Name	**Tangible Interfaces**	Classroom x☐ Studio or workshop ☐ External venue ☐ Online ☐
Codes	*M-ID-201*	
Host	**Design Intézet**	

	Type	ECTS	Contact hours	Student work	Course Typel	Semester	Unit
Basic info	**Gyakorlat**	**2**	**22**	**38**	**Interaction Design MA compulsory**	**2023/2024 Spring**	**Market and products**

Recommen-dation

This program stands out as an innovative and hands-on learning experience that thrives in an interdisciplinary, workshop-style environment. Students delve into the creative process by building interactive electronic prototypes and exploring concepts in a playful and engaging manner. Embracing the philosophy of learning by doing and DIY, participants get their hands dirty, working collaboratively to bring their ideas to life.

Short Description

By analyzing example research-through-design cases on the use of expressivity in interaction, we discuss how different perspectives and concepts contribute to understand expressivity and tangible solutions in interaction. We integrate these perspectives and make them operational for interaction design by creating working prototypes including design considerations such as freedom of interaction, action-perception loops, multimodality, subtlety, ambiguity, skill development and temporal form. During the sessions, we will explore the following topics, related to the sociocultural aspects of tangibility and interaction:

- The role of hand gestures and movements in communication and nonverbal expression
- The use of hand gestures and movements in various cultural contexts and traditions
- The relationship between hand gestures and emotions, such as anger, happiness, and fear
- The use of hands in art and creativity, such as painting, sculpture, and music
- The role of hand movements and gestures in sports and physical activities
- The impact of technology on the use of hands, such as in virtual and augmented reality.

Teachers

Name of lecturer	Contact of lecturer	BIO	Open Office
Ágoston Nagy	nagy.agoston@mome.hu +36304809295	Assistant Professor	Teams & Onsite once each month

Semester schedule

Course	Date

Alk.	Date	Description
1		Introduction: context and general overview

		- expressivity, participation, cognition - choreography, writing, language, signaling - instruments, affordance, ergonomy
2		**Embodiment and Enaction** - Soft robots vs anthropomorphism - Internalization, context, common sense - Expert skills, soft skills
3		**Input methods** - "hands feel things, hands manipulate things" - tactile interactions, conductivity - computer vision
4		**Consultation: Research on diversity & inclusivity issues**
		Tinkering - touch, sense, proximity, electronics
		Interactive Systems - theory - feedback loops - input/output - instruments, tools - behavior models, systems dynamics
		Interactive Systems - practice - prototyping, framework design - responsive environments - Connected services, IoT & AI
		Tinkering - project based consultation, lab hours
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		Consultation - closing the loops, building & testing prototypes
		Class Work Presentation & documentation

Requirements and evaluation

Deliverables	Criteria for assessment	Deadline	Proportions
10 mins Presentation & Pitching	Active participation on the classes aesthetic qualities of the practical work	10th week	40%
Video documentation (1.5 mins)		12th week	20%
Presenting the object as a working prototype	Requirements to be met: presentation (visual introduction of the class work) Method of assessment:	9-12th week	40%

	practical demonstration		

Compulsory readings

Recommended readings

"The Handbook of Touch: Neuroscience, Behavioral, and Health Perspectives" edited by Matthew J. Cruccu, Olaf Blanke, and Jan Gruell
"Designing Gestural Interfaces: Touchscreens and Interactive Devices" by Dan Saffer
"The Invisible Computer: Why Good Products Can Fail, the Personal Computer is So Complex, and Information Appliances are the Solution" by Donald A. Norman
"The Nonverbal Dictionary of Gestures, Signs & Body Language Cues" by David B. Givens

Learnings

Knowledge	Overall understanding of interactive systems and cognition Understanding realtime feedback loops Generative methodologies and overall machine learning workflow
Skills	Hands-on experience working with computer vision, hand tracking, conductive materials
Attitude	Responsible designer with advanced problem framing capabilities
Responsibility	Improved critical thinking and problem-solving skills

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 substituted with other activities,
☐ A full exemption can be granted

Curriculum connections

Unit	Parallel courses	Course proportion in unit
Befoglaló tantárgy címe	[Ez a kurzus]	MA1_ Mercedes In-Car UX Design_M-ID-201, 5 credits MA1_The Business of Design_M-ID-201, 2 credits MA1_Mastering IxD 2. Digital Product Design_M-ID-201, 5 credits
	Másik kurzus címe	
	Harmadik kurzus címe	

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

Misc.
information