

# ARTX-1008 Sustainable design – Spring 2022

Contact teacher:

For the whole course and sessions 1-4 Mikko Jalas [mikko.jalas@aalto.fi](mailto:mikko.jalas@aalto.fi),

For sessions 5-7 Tatu Marttila

For sessions 8-11 Pirjo Kääriäinen.

This course syllabus contains the detailed course schedule, accompanied with possible links to online work, readings, and exercises. You can check daily teaching events from the list below.

Besides teaching sessions, student tasks consist of selected readings that need to be read *before* the sessions. The 19.4. reading is an exception as we realise that students will not have time to all the material before the session). Specific exercises that are linked to precede or follow selected sessions, and written reflections to learning diary.

For general questions, please email Mikko Jalas and for particular session, please email the respective teacher.

Sessions (9:15-12) and teaching locations:

- Tue 19.4. (F102, Väre) Intro to course & sustainability
- Thu 21.4. (U356, Otakaari 1) Multi-level design model: Positioning design strategies
- Tue 26.4. (A123 A1, Otakaari 1) Tools to guide product design and certify performance
- Thu 28.4. (A123 A1, Otakaari 1) Communicate sustainability with design
- Tue 3.5. (Maari C-D (Win) 184-186, Maarintalo) Sustainability assessment exercise
- Thu 5.5. (M232 M1, Otakaari 1) 'Redesign' for sustainability
- Tue 10.5. (U121a, U250a, U262) Assessment & redesign exercise presentations
- Thu 12.5. (<https://aalto.zoom.us/meeting/61754355043>) Plastics: problems and possibilities. Groupwork begins
- Tue 17.5. (U405a, U410b, Otakaari 1) Materials focus and the groupwork continues.
- Thu 19.5 (independent case work)
- Tue 24.5. (U405a, U410b, Otakaari 1) Groupwork interim presentations
- Tue 31.5. (9:15-13:00) (U119, Otakaari 1) Final presentations

In-class presence or online?

The lecture on 12.5. will be on ZOOM. In addition, some of the lecture content can be followed at zoom. However, the course is designed for online presence. Link to the course Zoom <https://aalto.zoom.us/meeting/61754355043>

Interaction platforms

Use the course presemio (<https://presemio.aalto.fi/artx1008sustainabledesign>) for any issues you want to highlight as needed for example more clarification. This is anonymous.

Use MyCourses General discussion forum to initiate new discussions for the class

Materials:

All materials are listed in the detailed workplan and provided at <https://mycourses.aalto.fi/course/view.php?id=27907&section=2>

Exercises:

Follow the instructions and the deadlines given at <https://mycourses.aalto.fi/course/view.php?id=33779&section=3>

Grading:

- independent assignments on session 2 (P/F), session 3(P/F), session 4(1-5), an session 7 (1-5), (30% of grade evaluation),
- group work on conceptual design (1-5) (30%),
- personal learning diary (1-5) (40%) – cover the reflection tasks listed in the detailed work plan.

Warmly welcome to the course!

Session details and worktime allocation:

