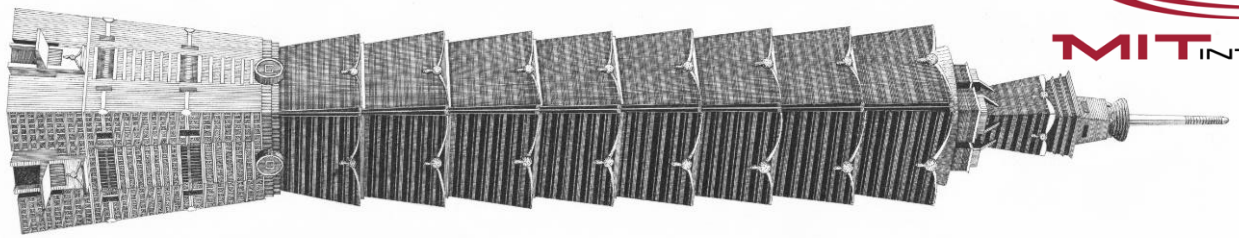
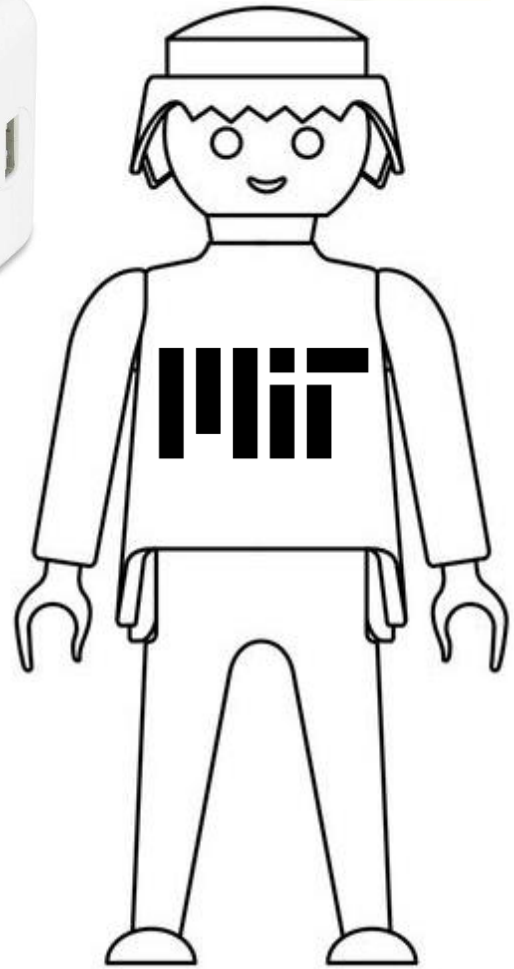


MIT INTRAMURALS

Inventor

How to CAD Almost Anything!



MIT IAP ‘26

Instructors: Andy Eskenazi
Mollie Johnson

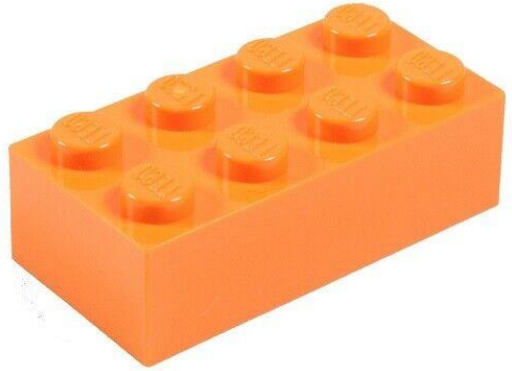
Session 1

MIT AEROASTRO

Agenda



- Quick intros!
  - Why CAD? Why VR?!
- Workshop logistics and important info
  - Overview of sessions and projects.
- Session 1:
  - Demo of the session's Inventor commands.
  - Demo of projects: 1st gen iPod classic, 1st gen iPod USB power adapter.
- Questions?
- Preview of Session 2



Quick Intros!

Me
(Andy)

You (in IAP 2025)!

1) Name, major, year
   - Eg: Andy, AeroAstro, PhD Y3.
2) Hometown
   - Eg: Buenos Aires, Argentina.
3) Spirit animal
   - Eg: Angus Aberdeen cow.
4) Why CAD almost anything?
   - Eg: I think it's cool to look at a random object and imagine how to cad it!

