citizens health and wellbeing, but also increase biodiversity and reduce climate change impact. The understanding of the intriguing relation between the city

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as we design and materialize it and the urban life that it affords, is central for this direction.

The background for this direction is the dramatic urbanization trend with 70% of the world population that is expected to be living in urban areas by 2050. At the same time, cities consume almost 80% of the world's energy, produce more than 60% of greenhouse gas emissions and are generally associated with lower levels of physical and mental health. Furthermore, rapidly expanding cities are facing biodiversity losses, as well as other environmental threats. Although cities, in many ways, have contributed to current problems, they also have the potential, *if designed and planned well*, to contribute to sustainable development and human well-being.

The concept Social-Ecological Urbanism integrates two lines of thinking of the city as an ecosystem, dealing not only with designs for mitigating problems, but also with adaptation measures to enhance adaptive capacities in cities. Social-Ecological Urbanism looks for synergies between ecological and sociospatial systems, acknowledges the existence of conflicts between them and expands the systems' capacity, through design, to absorb shocks, utilize them, reorganize and continue to develop without losing fundamental functions and thus building resilience.

Content and structure thesis preparation course

- 7 October, 09.00-17.00, lecture and presentation
  - The examiner gives a short lecture
  - The students present their project idea and get feedback
- 14th of October 09.00-16.00, Individual work
- 21st of October, 09.00-16.00, Individual work
- 11th of November , deadline 09.00. hand-in for mid-critic on Canvas
- 11th of November , mid-critic
  - The students present their project plan and receive feedback
- 18th of November, 09.00-16.00, Individual work
- 18th of November, deadline 17.00, Hand in project plan
- 25th of November 09.00-16.00, Final presentation and feedback
  - The examiners have read the project plan and give feedback
- 9th of December, deadline 12.00, final hand-in for the course on Canvas
- 9th of December, deadline 12.00, final hand-in for initiating the MT term
  - Deliver final project plan and registration form
  - There will be a folder in the reception on the 3rd floor
- 13th of January, deadline 12.00, Deliver a final project plan for the exhibition
  - Starting the master's thesis term
  - There will be a folder in the reception on the 3rd floor

Submission

Canvas is used for all deliverances. As the course only has one Canvas page, please make sure you are uploading to the right thesis direction.

Specific requirements for direction Social-Ecological Urbanism
Besides a powerful title and relevant image or sketch, the choice for the type and scale of the project, the project plan should include the following:

- Problem description where especially the spatial dimension should be emphasized
- Background where the larger context should be described including knowledge gaps and relevance for practice
- General aim and specific purpose of the project (link to the ´problem description´ and ´background´)
- Delimitations (that is, what will not be addressed in the thesis)
- Theories, methods and tools that will be used
- Schematic drawings that provide an overview of your topic: spatial dimension of the problem and spatial strategies to address these problems based on theories or your own hypothesis
- Project references to clarify what kind of final product you have in mind
- Time schedule and students' background and skills, relevant to the project (related to theories, methods and analysis tools)

Evaluation criteria
Independent of the type and scale of the project, the project plan will be evaluated based on a clear description of the problem (including the spatial dimension of the problem), the knowledge gap, the research question related to that, the method you propose to help find an answer and finally, a hypothesis in the form of a proposed spatial solution. The thesis will be assessed by its design qualities, but especially the evidence base that is used for the design decisions or recommendations. This means that the thesis must give a well-argued spatial answer to the problem described where both theoretical and analytical arguments can be used to support design decisions.

The thematic focus can differ across projects but what connects them is that the proposed design solutions simultaneously support social-economic goals and ecological goals. For example, projects that propose densification in support of walkability should also take into consideration the negative impact densification might have on biodiversity. This will call for innovative spatial solution that combine densification with urban greening. What further connects the projects is the combined design-analysis approach where the role of architecture and urban design to support e.g. walkability or biodiversity is made explicit. We believe that such a research-based design is required to live up to the great expectations of cities to contribute to a more sustainable future. Research-based design supports design decision with empirical evidence, tests proposals using advanced spatial analysis to deliver designs that are both esthetically appealing but also perform as is aimed for.

Grading: Approved / not approved

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Suggested literature and projects

Scientific papers and books

Barthel et al. (2013). *Principles of Social-Ecological Urbanism*, KTH.
Berghauser Pont, M. and P. Haupt (2010). *Spacematrix. Space, density and urban form*, NAi Publishers.
Hillier, B. (1996). "Cities as movement economies", in *Space is the machine*, Cambridge University Press, Cambridge, UK, pp. 149-182.
Hillier, B. (2009). *Spatial Sustainability in Cities*, keynote lecture 9th Space Syntax conference.
Marshall, S and O. Caliskan (2011). "A joint framework for Urban Morphology and Design", in *Built Environment*, vol 37, No. 4, pp. 409-426.
Martin, L. & L. March (1972). "The grid as generator", in *Urban space and structures*, Cambridge University Press, Cambridge, UK, pp. 6-27.

Practice oriented reports

Legeby, A., Berghauser Pont, M., Marcus, L. (2015). *Dela(d) Stad – Stadsbyggande och segregation I-V,* (2015), KTH, Mistra Urban Futures, https://www.mistraurbanfutures.org/sv/publikationer/delad-stad-perspektiv-och-utgangspunkter
Berghauser Pont, M., Gren Å., Ahrné K., Marcus, L., A. Kaczorowska (2017). *Bee Connected – Ekosystemtjänsten Pollinering - Gröna Kopplingar för Resilienta Städer*, rapport från delprojekt inom forskningsprojektet C/O City, https://research.chalmers.se/publication/254355

Popular-scientific papers (in Swedish)

Berghauser Pont, M. (2020). Framtidens stad är både tät och grön, in ETC 1 juni 2020, https://www.etc.se/debatt/framtidens-stad-ar-bade-tat-och-gron
Marcus, L. and M. Berghauser Pont (2020). Teorier om stadsform för att mäta städer, http://alvstranden.com/wp-content/uploads/2020/05/FP02_Teorier_om_stadsform_for_att_mata_stader.pdf
Marcus, L. and M. Berghauser Pont (2020). Texter om stadsform, http://alvstranden.com/wp-content/uploads/2020/05/FP03_Texter_om_stadsform.pdf
Berghauser Pont, M. (2019). Munken som kan rädda vår stad, in Stadsbyggnad 2019:2, https://stadsbyggnad.org/2019/munken-som-kan-radda-var-stad/
Berghauser Pont, M., C. Caldenby, A-J. Klasander, O. Nylander (2018). *Tät blandstad passar inte överallt I Göteborg*, in: GP 7 januari 2018, https://www.chalmers.se/sv/institutioner/ace/nyheter/Sidor/Blandstad-passar-inte-overallt-i-Gbg.aspx

Direction faculty

This direction is led by the research group SMoG, part of the Urban Design and Planning division. See https://www.smog.chalmers.se.

Supervisors

Meta Berghauser Pont, Lars Marcus, Gianna Stavroulaki, Jorge Gil

Examiners

Meta Berghauser Pont, Lars Marcs, Gianna Stavroulaki