

Name	Prototyping Living Probes
Codes	M-KH-E-201-FS-262701-05 / M-KH-201-FS-262701-05
Host	MA School
Location	U_312

Course info			Subject info			
Course Type	Contact hours	Home study hours	Comprehensive Subject	Subject type	Semester	Subject credit value
Course week	5X8 hours	4X3 hours			26/27/1	

Recommendation
The course is intended for MA1 and MA2 students, who are interested in prototyping with sensors and living organisms.

Short description
What if a kombucha leather patch could blush when you touched it? What if a mycelium tile could whisper to its neighbor across the room? What if you could generate music from coffee grounds? "Prototyping Living Probes" is a hands-on studio where MA students from across the university come together to design, build, and interrogate small experimental objects that sit somewhere between organism and interface. We'll grow, mold, wire, solder, and observe — treating biomaterials and sensors as collaborators rather than supplies. Expect mess, surprise, productive failure, and at least one moment where you're not sure if your prototype is alive or just damp. The "probe" framing matters: we're not designing finished products. We're crafting speculative artifacts that ask questions about touch, growth, decay, attention, and what it means for a designed thing to behave more like a creature. Bring curiosity. Bring patience for slow materials. Bring a willingness to share a workbench with someone whose discipline you've never collaborated with before.

Teachers				
Name	Contact information	Teaching hours	Short BIO	Open hours
Mary Karyda	maria.karyda@mome.hu	40		
Dóra Szentandrás	szentandrasi.dora@mome.hu	20		
Balint Ligeti	ligeti.balint@mome.hu	40		
Caglar Genc	genc.caglar@tuni.fi	24		
Ferran Altarriba	ferran.altarriba@eram.cat	32		

Course scheduling	
Course format	Weekly class appointments

Each day: frontal presentation, group discussion, workshop, mini field study Last day: studio work on research plan			Each days (course week): 9-17
Details of each session's type and schedule, showing the teacher's role			
Week	Date	Weekly educational content	Studio/workshop
1	October 12	Encountering Introductions, framing lecture on living probes and more-than-human design. Material library tour. Small group exercises with biomaterial samples. Brief: choose an interaction you want to investigate.	U_312
2	October 13	Growing & Wiring Parallel tracks. Morning: biomaterial preparation (casting, inoculating, mixing). Afternoon: sensor and microcontroller crash course. Concept sketches due by end of day.	U_312
3	October 14	Building Full studio day. Prototypes take shape. One-on-one tutorials. Mid-week pin-up at 4pm — informal, messy, expected.	U_312
4	October 15	Tuning Refining interactions, debugging electronics, observing how materials are behaving (or misbehaving). Documentation push: photo, video, field notes.	U_312
5	October 16	Sharing Morning: final assembly and rehearsal. Afternoon: open studio presentation. Each team demonstrates their probe and shares a "field report" of what it taught them.	U_312

Course completion requirements, prerequisites, and evaluation				
Students' duties				
Requirements, assignments	Form of evaluation	Evaluation criteria	Deadline	% in evaluation
The probe itself	a working or semi-working prototype demonstrating one investigated interaction		Last day of the course week	40%
Field report	a short documentation artifact (zine, video, web page, or printed booklet) capturing the probe's behavior, your observations, and what it provoked		Last day of the course week	30%
Studio engagement	participation in tutorials, pin-ups, and cross-disciplinary exchange		Throughout	20%

Final presentation	a 10-minute share-out on Day 5		Last day of the course week	10%
General requirements				
e.g. eligibility criteria for the exam, free-form description				

Course materials and literature
Mandatory literature
Course notes and presentations
Recommended literature
Ramirez-Figueroa, C. (2022). Biomaterial probes: creative practice engagement with living systems. In <i>Creative Practice Inquiry in Architecture</i> (pp. 206-217). Routledge.
Myers, W. (2012). <i>Bio Design: Nature, Science, Creativity</i> . New York: Museum of Modern Art.
Bolzan, P., & Standoli, C. E. (2023). Prototypes as learning tools for exploring biomaterials. In <i>Driving Design. Collective approaches enriching design principles</i> (pp. 100-111). Distributed Design Platform in collaboration with IaaC.
Ginsberg, A. D., Calvert, J., Schyfter, P., Elfick, A., & Endy, D. (2014). <i>Synthetic Aesthetics: Investigating Synthetic Biology's Designs on Nature</i> . Cambridge, MA: The MIT Press.

Learning outcomes	
Knowledge	Students will understand the conceptual lineage of probes in design research from cultural probes to technology probes to speculative and critical design and be able to situate their own work within this tradition. They will gain foundational knowledge of selected biomaterials (their composition, growth conditions, lifespan, and failure modes) and of basic sensing and microcontroller principles relevant to soft and unconventional substrates. They will be familiar with key debates in biodesign and more-than-human design, including questions of agency, care, and temporality in living artifacts.
Skills	Students will be able to prepare and work with at least one biomaterial, integrate basic sensors and microcontrollers into non-standard substrates, and translate a research question into a working prototype. They will practice cross-disciplinary communication — articulating their thinking to peers from unfamiliar fields — and develop documentation skills suited to objects that change over time, including photographic, video, and written field-note formats.
Attitude	Students will cultivate curiosity toward unpredictable materials and an experimental disposition that treats failure as data rather than defeat. They will approach biomaterials as collaborators with their own timescales and behaviors, rather than as passive supplies, and engage with cross-disciplinary peers in a spirit of mutual translation rather than disciplinary defense. They will develop sensitivity to the ethical and ecological implications of working with living and biological matter.
Autonomy and Responsibility	Students will take ownership of their own line of inquiry within the studio, making independent decisions about material choices, interaction framing, and documentation strategy. They will manage their time across parallel

	tracks (biological growth cycles, technical iteration, conceptual development) and take responsibility for the safe and considered handling of biological materials and electronic components. In group settings, they will contribute reliably to shared studio practice and peer feedback, and reflect critically on their own process and its implications.
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Exemption
<u>No exemption may be granted from participation in or completion of the course.</u> In individual cases, the student must discuss the details of a full or partial exemption with the instructor and the programme lead.

Curricular connections		
Subject	Parallel courses	Course proportion in subject
N/a		
Subject prerequisites	Special subject prerequisites	Is it available as an elective?
N/a		Yes/No

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 Policy of the Moholy-Nagy University of Arts.

Materials needed for the course	Who provides the materials?
none	none

Other information, comments
This course, and the activities carried out during it, fall under the scope of Section 6 (1) of the University's Intellectual Property Management Regulations, effective September 1, 2021. Accordingly, participating students will enter into an agreement with the University in line with Section 6 (3) of the Regulations, including the transfer of economic and usage rights of intellectual creations produced during the course to the University under the terms specified in the contract. Furthermore, the student is obligated to maintain full confidentiality regarding the entire course—especially concerning the subject of the course, the activities, the works, creations, and other results, as well as the circumstances of their creation—and may not disclose, publish, or make any information public, except as otherwise specified in a signed written agreement necessary for completing the course. Acceptance of these conditions is a prerequisite for enrolling in the course. By selecting the 'Course Registration' option, the student acknowledges awareness of these conditions and agrees to participate in the conclusion of the relevant agreement.