Why CAD? Why VR?

"I'm excited to learn how to CAD!"

"learning new skills"

"creating CAD models for 3D printing"

"make designs more efficiently"

"being more confident in my CAD skills"

"learning how to use Inventor"

"making a Trumpet"

"create 3D-printable anatomical models"

"learn how to do VR"

"getting hands-on with Unity"

"develop true fluency in CAD design"

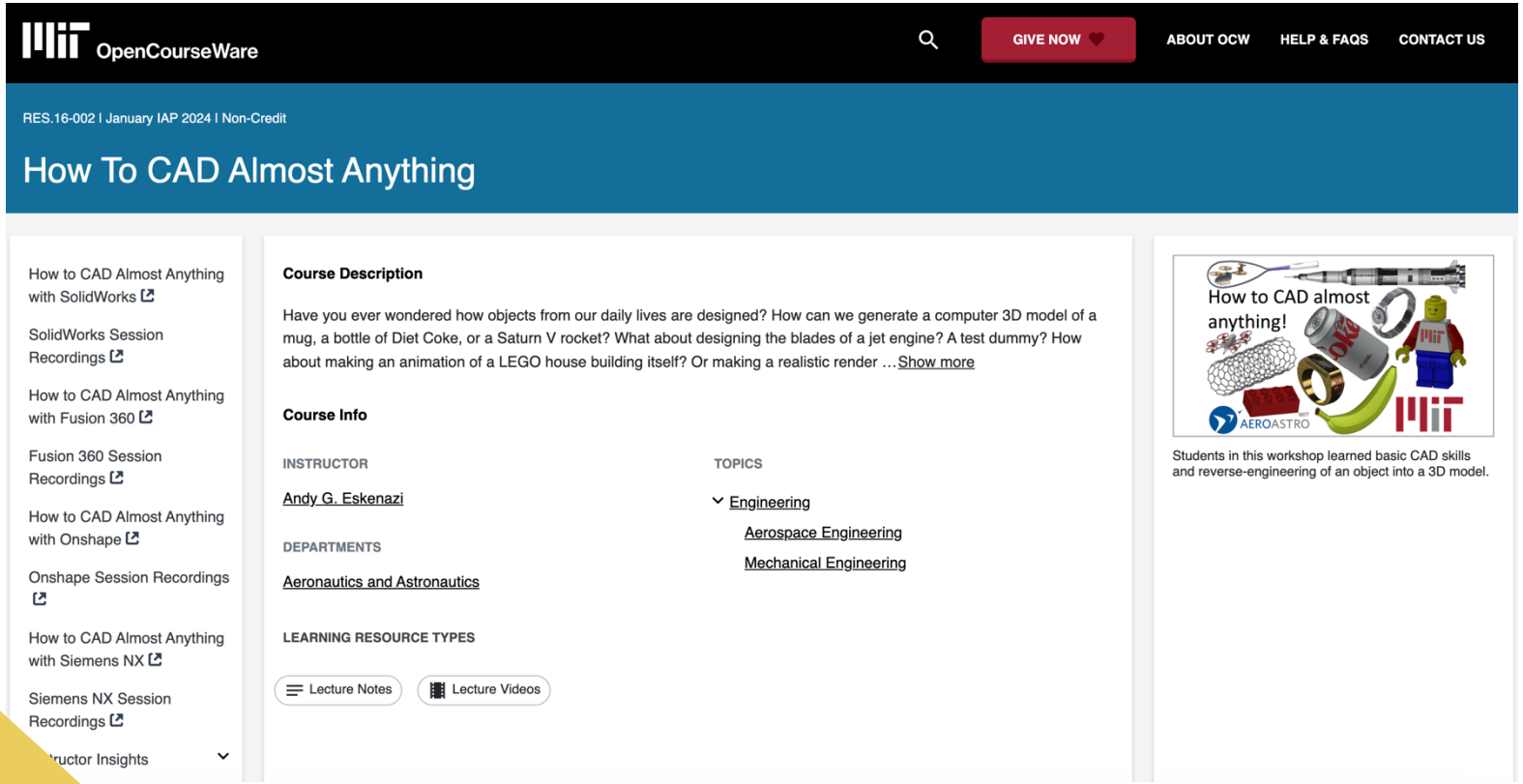
"what tools can help bring your imagination to life!"

