

MSE-433 Towards Sustainable Materials

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<https://moodle.epfl.ch/user/index.php?id=18623>

Mondays, 13h15-17h, room INR-219

Tentative course programme

Date	Week	Topics	Guests
17th Feb	1	Introduction and sustainability frameworks Course grading, group projects, debates	
24th Feb	2	Introduction to sustainable materials Linear vs circular economies Economics of waste management	Robin Quartier (VBSA)
3rd March	3	Circularity metrics Addressing the impacts of materials Global North-Global South	Nicholas Myers (OMNIS Inst)
10th March	4	Life cycle analysis Introduction to SimaPro	
17th March	5	Monetary and mass flows Material flow analysis	Claudia Binder (EPFL)
24th March	6	Hard to abate (polymeric) materials Recycling	Jonathan Sterne (INEOS)
31st March	7	Bio-based materials Direct Air Carbon Capture	Tiffany Abitbol (EPFL) Kumar Agrawal (EPFL) Lars Lundquist (NESTLE)
7th April	8	Group project feedback session	
14th April	9	Hard to abate (cement / concrete) materials	Corentin Fivet (EPFL) Karen Scrivener (EPFL) Christophe Levy (Holcim)
21st April		Vacation easter	
28th April	10	Mobility, composites, and the energy transition Modelling uncertainty Data driven sustainability initiatives	Jon Meegan (Syensqo)
5th May	11	Critical materials & precious metals SC stakeholder engagement	Matthew Kilgarriff (Richemond)
12th May	12	Hard to abate (metallic) materials	Roland Logé (EPFL)
19th May	13	Group project presentations Prize giving	
26th May	14	Open book exam	