



ES/SO360 DESIGNING THE SUSTAINABLE CITY

DESCRIPTION:

The world is in search of sustainable cities - models of urbanism that can house, educate, and employ a growing share of the world's people, and meet their needs for breathable air, drinkable water, healthy food, as well as safety, community, and opportunity.

In some of these fields, Amsterdam is a global inspiration. Its model of human-powered mobility, in which cycling is the dominant transport mode, is almost unique among cities of its size in the world. Amsterdam is also a testbed for design thinking and experimentation in food production, building on the Netherlands' intensive, and capital-intensive, agricultural model. The city has a long history of fostering innovation, and providing political room to try out new ideas - and fail sometimes - in a way that exemplifies what Mariana Mazzucato terms 'the entrepreneurial state'.

At the same time, Amsterdam lies largely below sea level in a warming world. The Netherlands remains a high-income consumerist society, with a vast ecological footprint. Amsterdam, its largest city, contends with a persistent housing crisis, a cost-of-living crisis, and the kinds of pressures on public services that are now widespread across the high-income world. As the paintings in the Rijksmuseum depict in such memorable detail, a significant part of Amsterdam's wealth was extracted from enslaved and exploited human beings far away, especially in its colonies - a legacy that is still an open political discussion today. This unequal global order is intrinsic to the lifestyle that Amsterdammers enjoy, and the choices they have in how the city meets its needs, and reconciles the needs of its people with Amsterdam's place in the world.

On the level of national politics, while Amsterdam's electorate differs considerably from that of the nation as a whole, the Netherlands is - in common with many other European countries - on a trajectory that is likely to lead toward ever-tighter control over national and EU borders, as well as a far more restrictive policy towards people who cross borders, with and without documentation. Every one of these dynamics makes itself felt in the fabric of the city, and constrains or opens up a menu of design choices.

This course takes the city as a classroom, and explores design thinking and methods in order to come to a set of proposed solutions that are creatively presented and conceived, but rigorously argued and evidence-based. The course will engage with the global frameworks that provide a common language for talking about and quantifying concepts like *sustainability*, *equity*, and *justice*. More concretely, students will populate a toolbox of concepts, methods and models that will equip them, in groups, to define for themselves an interesting problem within a key urban 'system', such as the system for the provision of food, housing, energy, or mobility. In groups, students will work towards proposing a solution to this problem, using an interactive 'design studio' format. Put simply, the course tasks students with asking an objective and fully contextualised question (How can we design the sustainable city?), and providing a creative (but rigorously motivated) answer.

CREDITS: 3

CONTACT HOURS: 45

LANGUAGE OF INSTRUCTION: English

PREREQUISITES: None

ADDITIONAL COST: None

METHOD OF PRESENTATION:

The main outcome of this course is the challenge given to two or more student teams within the course group, to define a sustainability problem in one of Amsterdam's key urban systems. The student teams will then, over a period of weeks, produce and refine a creative solution to this problem, collaborating closely with the lecturer and peers in a design studio format. Class discussion of readings, fieldwork, and an iterative process of presenting one's work, and receiving and giving feedback on it, are important components of this course.