"creative approach to CAD"

"the integration of CAD model into VR/Unity"

Why Inventor?

- Add another CAD software to the “How to CAD” OCW series.
- Used widely in industry, with lots of functionalities.
- Free for students and educators!



- Explore the differences with other CAD software, namely Solidworks!

Welcome!

How to CAD Almost Anything!

MIT IAP ‘26

Workshop logistics (CAD)

Week 1		Week 2		Week 3	
Session 1: January 13 (Tuesday)		**Session 3:** January 20		**Session 5:** January 27	
Sketches, basic feature commands, editing and defining sketches, coloring parts, changing material properties	▪ iPod classic ▪ iPod USB power adapter	Revolve, mirror, circular patterns, angled planes	▪ Tambourine ▪ Taipei 101 tower	Assemblies, exploded view, animations, engineering drawings	▪ LEGO 2x4 brick ▪ LEGO bridge assembly ▪ Engineering drawings
Session 2: January 15 (Thursday)		**Session 4:** January 22		**Session 6:** January 29	
Spline tool, sketch picture	▪ MIT Intramurals banner ▪ Sports keychain	Loft, sweep, review of previously learned commands	▪ Play Station 1 controller ▪ Banana!	Sketch/feature names, equations, design table, configurations	▪ Airplane economy seat

Important info

- Meeting times:
  - Tuesday: 3:00pm – ~5:00pm
  - Thursday: 3:00pm – ~5:00pm
- GIS & Data Lab (Rotch Library)
  - Open M – F: 10:00am – 6:00pm
  - 16 computers (all of which have Inventor on them).
- Online resources:
  - GitHub https://github.com/andyeske/How-to-CAD-Inventor.

How to CAD (and VR) Almost Anything!
IAP 2026 – AeroAstro Workshop

A compressed yet rewarding introduction to the parametric design software Inventor and game engine software Unity, for beginners (no experience at all) and pro-users alike. Come learn how to CAD (computer-aided design) and VR (virtual reality)-visualize essentially almost anything!

Yes, this could be YOU at the end of the workshop! You'll be equipped with the tools to design cool looking objects such as Spaceship Earth, a Scream Canister, a Green Alien, a Locomotive, a Mickey mug, and even a Luxo Jr. Lamp! These are all projects from the Summer 2025 "How to CAD Almost Anything! – Disney Edition".

Workshop Details

Subject Title:	How to CAD (and VR) Almost Anything!
Prerequisites:	Willingness to have fun and think outside the box!
Enrollment:	20.
Attendance:	Participants must attend all sessions.
Meeting Rooms:	CAD Sessions: GIS & Data Lab (first floor of the Rotch Library, 7-238). VR Sessions: 17-130 (The Hangar).
Meeting Times:	CAD Sessions (6): Tuesdays (T) and Thursdays (Th), 3pm – 5pm, on 01/13 (T), 01/15 (Th), 01/20 (T), 01/22 (Th), 01/27 (T), and 01/29 (Th). VR Sessions (2): Wednesdays (W), 4pm – 7pm, on 01/21 (W), 01/28 (W).

