

6.5310

Class 1

Feb. 4, 2025

6.5310: Geometric Folding Algorithms:
Linkages, Origami, Polyhedra

Prof. Erik Demaine

TAs: Josh Brunner, Jenny Diomidova

<https://courses.csail.mit.edu/6.5310/spring25/>

Tuesdays & Thursdays at 11am - 12:30pm class (req'd)
12:30 - 1pm more/office hours

Technical content overview:

- linkages (1D), paper (2D), polyhedra (3D)
- design (target $\rightarrow$ folding) vs.
foldability (folding $\rightarrow$ target)

Intended audience:

- computer science & mathematics:
cool problems & algorithms, lots of open problems,
growing software tools
- designers: cool way to make things, inspiration
- origamists: deepen your understanding of folding

We will assume familiarity with algorithms,
but are happy to fill in gaps in your knowledge

Requirements: (taking for credit)

- 20% REQUIRED
- watch all video lectures ($2 \times 1.5 \text{ hr / week / speed}$)
- 40% REQUIRED
- attend class (TR 11-1:30+):
 - new material
 - progress reports
 - guest lectures
 - participate in problem solving
 - solved problems (pset puzzles)
 - open problems (research!)
 - coding problems (implement/visualize algorithms)
 - design problems (create!)
- 50% OPTIONAL
- problem sets, weekly
 - due TUESDAYS @ 10am, including PS1 Feb. 11
- 50% OPTIONAL
- project
 - based on in-class work on open/coding/design
 - can be collaborative & done at any time
- TOTAL: 160%

Measurement:

[completion] on Coauthor

coauthor ≥ 1
post on Coauthor
by next MONDAY

COLLABORATE

Gradescope

code, write-up, present

Grading scheme:

- lowest-scoring component's weight reduced until $\sum \text{weights} = 100\%$
- ⇒ can skip project OR problem sets
OR do both to make up for lost points
- this decides your letter grade (A, B, ...); we may use other schemes for +/-