- **Design studio format:** This course makes use of a design studio format commonly employed in architecture and fine arts schools. The format is simple: every week, students, and later student groups, will present their work, highlighting progress from the week before, and identifying their priorities and challenges for the week ahead. Everyone, including the lecturer, will give feedback in turn. Students' ability to give critical, productive feedback will be taken into account in grading. The **studio time** in class is therefore very important - live interaction is essential. **Time outside the class** will, in principle, be limited to desk research (in the first part of the course, this will be replaced with a significant reading load), and whatever is needed to make the most of the next design studio session.
- **Field trips and fieldwork:** Amsterdam is the classroom for this course, and outside of guided field trips, students will be encouraged to immerse themselves in the city in order to observe, gather data, and reflect. Field trips led by the lecturer will take place, but the sequence in which they occur is subject to change in relation to external factors, including the weather and the capacity of external partners. Field trips will be discussed well in advance with students, especially in the event that they include travel costs (such as public transport tickets, bicycle hire, or entrance fees). Every effort will be made to keep these costs to a minimum.
- **Class discussion and reading in advance:** In the first part of the course, students are expected to read each week's texts in advance, to engage with any unfamiliar terms or concepts introduced in the text, and above all, to come to class prepared for wide-ranging, critical discussion of the texts. Well-reasoned, evidence-based disagreement with the texts is encouraged in class discussion, as is a critical appraisal of how circumstances and contexts may have evolved since a time of writing or publication. The lecturer may ask individual students to offer a definition or clarification of key concepts encountered in the readings, especially in the early part of the course, to ensure that foundational concepts (such as design thinking methods) are well understood. **Note:** students are discouraged from reading more than one week in advance of the course calendar. This is so that the reading syllabus can be adjusted if needed.
- **Readings and Moodle:** Moodle is the 'home' of this course. Course materials will be available there, including any revisions that may become necessary. If students have trouble finding any assigned reading, having tried the IES provider and their own institution's provider(s), they are invited to contact the lecturer as soon as possible.

REQUIRED WORK AND FORM OF ASSESSMENT:

- **Participation** – 20%, including:
 - Individual participation in design studio sessions, which may include written peer feedback
 - Individual participation in field activities
 - Groupwork skills within groups
- **Individual weekly assignments** – 10%, including:
 - Survey of concepts, survey of historical examples of enclosure and the commons, etc.
 - Individual contributions to the Toolkit
- **Team assignments** – 60%
 - Project proposal: 15%
 - Final Project: 40%
 - Final Presentation: 5%
- **Individual reflection essay** - 10%
 - This essay is **not** primarily a 'personal' reflection on one's subjective experience of the course. It is intended to be, and will be graded as, a conceptual and academic reflection on how concepts derived from scientific literature were framed and interpreted during the course, and during one's individual and group work, and on the successes and shortcomings of these contingent outcomes in light of the imperative to 'design the sustainable city'.
Basically, this essay asks:
 - How did the concepts and tools in this course equip you for the group project?
 - What were the important compromises or practical modifications that you made as you took these abstract concepts and applied them to a design problem?

Participation

- Participation is essential in this course. Students are required to engage with assigned materials, and to participate actively both in their team activities and in their discussions with other teams. A general participation rubric will be shared with students.
- **In particular, in the first part of the course, students will be assessed on their success in reading assigned texts, and their ability to discuss and reflect on these texts.**

Individual Assignments

- Students will be asked to complete several weekly individual assignments during the first part of the course, including a number of individual contributions to the Toolkit, which will be a shared resource (usually hosted in a shared Google doc or similar).

Group Project - overview

- The final project for this course will be done in two or more student groups consisting of at least 3 students each, depending on class size. It is a research-and-design project, meaning that it contains elements of analytical, objective research, which must be scientifically referenced and argued, as well as design elements which are subject to rigorous analysis and assessment, but also include a creative and subjective dimension.
- Before starting the final project, student teams will submit a **project proposal**. The proposal should present and define the problem that the team has identified, and justify the relevance and feasibility of a proposed solution to this problem. This proposal will be more objective in nature than the final project. Once the proposal is accepted by the lecturer (including any potential revision by students), students will start work on the final project. This project will be discussed in detail with the lecturer and fellow students every week, so that there is ample time to address challenges (including very practical issues of data collection and fieldwork)

as they emerge.

- The aim of the Group Project is to create a proposal for an improvement at one of three potential scales - the Amsterdam city-region, an Amsterdam neighbourhood, or a single building.
- This improvement can take any form - for example, a proposal for the development of physical infrastructure; for the implementation of a different process of public participation; or for a pilot project to test an innovation.

