

CIRCULAR ECONOMY AND THE CITY: THEORY AND PRACTICE



SYLLABUS

VU Amsterdam Summer School

20 – 31 July 2026

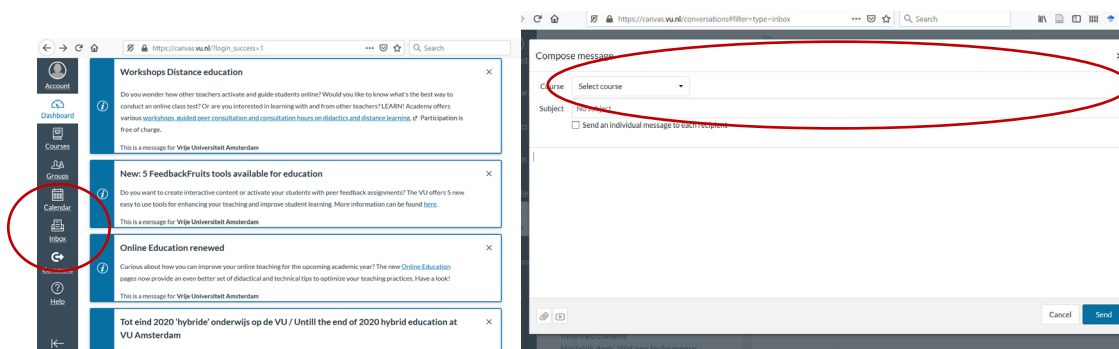
Any general questions for the Summer School support team? Contact amsterdamsummerschool@vu.nl.



Course Details

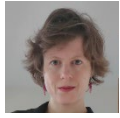
Welcome to the course Circular Economy and the City: Theory and Practice. This interdisciplinary course will teach you what the circular economy is, and what it can mean for life, study, and work, especially in cities. In this course, you will participate in active and creative workshops and excursions, and you attend lectures from experts about the essentials of the Circular Economy, how it tackles social and ecological problems, and which innovations in business, policy, and civil society are important for the Circular Economy. We will pay special attention to how human and non-human beings can live together in urban environments, with real-world examples from the city of Amsterdam. At the end of this course, you will be inspired and empowered to develop your own circular business, policy, or social initiative. The course features examples from the Netherlands and Europe as frontrunners in the circular economy. This syllabus details readings, learning activities, and assignments.

Communication and contact: Please feel free to ask all questions you may have to the course coordinators (Katinka Quintelier and Hans Ossebaard), via the course website on canvas. Canvas is the virtual learning environment. Figure 1 below is a screenshot of canvas. The red circle shows where to find the email function. Figure 2 is a screenshot of the email function when you are composing an email. Before sending an email, choose the course Multistakeholder Management, in the red circle in figure 2. After choosing the course, the 'To' field will appear. You can then type and find our names in the 'To' field.



Title	Circular Economy and the City: Theory and Practice
Coordinator(s)	Katinka Quintelier and Hans Ossebaard
Other lecturers	Reinout Heijungs, Marieke van Keeken, Marina Bosman
Study credits	Equivalent to 3 ECTS
Form(s) of tuition	Lectures & (lunch) seminars on campus. Workshops & excursions on campus or on location
Approximate contact hours	44
Approximate self-study hours	40

Teachers of lectures (in order of appearance)



My name is Katinka Quintelier, and I am a coordinator and lecturer for this course. I am very much looking forward to our time together! As an associate professor in business strategy and ethics at the Vrije Universiteit Amsterdam, I teach and investigate how business can create value for people and the natural environment. It's my pleasure to host you in Amsterdam.



My name is Hans Ossebaard and I am a lecturer in planetary health and green care at the Athena Institute and the Amsterdam Sustainability Institute, both at the Vrije Universiteit Amsterdam. I am also an advisor about sustainable health care innovation at the Institute for Care Netherlands (zorginstituut Nederland).



Reinout Heijungs is associate professor at the Department of Operations Analytics of Vrije Universiteit Amsterdam and also works at [Leiden University](https://www.leidenuniv.nl/), advising PhD students and others. He has published extensively on life cycle analyses and supply chains and is a member of the editorial board of various scientific articles.



Marina Bosman is the director of blossoming meadows, a business that contributes to nature inclusive cities in the Netherlands. On top of that, she is a PhD student in circular business models at the Vrije Universiteit Amsterdam. She will present how her company changed from a start-up into a scale up aiming to transform cities into socially and ecologically healthy areas.



Marieke van Keeken is a PhD candidate at the department of Operations Analytics of the Vrije Universiteit Amsterdam. She has investigated the effect of product lifetime extension on circularity as well as the sustainability transition of aluminum. She will creatively present the dynamics between lifetime extension and circularity with modelling software.

