

Name

# Speculative Design Meets FoodTech: Co-Creating the Future with Soft Matter and Immersive Prototyping

Classroom ☐  
 Studio or workshop ☐  
 External venue ☐  
 Online ☐

Codes

*M-KH-E-201-FS-252601-08, M-KH-201-FS-252601-08, B-KH-201-FS-252601-08*

Host

Design Institute

Type ECTS Contact hours Student work Course type Semester Unit

Basic info

Practice	-	40	-	Course week	Academic year 2025/2026, Fall	-
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Recommendation

This 5-day intensive workshop invites master's students interested in future-oriented design, food innovation, and speculative thinking. It is for you if you wish to explore how design can address social issues through material experimentation, immersive technologies, and transdisciplinary collaboration. Through a unique mix of 3D/4D printing, soft matter engineering, and speculative design, this program empowers students to imagine and prototype high-impact food experiences for tomorrow's society.

Short Description

Speculative Design Meets FoodTech is a future-focused workshop that blends material innovation, design fiction, and soft robotics to reimagine the role of food in society. Students will explore soft matter technologies such as gel-based 3D/4D printing and immersive prototyping (VR/AR), and use speculative design methods to develop concepts addressing social and cultural issues. In interdisciplinary teams, participants will prototype food experiences that tell stories, spark reflection, and challenge existing systems. The program is part of a broader cultural exchange between Hungary and Japan, with project outcomes potentially exhibited at the Japanese Embassy in Budapest in 2026.

Teachers

Name	Contact information	Short bio	Open hours
Hidemitsu Furukawa (Yamagata University) : Professor of Mechanical Engineering / (T-EAT Inc.): CTO	furukawa@yz.yamagata-u.ac.jp <a href="https://hidefurukawa.com/">https://hidefurukawa.com/</a> <a href="https://swel.jp/">https://swel.jp/</a>	Hidemitsu is a professor at Yamagata University and director of the SWEL lab, focusing on soft matter, 3D/4D printing, and foodtech.	
Shoko Usui (Yamagata University): Associate Professor of Arts-based Learning	usui@yz.yamagata-u.ac.jp <a href="https://swel.jp/">https://swel.jp/</a>	Shoko is an associate professor at Yamagata University working at the intersection of art education, media design, and industry collaboration.	
Naoyuki Ito (F-EAT Inc.): CEO and FoodTech Innovator	nao@f-eat.inc <a href="https://f-eat.inc/">https://f-eat.inc/</a>	Naoyuki is the CEO of F-EAT Inc., leading future food innovation through academic-industry partnerships in Japan.	
Mai Nomura (KNOTWORK Inc., CEU Business School): Global Strategy and Innovation Liaison	nomura@knotwork.jp	Mai is the CEO of KNOTWORK Inc. and strategic manager at CEU Business School, bridging design, diplomacy, and social innovation.	
MOME Faculty(s): Design educators and speculative design mentors			

Semester schedule

Course scheduling	Daily class appointments
In one block	9 AM – 5 PM

#	Date	Daily educational content
1	Monday, 13th October 2025	<b>Introduction I</b> <b>Title:</b> <i>Soft Matter &amp; Speculative Design Foundations</i> <ol style="list-style-type: none"> <li><b>Lecture:</b> <i>Soft Matter and 3D Food Printing – Scientific and Technological Perspectives</i>  <b>Instructor:</b> Prof. Hidemitsu Furukawa  → Introduction to the theory and future potential of soft materials and food-based additive manufacturing.</li> <li><b>Lecture:</b> <i>Yamagata University Case Studies: 3D Food Printing and Educational Innovation</i>  <b>Instructor:</b> Assoc. Prof. Shoko Usui  → Insights from interdisciplinary art-tech projects in Japan, focused on food, media, and pedagogy.</li> <li><b>Lecture:</b> <i>Comparative Food Cultures: Japan and Hungary</i>  <b>Instructor:</b> Mai Nomura  → An intercultural exploration of how food reflects social values and narratives in both countries.</li> <li><b>Workshop:</b> <i>Team Formation &amp; Social Issue Mapping</i>  <b>Facilitators:</b> MOME Faculty  → Students form interdisciplinary teams and identify social/cultural issues to explore through design.</li> </ol>
2	Tuesday, 14th October 2025	<b>Ideation &amp; Strategy I</b> <b>Title:</b> <i>Designing for the Future of Food</i> <ol style="list-style-type: none"> <li><b>Lecture:</b> <i>Introduction to Speculative Design Methodologies</i>  <b>Instructor:</b> MOME Digital Craft Faculty  → Core principles of speculative and critical design, focusing on food futures and systems thinking.</li> <li><b>Lecture:</b> <i>Narrative and Immersion in XR: Creating Food Stories in VR/AR</i>  <b>Instructor:</b> Naoyuki Ito (CEO, F-EAT Inc.)  → Practical insights from media production and immersive storytelling applied to food experience design.</li> <li><b>Workshop:</b> <i>Concept Development Sprint</i>  <b>Facilitators:</b> All Instructors  → Teams generate and refine initial design concepts rooted in identified social issues.</li> <li><b>Workshop:</b> <i>Storyboarding &amp; Speculative Scenario Building</i>  → Students create narrative frameworks that support the development of their speculative food solutions.</li> </ol>
3	Wednesday, 15th October 2025	<b>Prototype &amp; Feedback I</b> <b>Title:</b> <i>First Contact with Materials</i> <ol style="list-style-type: none"> <li><b>Workshop:</b> <i>Mock-up Prototyping – Gel / Food / Interface</i></li> <li><b>Workshop:</b> <i>Feedback Session – Peer + Guest review</i></li> <li><b>Lecture:</b> <i>Thinking through Material – Shoko Usui + Furukawa</i></li> <li><b>Workshop:</b> <i>Narrative Testing – Simulate &amp; Iterate</i></li> </ol>
4	Thursday, 16th October 2025	<b>Refinement &amp; Experience Design</b> <b>Title:</b> <i>Designing the Encounter</i> <ol style="list-style-type: none"> <li><b>Workshop:</b> <i>Second Prototyping Round</i></li> <li><b>Lecture:</b> <i>Designing Food Experience – F-EAT / MOME / Nomura</i></li> <li><b>Workshop:</b> <i>UX &amp; Immersion Refinement</i></li> <li><b>Presentation Rehearsal:</b> <i>Feedback from Cross-disciplinary Panel</i></li> </ol>
5	Friday, 17th October 2025	<b>Final Pitch I</b> <b>Title:</b> <i>Showcase I – First-Year Visions</i> <ol style="list-style-type: none"> <li><b>Final Presentation Session</b> – Each team presents 5–7 minutes</li> <li><b>Expert Review &amp; Reflection Roundtable</b></li> <li><b>Discussion:</b> <i>How to carry projects forward into Year 2</i></li> <li><b>Documentation &amp; Wrap-up</b></li> </ol>
6	Monday, TBD 2026	<b>Introduction II</b> <b>Title:</b> <i>Critical Re-entry into Futures</i>