Group Project - timeline

- **Group formation.** At the start of the Part 2 of the course, students will be divided into two or more groups of equal size.
- **Groups start work on their project proposal.** Groups will work with the instructor, and with input from the other group(s), to formulate an idea about the design problem that they want to address. Their proposal will evolve into a report format, with academic citations and a bibliography, but also including visuals made by the group (hand drawings are especially valued for their clarity and concision).
- **The project proposals are returned by the instructor, with feedback and a grade, within one week.** Groups may be tasked with making adjustments to their proposal; these are usually minor, since the proposal has already been seen and discussed by the instructor and other group(s) through several iterations.
- **Groups start work on the project report.** After the proposal has been approved, groups have several weeks to work on their report. This will take the form of an academic text, as with the proposal, but will have an expanded design/creative component. The design/creative component should be understood as an expression of creative thinking that will receive critique; students should be ready to justify the choices and compromises that they have made, and will be graded on this. **NB:** The project report has an important **visual component**. Students will be strongly encouraged to create their own visuals to communicate their ideas, ranging from diagrams, to floor plans, to flow charts. Writing and drawing by hand will form a significant part of our class time, especially for rapid ideation and for clarifying concepts.
- **Students present their work in a final presentation.** The second-last deliverable for this course is a live presentation of the group's process, from the initial germ of an idea through to the proposal and report.

Rubrics will be provided to guide the students in completing their assignments, although the rubrics will leave space for originality and creativity. Grades will be awarded on the basis of the clarity and creativity of solutions, but also on the basis of the teams' ability to work together, and to exchange ideas. Collaboration, and adapting other teams' ideas to the local context, will be positively evaluated.

LEARNING OUTCOMES:

By the end of the course students will be able to:

- Identify the key systems of provision in Amsterdam
- Articulate a significant problem within one or more of these systems
- Articulate a solution to this problem in design terms
- Receive and provide detailed, actionable feedback in an iterative process
- Assess and compare levels of success and feasibility in existing attempts to resolve problems in urban sustainability

ATTENDANCE POLICY:

See the updated attendance policy for this course in Moodle.



COURSE AND CLASS STRUCTURE:

The course will have one three-hour period of time scheduled from 09:00 to 12:00 each week on Friday morning. **Field trips will take place within this period, as far as possible.** However, the possibilities of holding field trips outside of these times will be discussed with students in advance.

COURSE CONTENT WEEK-BY-WEEK

Class No. (Date)	Content	Assignments and Readings
PART 1 - CONCEPTUAL FOUNDATIONS		
#1 (7 Feb.)	Introduction to the course: review of syllabus and time planning, introductions, breakout sessions ('What do I want from this course? What do I have to offer this course?') What do we mean by 'design', 'cities', and 'sustainability'? Thinking at scales: the city-region / the neighbourhood and streets / the building	- Design - how do we identify 'design' as a practice? What are its possibilities, and its limits? How can we qualify 'good' and 'bad' design - or alternatively, how should design be characterised and assessed? Outcome - method: Creating an overview of the scope or window within design interventions are possible, in a given context. - Cities - how can we define 'the city'? Are there recognisable features common to cities through space and time? Are cities imagined communities, or administrative compromises, or are there - for our purposes - better definitions? Outcome - concept: Create a single working definition of 'the city', which will be constantly updated throughout the course. - Sustainability - what does it mean to be sustainable? Which framings and conceptions of this term are currently dominant in global and national politics, in economic and financial arenas, and in social and political movements? What kinds of contestation are now underway over what is 'sustainable'?
2 (16 Feb.)	FIELD TRIP: 'WHOSE AMSTERDAM?'	I propose to lead a walking tour of central Amsterdam, highlighting the most prominent tensions in the city, starting with who has, and who should have, access to it. NB: All field trip dates will be discussed with you in Class 1, to ensure that the greatest number of students can participate. There are important readings to be done for this week; they will be discussed during the field trip, and also in the following class session. Reading: Harvey, D. (2015). The right to the city. In <i>The city reader</i> (pp. 314-322). Routledge. Wijsman, K., & Feagan, M. (2019). Rethinking knowledge systems for urban resilience: Feminist and decolonial contributions to just transformations. <i>Environmental Science & Policy</i>, 98, 70-76. Feddes, F., de Lange, M., & te Brömmelstroet, M. (2020). Hard work in paradise. The contested making of Amsterdam as a cycling city. In <i>The Politics of Cycling Infrastructure</i> (pp. 133-156). Policy Press.

