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.

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. 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.

		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		Cow-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		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		 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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	 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 Al, surveillance, and automation in future homes.