		<ol style="list-style-type: none"> <li>1. <b>Lecture:</b> Updated Global FoodTech Trends – <i>Mai Nomura</i></li> <li>2. <b>Lecture:</b> Revisiting Soft Matter – <i>Prof. Furukawa</i></li> <li>3. <b>Workshop:</b> Team Realignment &amp; Goal Setting</li> <li>4. <b>Lecture:</b> XR &amp; Transmedia Updates – <i>Naoyuki Ito</i></li> </ol>
7	Tuesday, TBD 2026	<b>Ideation &amp; Strategy II</b> <b>Title:</b> Designing for Impact <ol style="list-style-type: none"> <li>1. <b>Lecture:</b> Advanced Speculative Design – <i>MOME Faculty</i></li> <li>2. <b>Workshop:</b> Business &amp; Impact Model Mapping</li> <li>3. <b>Lecture:</b> High-Value Concept Building – <i>Shoko Usui</i></li> <li>4. <b>Workshop:</b> Partner/User Persona Design</li> </ol>
8	Wednesday, TBD 2026	<b>Prototype &amp; Feedback II</b> <b>Title:</b> Polishing the Future <ol style="list-style-type: none"> <li>1. <b>Workshop:</b> Prototyping with Purpose – <i>Refined Formulation</i></li> <li>2. <b>Mentoring Session:</b> Industry/NGO Feedback</li> <li>3. <b>Lecture:</b> Systems Thinking for Food – <i>Guest faculty TBD</i></li> <li>4. <b>Workshop:</b> Feedback &amp; Re-iteration Loop</li> </ol>
9	Thursday, TBD 2026	<b>Business &amp; Impact Design</b> <b>Title:</b> Designing the Ecosystem <ol style="list-style-type: none"> <li>1. <b>Workshop:</b> Speculative Scenarios to Real-World Systems</li> <li>2. <b>Lecture:</b> Funding, Impact &amp; Communication</li> <li>3. <b>Workshop:</b> Finalization of Presentations</li> <li>4. <b>Mentoring Review</b></li> </ol>
10	Friday, TBD 2026	<b>Final Pitch II</b> <b>Title:</b> Showcase II – From Speculation to Social Value <ol style="list-style-type: none"> <li>1. <b>Final Business Model Pitch – Public Presentations</b></li> <li>2. <b>Exhibition Walkthrough (optional physical outputs)</b></li> <li>3. <b>Roundtable: Social Impact &amp; Diplomacy Through Design</b></li> <li>4. <b>Closing &amp; Certification Ceremony</b></li> </ol>

Requirements and evaluation	Assignments	Evaluation criteria	Deadline	% in evaluation
	Participation in class	Minimum 4 out of 5 days required	-	

Compulsory readings
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Recommended readings
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Learnings	Knowledge	Understand speculative design principles and their role in envisioning future food systems. Familiarity with soft matter technologies including 3D/4D printing and immersive tools.
	Skills	Ability to prototype using food-safe materials and emerging tech (e.g., VR/AR). Team-based problem solving and conceptual development through interdisciplinary methods.
	Attitude	Openness to unconventional approaches and speculative thinking. Curiosity-driven exploration and empathy towards social and cultural challenges.
	Responsibility	Contribute actively to team efforts and international co-creation. Take initiative in developing and presenting socially meaningful design work.

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]	
	Másik kurzus címe	
	Harmadik kurzus címe	

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

Misc.  
information