3 (23 Feb.)	UNDERSTANDING: A DEEPER DIVE INTO 'DESIGN'	- What are the possibilities of design as a method for making and remaking the city? Outcome: A survey of design as a city-(re)making tool in the student's home city, or a city of their choosing. What can 'design' do, and what can it not do? Where do design-led approaches tend to succeed, and where do they fail, or succeed in more limited ways? Individual results to be presented to the group in 'design studio' format. Reading: Julier, G. (2020). Urban designsapes and the production of aesthetic consent. In <i>Culture-Led Urban Regeneration</i> (pp. 29-47). Routledge. Roggema, R., & Yan, W. (2019). Developing a design-led approach for the food-energy-water nexus in cities. <i>Urban planning</i>, 4(1), 123-138. Hajer, M., & Bröer, C. (2020). We are here! Claim-making and Claim-placing of Undocumented Migrants in Amsterdam. <i>European Journal of Cultural and Political Sociology</i>, 7(4), 431-451.
4 (1 March)	UNDERSTANDING: A DEEPER DIVE INTO 'CITIES'	- What can the history of enclosure and the commons tell us about scarcity, abundance, and sufficiency in the city? Outcome: A survey in which students find, and present in a design studio format, one form of enclosure, and one kind of commons, in a city of their choosing. The lecturer will present examples from Amsterdam. Reading: Dietz, T., Ostrom, E., & Stern, P. C. (2003). The struggle to govern the commons. <i>Science</i>, 302(5652), 1907-1912. Jones, S. E. (2013). <i>Against technology: From the Luddites to neo-Luddism</i>. Routledge. Chapter: Introduction. - What does the history of the relationship between cities and technology tell us about the potential for cities (and their inhabitants) to critically choose one out of many possible futures? Outcome: An identification of 'hinge moments' in the history of the students' city of choice, in which a choice was made for one out of many possible technological (infrastructural, economic) futures. Lecturer will present examples from Amsterdam. Recommended listening: Tech Won't Save Us (podcast), Episode # , "How Cities Sell Themselves to the Tech Industry w David A. Banks", 1h01min

PART 2 - INTRODUCING THE GROUP PROJECT

5 (8 March)	INTRODUCTION TO GROUP PROJECT UNDERSTANDING: A DEEPER DIVE INTO 'SUSTAINABILITY' through five themes: WATER, ENERGY, FOOD, HOUSING and MOBILITY CONTEXT: UNDERSTANDING AMSTERDAM	The group project will be presented to students. Significantly, some details of this project will be presented for discussion and, potentially, modification, according to the group's motivation. Students will be asked to divide into 2-3 groups (depending on numbers) for the group project. Each group will be asked to choose one of the five themes, and then produce a project proposal within this theme. The project proposal is required to engage with a theme-related challenge in (greater) Amsterdam, define a design problem, and offer an outline for producing a design solution. The end of this contact session is the deadline for choosing a theme. Reading: van der Hoek, J. P., Strucker, A., & De Danschutter, J. E. M. (2017). Amsterdam as a sustainable European metropolis: integration of water, energy and material flows. Urban Water Journal, 14(1), 61-68. Covarrubias, M., Spaargaren, G., & Boas, I. (2019). Network governance and the Urban Nexus of water, energy, and food: lessons from Amsterdam. Energy, Sustainability and Society, 9(1), 1-11.
6 (15 March)	DOING: CREATING A TOOLKIT FOR 'DESIGNING THE SUSTAINABLE CITY' SCALE: THE CITY-REGION WORKING SESSION: GROUP WORK ON PROJECT PROPOSAL	- Understanding how to use best practices: creating a toolkit for understanding and doing 'design for sustainable cities' - methods, examples, concepts, pitfalls to avoid. Outcome: The entire student group is asked to collaborate on populating a single resource - such as a collaborative online spreadsheet - to create the richest possible toolkit of useful elements. Each contribution will be tagged by whoever created it, with attribution given for contributions by others. - The last hour of the session, at minimum, will be set aside for groups to work together on their group project proposals. Roggema, R. (2020). Designing the sustainable city. Designing Sustainable Cities. Chapter: 1. Chapters 5 and 6 are highly recommended, but not required. Dovey, K. (2016). Urban design thinking: A conceptual toolkit. Bloomsbury Publishing. This book consists of short chapters that explain single concepts - it should be skimmed as an example of a 'toolkit'. Students may also read individual chapters according to their chosen project theme.
7 (22 March)	DOING: DEFINING A DESIGN PROBLEM, PRODUCING A DESIGN SOLUTION SCALE: THE NEIGHBOURHOOD, THE BUILDING WORKING SESSION: GROUP WORK ON PROJECT	- The lecturer will present to the group a thinking process for defining design problems and solutions. Students will critically respond to this presentation, as well as to the examples presented in this week's (and previous) readings. Outcome: The group will come to a consensus on what it means to define a design problem and produce a design solution, and how this can be done in a way that is lucid, that takes account of time and other resources and