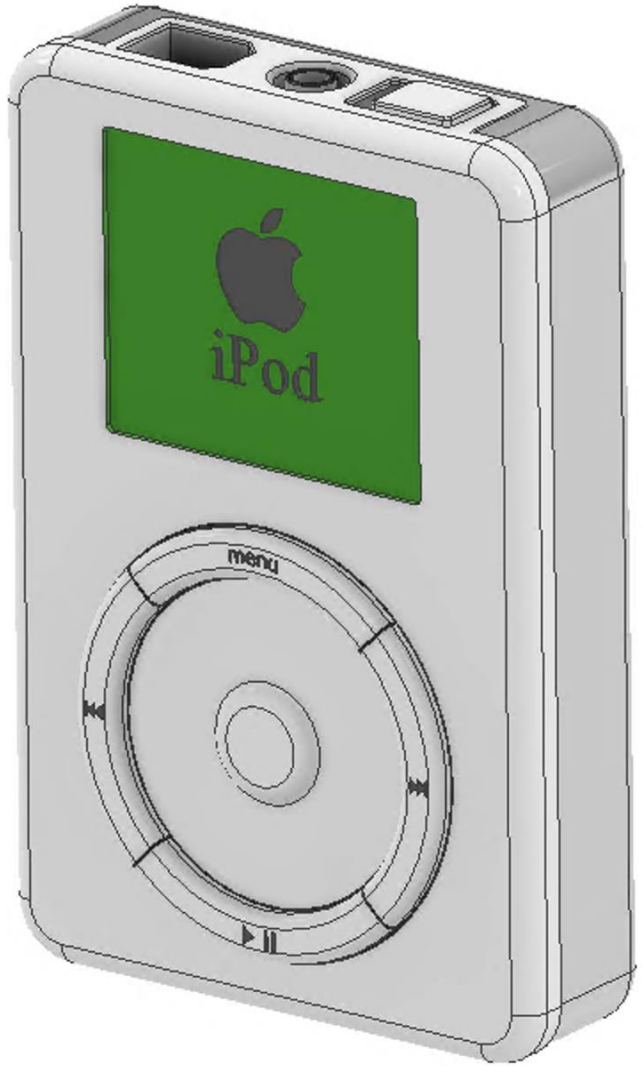
Check out the syllabus if you have more questions!

Session 1

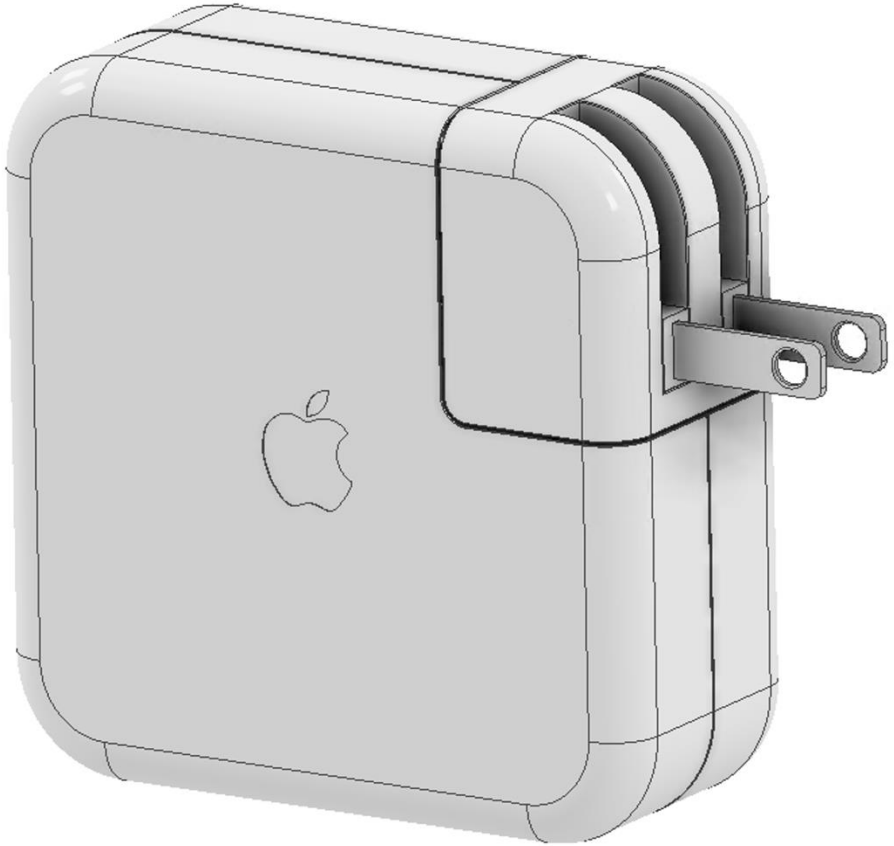
A first-generation iPod classic

A first-generation
USB power adapter

First-generation iPod classic



First-generation power adapter



Questions?

Preview into Session 2

An MIT Intramurals Banner

A key chain of your favorite sports team