Name	Human-Robot Interactions and Reflective Robotics with Boston Dynamics
Codes	M-KH-E-201-FS-252602-10, M-KH-201-FS-252602-10, B-KH-201-FS-252602-10
Host	Future School
Location	B-106

Course info			**Subject info**			
Course Type	Contact hours	Home study hours	Comprehensive Subject	Subject type	Semester	Subject credit value
Practice	48		Course Week	Course week	2026 / 01	5

Recommendation
T This course is intended for students who want direct, hands-on exposure to contemporary Human–Robot Interaction and embodied AI through close collaboration with two designers from **Boston Dynamics, a global leader in robotics design and behaviour engineering**. It is especially suitable for those who prefer learning through guided experimentation, iterative prototyping, and intensive small-group consultations rather than frontal instruction. Students will work in multidisciplinary teams and gain practical insight into how robot behaviour and interaction concepts are developed in real-world design practice.

Short description
The course offers a fast-paced introduction to HRI and reflective robotics through a combination of design research, embodied experimentation, and agent-based prototyping. Students learn the core principles of socially and physically embodied AI, behaviour design, and agent motion planning, and explore how interaction concepts can be transferred from simulation to physical robot platforms. Guided by David Robert and Leland Hepler from Boston Dynamics—an internationally recognised leader in advanced robotics and robot behaviour design—participants work with agent-kit tools, TouchDesigner, and simple behavioural-cloning methods to design, test, and refine interactive robot behaviours. The course is organised by the MOME Interaction Design MA programme and conducted in close collaboration with the MOME Robotics Lab.

Teachers			
Name	Contact information	Short BIO	Open hours
David Robert (Boston Dynamics) (40 contact hrs)	Visiting Lecturer	Human–Robot Interaction / Interaction Designer at Boston Dynamics.	by appointment
Leland Hepler (Boston Dynamics) (40 contact hrs)	Visiting Lecturer	Robotics Designer / Interaction & Behaviour Specialist.	by appointment

Tamás Fogarasy (MOME IXD MA) (8 contact hrs)	fogarasy@mome.hu	Interaction Design	by appointment
Renáta Dezső (MOME Robotics Lab) (40 contact hrs)	renata.dezso@mome.hu	embodied interaction, design research.	by appointment

Course scheduling			
Course format		Weekly class appointments	
Group and individual consultations according to a pre-announced schedule, guest lectures and workshops		9:00-17:00	
Details of each session's type and schedule, showing the teacher's role			
Weeks	Date	Weekly educational content	Studio/workshop
1	Monday-Friday (9-17)	Course Week – full-day intensive sessions with Boston Dynamics	Studio only
2			
3			
4			
5			

Course completion requirements, prerequisites, and evaluation				
Students' duties				
Requirements, assignments	Form of evaluation	Evaluation criteria	Deadline	% in evaluation
10 mins Presentation & Pitching	Presentation (visual introduction of the class work)	Active participation on the classes aesthetic qualities of the practical work	Last day	60%
General requirements				

Requirements, assignments

- Daily experimental tasks completed during the course week
- Final interactive behaviour prototype or scenario (team-based)
- 10-minute final presentation and pitch (visual introduction of the week's work)
- Short documentation package (1–2 pages + prototype video)

Form of evaluation

- Presentation
- Prototype / scenario
- Participation
- Documentation

Evaluation criteria

- Conceptual clarity (relevance to HRI, embodied AI, reflective robotics)
- Experimental depth (quality of testing, iteration, insight)
- Technical execution (agent behaviour, TouchDesigner logic, motion/interaction quality)
- Aesthetic and interaction qualities (somaesthetic sensitivity, articulation of embodied intent)
- Team collaboration and professional communication

Deadline
Last day of the course week

% in evaluation
Final presentation & prototype: 60%
Documentation: 20%
Participation: 20%

Course materials and literature
Mandatory literature

- **Breazeal, C. (2003).** *Toward sociable robots.* International Journal of Human–Computer Studies, 59(1–2), 119–155.
- **Dautenhahn, K. (2007).** *Methodology & themes of Human–Robot Interaction.* In: HRI: A Brief Introductory Overview.

Course notes and presentations
Slides, lecture notes, workshop materials, and demonstration files provided by **Boston Dynamics guest lecturers (David Robert, Leland Hepler)**, the MOME Interaction Design MA, and the MOME Robotics Lab.
Recommended literature
Höök, K., et al. (2017). *Soma-based Design.* ACM CHI Proceedings.   **Matarić, M., Eriksson, J., Feil-Seifer, D., & Winstein, C. (2007).** *Socially assistive robotics for post-stroke rehabilitation.*   **Shusterman, R. (2012).** *Thinking Through the Body: Essays in Somaesthetics.* Cambridge University Press.   **Fong, T., Nourbakhsh, I., & Dautenhahn, K. (2003).** *A survey of socially interactive robots.* Robotics and Autonomous Systems.

Learning outcomes	
Knowledge	Critical understanding of H.R.I.
Skills	Planning and deploying prototypes of basic robots
Attitude	Independent approach to robotic interactions
Autonomy and Responsibility	Independent decision making in the professional field

Exemption
<u>No exemption may be granted from participation in or completion of the course.</u>

Curricular connections		
Unit	Parallel courses	Course proportion in unit
Course prerequisites	Special subject prerequisites	Is it available as an elective?
		Yes

Guidelines and rules for the use of artificial intelligence in the course
The use of artificial intelligence at the university is subject to the Artificial Intelligence and Plagiarism Regulations of the Moholy-Nagy University of Art and Design.

Materials needed for the course	**Who provides the materials?**
Equipment or material requirement 1	Tech Park / Programme / Student / Other
Equipment or material requirement 2	

Other information, comments