

AI ROBOTIC MANUFACTURE - SYLLABUS

COURSE DESCRIPTION

A hands on course and workshop combining human centered design with state of the art technology. Students develop creative new ideas with a focus on emerging technology and bring their ideas to life. You will learn and use digital creation and fabrication tools, robotics, and artificial intelligence, while establishing a strong foundation in design and technology.

Students learn advanced critical thinking and STEM skills, by designing and producing original projects, and documenting them for their portfolios. Practical and entrepreneurial approaches to problem solving and innovation are covered.

PROJECTS AND EXERCISES ADDRESS

- (1) Strategies for developing original concepts, and the translation of those concepts into concrete outcomes.
- (2) The establishment of a technical foundation in prototyping, with an emphasis on learning through making.
- (3) Creating new experiences for people using state of the art technology.
- (4) Documentation of process, presentation, and the development of a strong portfolio.

TENTATIVE OUTLINE

WEEK 1

- Introduction and lectures
- Design process and in-class exercises
- Critique, testing, and iterative making

WEEK 2

- Hands on with creation and fabrication tools
- Input sensing, processing, output driving
- Materials and processes
- Prototyping and presentation

WEEK 3

- Start student projects
- Generate ideas
- Rapid Prototype
- Initial presentation
- Revision

WEEK 4

- Making final version
- User testing
- Documentation
- Process presentation

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