	PROPOSAL	constraints, and that rigorously explores and satisfies the need of the imagined 'client'. The last hour of the session, at minimum, will be set aside for groups to work together on their group project proposals. Reading: Readings may be defined with the lecturer in the previous session, according to the themes chosen by groups.
NO CLASS ON 29 MARCH DUE TO GOOD FRIDAY / GOEDE VRIJDAG		
8 (5 April)	FIELD TRIP: SUSTAINABLE FOOD, WATER, HOUSING AND ENERGY SYSTEMS IN AMSTERDAM	Field trip to sustainable urban farms in Amsterdam (Sloterdijk, other options) and to nature-based water purification through wetlands (several options across the city). We will also aim to visit sites related to housing and energy; depending on our final itinerary, these themes may also be covered by self-guided walking tours (with itineraries provided to you) and presentations, readings, or other media.
9 (12 April)	<u>DEADLINE FOR SUBMISSION OF GROUP PROJECT PROPOSAL: THURSDAY 11 APRIL</u> FIELD TRIP: THE MOBILITY SYSTEM OF GREATER AMSTERDAM	A multimodal free-for-all: students will perform a 'dérive' through the city, accompanied by the lecturer, seeking to use as many modes of transport as possible. Some students may be given 'transport profiles' at random at the start of the field trip - these profiles will determine how each student group is able to travel (for example: one profile might be that of a wheelchair user, or a low-income job seeker, or an undocumented person travelling to a cash-in-hand job, or a highly-educated, high-income expatriate).
PART 3 - COMPLETING AND PRESENTING THE GROUP PROJECT		
10 (19 April)	Students will receive feedback/approval for Group Project Proposal as soon as possible in this week. WORKING SESSION	Students are required to attend the class venue during session hours, to work on their projects, and especially to present their progress and provide feedback to other groups using a 'design studio' format. The lecturer will moderate feedback and actively collaborate with project groups.
11 (26 April)	WORKING SESSION	Students are required to attend the class venue during session hours, to work on their projects, and especially to present their progress and provide feedback to other groups using a 'design studio' format. The lecturer will moderate feedback and actively collaborate with project groups.
NO CLASS 3 MAY DUE TO SPRING BREAK		
12 (10 May)	WORKING SESSION	I will be available during course hours to work with you on any aspect of your report.
13 (17 May)	<u>DEADLINE FOR SUBMISSION OF GROUP PROJECT REPORT: 11:59AM, THURSDAY 16 MAY</u>	- This working session will focus on your group presentations - Identify and refine the message that you want to bring across to the audience - Edit and modify visual elements

	WORKING SESSION to prepare Group Presentations	
14 (24 May)	GROUP PRESENTATION	See Presentation Rubric for assessment criteria
15 (31 May)	<u>DEADLINE (END OF DAY) FOR SUBMISSION OF INDIVIDUAL REFLECTION ESSAY</u> GROUP REFLECTION MEETING	A final meeting focussed on your feedback, as the first students to experience this format for the course. This is also an opportunity to ask questions related to your reflection essay, which is due at the end of the day.