Schedule:			LEGEND	Class	Read.	Exer cise	Group -work	Reflec. / Diary
Week	Date	Session topic	Tasks & materials					
Week 1			Reading: Allwood, J., & Cullen, J. (2010). Sustainable Materials - with Both Eyes Open (Chapters 1, 2, and 23-25)		10			
Session 1	<a href="#">Tuesday, 19 April, 09:15 » 12:00</a>	Intro: Key concepts and concerns of sustainability.	Session materials: -slides	3				
			Reflection (Session 1): Where do you see change coming from – regulation, business & design, consumers & values, science & technology					2
			Reading: Ceschin, F., & Gaziulusoy, I. (2016). Evolution of design for sustainability.		6			
			Exercise: Calculate your own carbon footprint with SITRA's lifestyle calculator. Pass/Fail.			1		
Session 2	<a href="#">Thursday, 21 April, 09:15 » 12:00</a>	Multi-level design model: Positioning design in the field of sustainability.	Session materials: -slides	3				
			Reflection (Session 2): What level is most important? How are levels connected?					2
Weekend								
Week 2			Exercise: Find labels and product standards for sustainability (submit at MyCourses). Pass/Fail.			3		
Session 3	<a href="#">Tuesday, 26 April, 09:15 » 12:00</a>	Product labels: Tools to guide product design and certify performance.	Session materials: -slides	3				
			Exercise: Select a product/service that communicates sustainability effectively or interestingly. Submit an image and preliminary ideas on how and what the products communicates. Use Susan Vihma's categories of semiotic meanings. Grade 1-5.			6		
Session 4	<a href="#">Thursday, 28 April, 09:15 » 12:00</a>	Communicate sustainability with design	Session materials: -slides	3				
			Reflection (Session 4): Review products picked by your fellow students: How do products communicate about sustainability? You can view submissions at MyCourses.					5
Weekend								
Week 3			Readings: Ashby et al (2013). Materials and Sustainable Development — a White Paper		5			
Session 5	<a href="#">Tuesday, 3 May, 09:15 » 12:00</a>	Sustainability research & CES Edupack & Materials	Session materials: - Slides - CES fact-finding sheet (PDF) - Online resources, material libraries	3				
			Reflection (Session 5): How comprehensive is the view CES Edupack gives on sustainability challenges.					2
			Reading: Allwood & Cullen (Chapters 16 & 17)		5			
Session 6	<a href="#">Thursday, 5 May, 09:15 » 12:00</a>	Circular economy: Strategies for life cycle extension, 4R and other strategies, end-of-life management. Product redesign	Session materials: - Slides - Ecodesign Strategy Wheel (PDF), Eco-Indicator 99 (PDF) - META sheet (PDF) - Topics for exercise (list)	3				
			Exercise: Research your redesign topic, perform META matrix exercise			6		
Weekend								
Week 4			Exercise: Continue with your redesign exercise			5		

			Exercise: Prepare poster presentation (before/after), upload to MyCourses. Grade 1-5.			3		
Session 7	<a href="#">Tuesday, 10 May, 09:15 » 12:00</a>	Redesign: presentation of improvement ideas and strategies	Session materials: - Poster presentations uploaded to MyCourses	3				
			Reflection (Sessions 5-7): Reflect on your assessment and redesign exercise					3
Session 8	Thu 12.5.	Plastics: problems and possibilities	Non-tox presentation: Overview of use of plastics & re-use of plastics. Overview of plastics (manufacturing) technologies (Teppo Vienamo)	3				
Weekend								
Week 5			Readings: Bak-Andersen, Mette. (2018). When matter leads to form: Material driven design for sustainability.		4			
Session 9	<a href="#">Tuesday, 17 May, 09:15 » 12:00</a>	Material futures	Continues from session 8.	3				
			Groupwork: Study selected material/project & produce a concept with this material					5
	<a href="#">Thursday 19 May, 09:15 » 12:00</a>		Groupwork: Produce a design concept idea with selected material					5
			Groupwork: Produce a design concept idea with selected material					5
Weekend								
Week 6			Groupwork: Prepare short interim presentation					5
Session 10	<a href="#">Tuesday, 24 May, 09:15 » 12:00</a>	Design with materials	Session materials: - Groups prepare a presentation (ie. few slide PPT) of the material and your concept, uploaded to MyCourses	3				
			Groupwork: Incorporate feedback					6
	26.5.	No class (Ascens. Day)						
			Groupwork: Finalize concept idea					6
Weekend								
Week 7			Groupwork: Prepare poster and presentation					4
Session 11	<a href="#">Tuesday, 31 May, 09:15 » 12:00</a>	Design with materials	Session materials: - Groups prepare a poster of the solution, uploaded to MyCourses	3				
			Reflection: What was the most interesting/important concept? Why? How could you improve it? What are the downsides?					5
		Course feedback	Fill in the feedback form (Compulsory)			1		
			Reflection: What is your key take-away. Finalize your learning diary					5
			Additional time to think					14
Weekend								
			TOTAL WORKING HOURS 162	33	30	25	36	38