Course description

What is the circular economy, and what can it mean for our life, study, and work? In this course, you will participate in active and creative workshops and excursions, and you will receive lectures from experts in state-of-the-art issues in the circular economy. The course will teach you what the circular economy is for, how it is organized, and which business, governance, and technical innovations are important for the circular economy. We will pay special attention to how human and non-human beings can live together in urban environments, with real-world examples from the city of Amsterdam. At the end of this course, you will be inspired and empowered to develop your own circular business, policy, or social initiative.

The current linear take-make-waste economy negatively impacts the social and ecological environment. The Circular Economy is a new paradigm that promises ways to regenerate the social and ecological environment, including biodiversity, social justice, and the relation between human and non-human life. Negative impacts of the linear economy hit hard in cities, where over half of the population lives today. At the same time, cities also offer test-beds for regenerative innovations such as circular business models and policies, symbiotic buildings and places - where human and non-human beings live together, and experiments in research and education, all supported by artistic or spiritual events.

In this course you will learn about business, policy and social initiatives for the circular economy, with examples from Amsterdam and from artistic creations. Many cities, like Amsterdam, are frontrunners in the Circular Economy and work on new symbioses between human and non-human nature. At the same time, people in

cities like Amsterdam have a strong local and planetary impact, from the food we eat and things we buy, to the energy we use, and the transport we cause. Cities are also hotspots for social or scientific experiments and artistic creativity, and such imaginations can inspire and motivate new ways of circular living.

To transition towards the Circular Economy, this course empowers you to apply the insights of experts and professionals on circular business and policy, and it motivates you with examples from art and the experimental spirit of the city.

From Monday to Friday, the course offers morning lectures, excursions, and workshops. Next to lectures from academic experts we will also be taught by frontrunners in circular business, policy and civil society. To rethink our relationship with nature, we will engage in shinrin-yoku, a Japanese practice of embedding in nature. To broaden our scope of action we will visit a zooperative, a novel organizational form where human and non-human beings cooperate for mutual benefit. You will also be invited to seek out other examples of circularity such as Repair Cafés, community gardens, green roofs, or waste management facilities. At the end of this course you will have learned and shaped what the circular economy is and what it may be in the near future.

The course draws on previous work conducted by the (guest) lecturers as part of a community focusing on people at the heart of circularity in the symbiotic city. This community consists of researchers and professionals and was kick-started by Het Groene Brein.

Learning objectives

At the end of this course, you will have acquired knowledge of theory and methods, and research skills, for the circular economy in the city.

Knowledge of theory and methods (quizzes and communication portfolio)

- you will know, understand, and explain social (economic, political, cultural, market, regulatory) barriers and enablers of circularity
- you will know, understand, and explain the reasons for the transition towards circularity
- you will know, understand, and explain different strategies as methods to enhance circularity

Research skills (project)

- you will have research skills to reflect on cutting-edge social innovations for circularity
- you will design your own social innovation for circularity
- you will have research skills to analyze social innovations for circularity

Assignments and Assessment

Students are assessed on three assignments. These assignments assess what you learned during the learning activities; as a consequence, **attendance and participation have an influence on students' grade**. This means that attendance is not obligatory but lower attendance will lead to a lower grade.

Format	% grade	Min. required	Research Skills	Knowledge of theory/methods
1. Knowledge quizzes	30	15		X
2. Project: design your own social innovation	40	20	X	
3. Portfolio: creative communication about circularity	30	15		X
TOTAL	100	55		

1. Knowledge quizzes

At the end of both weeks we will do a knowledge quiz to test knowledge acquired during the lectures and readings.

Required resources: Lectures, required resources list for knowledge quizzes

Deadlines: Friday 24 July, Friday 31 July

Preparation and timeline:

Before week 1, read the required readings of week 1 (see below). During week 1, attend the lectures, and take notes. On Friday between 13:00 and 16:00 you will participate in a quiz during the teaching activity.

Before week 2, read the required readings of week 2 (see below). During week 2, attend the lectures, and take notes. On Friday between 13:00 and 15:00 you will participate in a quiz during the teaching activity.

Grading: The quiz consists of open questions and multiple choice questions. The quizzes are testing knowledge and understanding of barriers and enablers, reasons, and strategies for circularity.

2. Project: design your own social innovation for circularity

In workshops, we will help you design your own social innovation for circularity.

Required resources: Required resources for project, lectures, workshops.

Deadlines: Thursday 30 July (presentation) and Friday 14 August (submission)

Preparation and timeline:

Week 1: Choose materials and brainstorm about at least three ways to keep it in the loop. For your chosen material and lifecycle, and based on the lectures and workshops, develop the following:

A circular business model that makes use of your. Use a business model canvas and integrate experimentation.

Friday 24 July: Give a short 3-minute presentation of your social innovation to receive feedback.

