

The Home of the Future

Project Brief

Course: Emerging Tech

Duration: 8 Weeks

Tools: 3D Audio, Projection Mapping, TouchDesigner, Ableton Live, After Effects, Video Editing Tools

Project Overview

Students will forecast **home interfaces 10 years from now**, designing **forward-thinking interactions** for a future living space. They will use **Futures Thinking** to anticipate new needs, integrate **the Internet of Things**, and develop working prototypes using advanced multimedia tools.

Students will work in **teams** to produce a final **immersive presentation** showcasing their work. The presentation will take place in an **immersive room** with **three-wall projections** and an **eight-channel spatial sound system**. They will construct **foam core models** and physical surfaces for **projection mapping** to simulate home environments. Additionally, they will integrate **triggers, buttons, and sensors** to demonstrate interactive experiences within the simulated future home.

Learning Goals

- Explore how to anticipate and design for future technologies using futures thinking methods.
 - Explore new interaction models beyond traditional screens.
 - Experience new tools such as 3D audio, projection mapping, and immersive visual tools.
 - Investigate the evolving role of interconnected home technologies.
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Project Schedule

Week 1 March 6, 2025	Introduction to Futures Thinking & Signals Identification	• Discussion: What is Futures Thinking? Why does it matter for designers? • Activity: Signal Scouting—students find and present current trends that could shape future homes (AI, sustainability, robotics, spatial computing, etc.) • Assignment: Create a "Future Signals Board" documenting identified trends. 1 Introduction to Futures Thinking & Home Technology • Discussion: What is Futures Thinking? Examples of past future predictions. • Exercise: Home Technology Assessment ○ List all current home technologies students use. ○ Conduct interviews with different generations about their home tech experiences. Homework Write a research report on existing and emerging home technologies. Include a comparison of past, present, and future trends.
Week 2 March 13, 2025	Forecasting & Speculative Design	• Discussion: How to extrapolate from signals to create future scenarios. • Activity: Future Wheel Exercise—students map out potential consequences of emerging signals. • Technical Workshop: Introduction to projection mapping tools and 3D spatial audio. • Assignment: Storyboard a future home concept based on their forecasts.

		2 Research & Forecasting Future Interfaces • Lecture: IoT & Smart Homes – What’s happening now? • Exercise: Create Personas & Future Scenarios ◦ Develop user personas for 2035 home residents. ◦ Brainstorm how they will interact with technology. • Homework: Develop 3-5 concept sketches for futuristic home interfaces. Provide a written justification for each design decision. (2 pages)
Week 3 March 20, 2025		
March 27, 2025	Spring Break	
Week 4 April 3, 2025		3 Low-Fidelity Prototyping (Storyboarding, Wireframes) • Lecture: Designing without screens – voice UX, gesture controls, minimal interfaces. • Exercise: Storyboard Interactions

		○ Sketch out how users interact with home technology. ● Homework: Create a digital wireframe or storyboard for your team's future home interface, highlighting key interactions. (PDF or slideshow)
Week 5 April 10, 2025	Designing Multi-Device Interactions	● Discussion: How devices communicate & work together in an intelligent space. ● Activity: Sketch interaction flows and physical prototyping plans. ● Technical Workshop: Prototyping with projection mapping & sound spatialization. ● Assignment: Build low-fidelity prototypes of one interaction in their future home
Week 6 April 17, 2025		4 Tool Workshops & Interactive Experiments ● Hands-on: In-depth workshops and demos (1-2 hours each) for: ○ Projection Mapping – Understanding projection techniques and mapping onto different surfaces. ○ 3D Audio – Spatial sound placement and movement. ○ TouchDesigner – Real-time interactive visuals. ○ Ableton Live – Audio sequencing for dynamic sound experiences. ● Exercise: Experiment with projection-mapped UI and spatial sound. ● Homework: Record a short video (1-2 minutes) of a prototype experiment using any of the new tools. Submit with a written reflection on the challenges and possibilities. (1 page)

Week 7 April 24, 2025	Prototyping & User Experience Refinement	• Technical Workshop: Implementing projection mapping, 3D sound, and interactive elements. • Activity: Peer testing—students test and iterate their interactive spaces. • Assignment: Begin finalizing prototype setup and refine interactions.
Week 8 May 1, 2025		5 High-Fidelity Prototyping & Iteration • Studio Work: Build out high-fidelity versions of interface prototypes. • Fabrication: Construct foam core models and projection-mapped surfaces. • Integration: Implement triggers, buttons, and sensors for interactivity. • Feedback Session: Peer reviews and refinement. • Homework: Finalize an interactive prototype and submit a written project brief summarizing the concept, user interactions, and technology used. (3-5 pages)
Final May 8, 2025	Final Presentations	• Presentation: Teams present their Future Home Concept, Prototypes, and Research. • Live Demo: Each group demonstrates their immersive installation. • Feedback & Discussion: Reflect on how Futures Thinking changed their approach.

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Final Presentations

- Students present their **Future Home Interface** in the immersive room.
- Submit a final reflection on the project, addressing what worked, what didn't, and how the experience changed their perspective on future homes. (2 pages)

Discussion Topics

- What predictions about the future have come true? What failed?
- How do cultural differences shape future home technology?
- Ethical concerns of AI, surveillance, and automation in future homes.