

Global Energy Transition in a Fossil World: Challenges and Opportunities

SYLLABUS

VU Amsterdam Summer School

8 July – 19 July 2024



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

Course Details

Title	Global Energy Transition in a Fossil World: Challenges and Opportunities
Coordinator(s)	Dr. Mathieu Blondeel; Ana Cassanti
Other lecturers	Guest lecturers to be determined, include experts from VU Amsterdam, other academic institutions, as well as key energy and climate stakeholder organisations
Study credits	3 ECTS
Form(s) of tuition	(Guest) lectures, interactive group exercises, excursions
Approximate contact hours	40

Teaching staff (in order of appearance)

- Dr Mathieu Blondeel
- Ana Cassanti, Msc
- Guest lecturers from VU Amsterdam and other academic institutions in the NL and beyond, as well as experts from key energy and climate stakeholder organisations based in the Netherlands and beyond.

Contact info

- For issues regarding course content: m.c.blondeel@vu.nl (tel: +32 494 29 16 06) or ana.cassanti@vu.nl (tel: +31 0647571984)
- For general issues and administration regarding the summer school: amsterdamsummerschool@vu.nl (tel +31 20 59 84717)

Course description

In December 2023, at COP28 in the UAE, the world agreed that we need to transition away from fossil fuels in energy systems. But does this truly signal the ‘beginning of the end’ for the fossil fuel era? After all, meeting the Paris climate goals remains far from a done deal. While the need for a global transition to a low-carbon energy system is contested by few, opinions on what this means in practice and how to get there vary between mainly technical and engineering interventions to radical societal change.

This course focuses on the societal and political sides of the energy transition, whilst taking into account the physical and technical limitations of the energy system, as well as the global environmental boundaries in which we operate. It will give you a broad overview of the global energy transition’s needs, its challenges and solutions, and the trade-offs generated by different (policy) options.

It will challenge you to critically assess your own preferred solutions – including their main advantages and disadvantages. The course will further introduce you to the leading theories, concepts, proposed solutions, and current governance efforts in the energy transition. You will study challenges and opportunities at a global level, but also regional, national, and local approaches in the Netherlands and beyond.

Additionally, this course will feature guest speakers from diverse backgrounds, offering varied perspectives on the global energy transition. Excursions provide practical insights into the challenges and opportunities of moving away from fossil fuels. By incorporating these external voices and real-world experiences, the course aims to enrich critical analysis, fostering a comprehensive understanding of the complex issues involved in transitioning to a low-carbon energy system. Finally, the course offers workshops in academic writing and presentation skills

Learning objectives

By the end of this course, students should be able to:

- Understand the main concepts and theories in energy transition research and be able to put them into the wider context of global sustainable development;
- Recognise what has been achieved on the road of the energy transition so far;
- Grasp the most critical challenges and opportunities for the future of the energy transition;
- Critically assess their own preferred solutions for the energy transition, including the main advantages and disadvantages.
- Share practical insights into the ‘transition on the ground’ through excursions and guest lectures from experts, policymakers and practitioners with diverse backgrounds.

Assignments and Assessment

The work load is designed to reflect 3 ECTS points, including three assessments:

- Active participation in the course (20%);
- Group presentation at the end of the course (30%);
- An individual written essay of 1000 words that reflects on the excursions and links it to one or more theories and concepts discussed throughout the programme (50%);

Provisional reading list

The reading list will be released closer to the starting date of the course. Participants can expect a few readings per lecture for preparation. Note that additional information can be shared in the form of podcasts, documentaries, etc.

(Provisional) course Schedule*

* This is the **provisional schedule** based on last year's programme. As such, this programme is subject to change. The final schedule will be communicated closer to the starting date of the course

Week 1 (8 – 12 July)

Day	Hours	Teacher / Moderator	Class number, subject
Sunday (7/7)	18:00 – 22:00	Mathieu Blondeel & Ana Cassanti	Welcome drinks & dinner for course participants (optional)
Monday (8/7) Room TBC	9:00 – 10:00	VU Summer School	Social programme
	10:00 – 12:00	Mathieu Blondeel & Ana Cassanti	1. Introduction: A systems approach to the global energy transition
	13:00 – 14:30	Mathieu Blondeel	2. Ideas, Interests and Institutions for the energy transition
	15:00 - ...	VU Summer School	Social programme
Tuesday (9/7)	9:00 – 10:30	Stephan Slingerland (TNO/VU Amsterdam)	3. Social Innovation for the Energy Transition

Room TBC	11:00 – 12:30	Dr. Sanchayan Banerjee (VU Amsterdam)	4. The economics of energy transition – changing investments & user behaviour
	14:00 – 16:00	Blondeel & Cassanti	5. EXCURSION: Energy Community Zuiderlicht, Amsterdam
Wednesday (10/7) Room TBC	9:00 - 10:30	Joyeeta Gupta (UvA)	6. Climate justice, phasing out fossil fuels, and stranded assets (recorded and discussion afterwards)
	10:45 – 12:15	Lucia van Geuns	7. The geopolitics of fossil fuels during the global energy transition
	12:30 - ...	VU Summer School	Social Programme
Thursday (11/7) Room TBC	9:30 – 12:00	Ana Cassanti	8. Role of stakeholders in the energy transition – a perspective through the lens of intersectionality/ Debate and serious game about multi hazards and role of stakeholders in the energy transition
	13:00 – 15:00	Martin Scheepers (TNO)	9. Technological solutions and integrated energy systems for energy transition
Friday (12/7) Excursions	9:30 – 12:00	Mathieu Blondeel & Ana Cassanti	10. EXCURSION: Milieudefensie / Friends of the Earth Netherlands (TBC)
	13:00 – 15:00	Mathieu Blondeel & Ana Cassanti	11. EXCURSION: Meeting with Amsterdam city councillor for sea and airport, Hester van Buren (TBC)

Week 2 (15 – 19 July)

Day	Hours	Teacher / Moderator	Class number, subject
Monday (15/7)	10:00 – 12:00	Gatti	12. Energy transition and spatial planning / Energy Game
	room TBC	13:00 – 15:00	TBC (VU Amsterdam)
			13. Managing dependencies on critical minerals during the global energy transition
Tuesday (16/7)	10:00 – 12:00	Marijke Menkveld	14. Dutch national climate and energy politics in an international context
	room TBC	13:00 – 15:00	Koen Straver (TNO)
		15.30 – 17.00	Ana Cassanti
			16. Question hour / presenting workshop (optional)
Wednesday (17/7)	10:00 – 12:00	Rosalie Arendt (UTwente)	17. Measuring the impacts of energy systems
	room TBC	12:30 – ...	VU Summer School
			Social Programme
Thursday (18/7)	10:00 – 12:00	Mathieu Blondeel & Ana Cassanti	18. EXCURSION (TBC)
	room TBC	14:00 – 15:30	Mathieu Blondeel
			19. Energy Justice in the Global South: Solving Energy Poverty
Friday (19/7)	9:30 – 12:00	Mathieu Blondeel & Ana Cassanti	20. Student presentations
	room TBC	13:00 – 13:30	Mathieu Blondeel & Ana Cassanti
		15:00 – ...	VU Summer School
			21. Wrap-up
			Social programme

