Classroom ☐
Studio or workshop ☐
External venue ☐
Online ☐

Cím

Smart Mobility Project 1: MOME x BME – shared micromobility

Codes ***M-FR-104-4***

Host **MOME Future School**

	Type	ECTS	Contact hours	Homework hour	Course type	Semester	Unit
Basic info	**Practice**					**1**	

Recommendation	*For first-year MA design students majoring in Smart Mobility*
Short description	*Topics and themes to be covered in the course:* *Micromobility is a particularly complex area of industrial design. Designers must simultaneously consider transportation as a multi-actor system, as well as the mobility devices that move the system. During the design course, students will go through a complete concept design process in teams.* *During the course, they will design on the topic of personal transportation of the near future, taking into account social, cultural and market conditions. At the end of the semester, a concept vehicle will be presented through visual designs, model sketches, and VR models.* *The aim of the course is for students to be able to design well-developed concepts that are of high formal quality, work in a system, and are based on the conclusions of a well-founded research. During the project, special attention will be paid to system-based design, the use of digital technologies (VR), and the high aesthetic quality of the end result.* *During the evaluation, students present their plans using VR technology, presenting their projects in a life-size, immersive way.*

Teachers

Name	Contact	Bio	Opening hours
Dániel Ruppert	ruppert.daniel@mome.hu	https://mome.hu/hu/emberek/ruppert-daniel	Monday 15-16: óra
András Húnfalvi	hunfalvi.andras@mome.hu	https://mome.hu/en/people/andras-hunfalvi	Monday 15-16: óra
Ádám Molnár	adamolnardesign@gmail.com	https://mome.hu/hu/emberek/molnar-adam	

Semester schedule

Course scheduling	Class appointments
weekly personal consultations	Monday, Wednesday

#	Date	Educational content
1	2025.09.09.	Briefing
2	2025.09.16.	rebiref
3	2025.09.23.	Research phase, concept creation
4	2025.09.30.	Research phase, concept creation
5	2025.10.07.	Concept finalization
6	2025.10.21.	Design development / consultation
7	2025.10.28.	Design development / consultation

8	2025.11.04.	Design development / consultation
9	2025.11.11.	Design development / consultation
10	2025.11.18.	Presentation and documentation preparation
11	2025.11.25.	Presentation and documentation preparation
12	2025.12.02.	Presentation and documentation preparation
13	2025.12.16.	Evaluation
14		
15		

Requrements and evaluation

Assignments	Evaluation criteria	Deadline	% in evaluation
Background research / market overview / trend analysis, presentation	description of underlying trends, user groups, application possibilities	2025.10.07.	25%
Concept description (text and image format)	understandability, reality, coherent presentation of the concept	2025.10.07.	25%
Design documentation with visual designs and illustrations and sketches showing the design process	consistency of the design process, clarity of the concept, quality of visual designs, illustrations	2025.12.16.	50%

Compulsory readings

Recommended readings

Learnings

Knowledge	1. Acquire basic knowledge in the field of micromobility. 2. Learn about the technical, environmental and social aspects of the mobility system. 3. Form an opinion on the personal mobility of the future. 4. Students should examine the current and near-future problems of mobility with a holistic approach.
Skills	1. Development of basic industrial design skills, from communication sketches to 3D modeling 2. Recognizes and analyzes problems that can be solved by design. 3. During the design process, maps the needs of stakeholders and, if necessary, involves stakeholders in the design process. 4. Adapts and develops design skills, techniques and technologies to new types of problems in response to current and future environmental, social, cultural and economic challenges. 5. Connects design concepts with similar tools from other (related) professional fields. 6. Students gain practice in working on a topic of their own choosing that fits within the framework of the call for proposals, but in accordance with market expectations. 7. Is able to implement and communicate their own ideas within their team. 8. Gains practice in the division of labor within the team 9. Able to cooperate with his/her own professional environment and communicate effectively
Attitude	1. Capable of effective teamwork, his/her design is tight, to the point, and based on focused research. 2. Openness and acceptance characterize his/her design approach.

	3. Strives to build and cultivate a professional network of relationships. 4. Consciously practices the interactions that arise during design (presentation, teamwork, brainstorming, workshop, etc.).
Responsibility	1. Able to create a design concept in a team and implement it professionally. 2. Acts autonomously and responsibly in multidisciplinary projects and activities.

Exemption

☒ Exemption from attending and completing the course cannot be granted,
☐ Exemption may be granted from the acquisition of certain competencies and the fulfilment of tasks
☐ Some tasks can be replaced by other activities,
☐ A full exemption can be granted

Curriculum link

Subject	Related courses (paralells)	Merit rate in the subject
Title of the course to be covered	[This course]	
	Another course	
	Third course	

Course prerequisites	Prerequisites in case of elective	Is it available as an elective?

TechPark

	Resources	
Requests	Personal (expert consultation)	
	Tools	
	Materials	
	Space	

Misc. information

- Research, trend analysis
- Learning and mapping the values and history of a given brand and category
- Problem definition, formulating future user needs and usage patterns, human-centered design
- Creative concept creation
- Digital design methods
- Ergonomic concept design
- 3D modeling, rendering and animation creation