Week 2:

For your chosen material and lifecycle, and based on the lectures and workshops, develop the following:

A circular city: describe who is affected by and can affect the life cycle of your material; describe and evaluate dynamic feedback loops and how you would measure the material, energy or nutrient flows.

Thursday 30 July: Give a short 3-minute presentation of your social innovation to receive feedback.

Friday 14 August: Submit your presentation in powerpoint and text.

Grading: you are graded on:

- designing your own social innovation for circularity
- analyzing your own and others' social innovations for circularity
- reflecting on social innovations for circularity

3. Communication Portfolio: creative communication about the circular economy

In excursions, you will experience different ways to explain concepts of circularity to a broader audience via various media (forest invitations, pictures, exhibits, ...). After the teaching period, you have another two weeks to finalize a portfolio of your own creative communications about circularity at your own pace. You submit your portfolio to the teacher.

Required resources: required resources for portfolio, lectures, excursions

Deadline: Friday 14 August

Preparation and timeline:

For two R's of the R ladder (Cramer 2020), develop an invitation that can be used in a nature walk. Check this resource: <https://silvotherapy.co.uk/articles/what-are-forest-bathing-invitations>

Describe a restorative and regenerative zooperative in text, drawing, pictures, or video and explicate what are barriers and enablers for this zooperative.

Find examples of synergies in Amsterdam, take a picture, explain the synergy, and explicate the reasons for transition.

Grading: you are graded on:

- explaining social (economic, political, cultural, market, regulatory) barriers and enablers of the circular economy (zooperative)
- explaining the reasons for the transition towards the circular economy (synergies)
- explaining the different strategies as methods to enhance material circularity (R-ladder)

Resources

- Das, A, Bocken, N. (2024) Regenerative business strategies: A database and typology to inspire business experimentation towards sustainability. *Sustainable Production and Consumption*, 49, 529-544
- Sterman, J. 2002. *System Dynamics: systems thinking and modeling for a complex world*.
<https://vensim.com/free-downloads/>
- Bocken, N., & Ritala, P. 2021. Six ways to build circular business models. *Journal of Business Strategy*, 43(3), 184-192. <https://www.emerald.com/insight/content/doi/10.1108/JBS-11-2020-0258/full/html>
- Cramer, J. 2020 *How Network Governance Powers the Circular Economy. Ten Guiding Principles for Building a Circular Economy, Based on Dutch Experiences*. ISBN 978-90-90-33928-3.
- Ellen MacArthur Foundation 2024. Circular economy introduction. Online resources:
<https://www.ellenmacarthurfoundation.org/topics/circular-economy-introduction/overview>
- Quintelier, Wuyts & Stephenson. SUSTAINABLE PLACING: TOWARDS AN INTEGRATED MODEL FOR SCALING SUSTAINABILITY (work in progress)
- Khakdaman, M., Dullaert, W., Inghels, D., van Keeken, M., & Wissink, P. (2024). A System Dynamics Supply Chain Analysis for the Sustainability Transition of European Rolled Aluminum Products. *Sustainability*, 16(20), 8892. <https://doi.org/10.3390/su16208892>
- Rigamonti, L., Mancini, E. 2021 Life cycle assessment and circularity indicators. *Int J Life Cycle Assess* 26, 1937–1942. <https://doi.org/10.1007/s11367-021-01966-2>
- <https://deceudel.nl/en/about/sustainable-technology/>
- <https://doughnuteconomics.org/amsterdam-portrait.pdf>
- Lectures, workshops and excursions
- Quintelier, K.J.P., van Bommel, K., Van Erkelens, A., & Wempe, J. (2023). People at the heart of circularity: A mixed method study about trade-offs, synergies, and strategies related to circular and social organizing. *Journal of Cleaner Production*, 387, 135780.

Course Schedule

Course timetable

The scheme below shows the teaching schedule of this course. **Lectures** take place on the VU campus. During most **lunches** you are free, but two lunches are combined with a workshop or excursion. **Workshops and excursions** take place on the VU campus or, in a few cases on another location that can be reached by foot or by public transport.

	10:00-11:00	11:00-12:00	12:00-13:00	13:00-14:00	14:00-15:00	15:00-16:00
Monday 20 July						
Tuesday 21 July						
Wednesday 22 July						
Thursday 23 July						
Friday 24 July						
Monday 27 July						
Tuesday 28 July						
Wednesday 29 July						
Thursday 30 July						
Friday 31 July						

Detailed course schedule (TBA)

The estimated time students need for basic study activities in this course are:

☐ Lectures, excursions and workshops	45 hours
☐ Portfolio	16 hours
☐ Project	3 hours
☐ Reading articles	10 hours
☐ Studying for quizzes	10 hours
	84 hours total

