Introduction to Origami Art and Design

Fall 2023 Syllabus

Course Description

This course is for students interested in picking up a new hobby, and for students already experienced with origami looking to broaden and deepen their skills. No prior experience with origami is required.

Over the semester, students will improve their folding skills and learn to fold increasingly complex models. Students will also be introduced to a variety of folding techniques and styles, and they will learn methods and systems for origami design. By the end of the semester, students will be able to demonstrate their knowledge by folding complex models and designing simple models of their own.

Learning Goals

By the end of the semester, students will be able to:
1. Fold origami models by following diagrams.
2. Fold origami models by reading crease patterns.
3. Shape models in order to give them life and personality.
4. Design origami models using a variety of methods, such as using traditional bases, modifying existing bases, box pleating, and circle packing.

Course Structure

There will be 2 hours of in-person lecture every week, along with weekly assignments that are expected to take between 2-4 hours per week, depending on your folding speed. These assignments will mostly be a mixture of folding assignments (folding an assigned model) and design assignments (designing your own model!).

Assignments are assigned every week, but you will have two weeks to complete them. The idea is that you will be able to bring them into the next class if you need help.

Lecture
Lecture will be held in-person at Evans 748 on Wednesdays at 7pm-9pm.
Students will be assigned an assignment each week. Assignments will contain a mixture of folding and designing origami, as well as some reading and videos. Each student will have 2 assignment drops for the semester.

Homeworks will generally have two options - a “normal” and a “challenge” option. The challenge option, as the name implies, is geared towards those who would like to fold more challenging models. With any given assignment students are free to choose whichever option they feel best suits them, and are free to switch between “normal” and “challenge” options week to week if they so choose.

**Final Project**
Over the last several weeks of the course, students will pick and fold a challenging project of their choice. Students will need to incorporate some amount of original ideas into their project. This can be done either by designing a completely original model, or by shaping the model substantially. Students will show-and-tell their projects at the final lecture.

**Internet**
Bcourses - Students will submit assignments through Bcourses.
Discord - Communication between students and instructors will happen through Discord. It is required that students join the course Discord server. Part of each assignment will be posting photos of models that you are most proud of to Discord to share with your fellow students. Additionally, students can comment and react to each other’s models, give and ask for advice, post progress pictures, etc.

**Prerequisites**
No folding knowledge or experience is expected of students taking this course. Students of all skill levels will benefit from taking this course, whether they are complete beginners or advanced folders. There are no required materials or textbooks for this course: the instructors will provide origami paper and diagrams.

**Grading Policy**
Students may receive a NP for any of the following reasons:
- More than 2 unexcused absences to lecture.
- More than 2 incomplete homework assignments.
- Incomplete final assignment.
- Unexcused absence for the final lecture.
If any issues come up during the semester, contact us and we will work something out.
Collaboration and Academic Dishonesty

Collaboration is highly encouraged for assignments, but everyone should submit their own models. Students are encouraged to give and receive help on assignments in the class discord. It would be awesome if the discord gets blown up each week by messages about origami folding and design!

However, there are a lot of origami designs out there on the internet. Please do not plagiarize and submit someone else’s design as your own. If caught, you will receive a NP in the class.

Side note: During class, some students may finish folds faster than others. Those students are encouraged to help out their classmates, if help is desired. Students should find that the process of coaching another student helps deepen their own skills and understanding. However, please do not fold for your fellow classmate. You should never touch someone else’s model/paper.

Students with Disabilities

This course aims to be as inclusive as possible for students of all backgrounds. If you have any special circumstances or need accommodations, please contact us and/or meet with the disabled Students’ Program (DSP) which serves Berkeley students with learning, psychological and physical disabilities.

Contact Information

Course Staff:
Theo Lysek (he/him/his): theolysek@berkeley.edu

Students can also contact us through the Discord server or at calorigami@gmail.com.
Weekly Topic Breakdown

Course is split into two sections: folding and design. The first four weeks (folding) are geared towards getting all students onto a similar skill level of folding. From there, we will cover more advanced theory and design during the latter portion of the course. During design lectures, we will fold more complex models that incorporate design techniques, as well as design models of our own. Also covered will be cultural and historical context surrounding origami, as well as modern origami communities, famous artists, styles, and resources. These will be sprinkled in throughout the course.

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic (subject to change with student feedback)</th>
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<tbody>
<tr>
<td>1 (folding)</td>
<td><strong>The Importance of Folding Neatly</strong> (easy models) mountain and valley folds, squash folds, pull out folds, and the preliminary base</td>
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<tr>
<td>2 (folding)</td>
<td><strong>Introducing Shaping</strong> (easy and intermediate models) petal fold, inside reverse fold, and rabbit ear, waterbomb base, bird base, fish base</td>
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<tr>
<td>3 (folding)</td>
<td><strong>More Advanced Techniques</strong> (intermediate models) outside reverse folds, sinks, double rabbit ears, frog base</td>
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<tr>
<td>4 (folding)</td>
<td><strong>Putting It Together</strong> (intermediate to difficult models) synthesis of all the techniques in weeks 1 to 3, and tackle some more challenging models</td>
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<td>5 (design)</td>
<td><strong>Introduction to Origami Design Theory</strong> bases, flaps, stick figures</td>
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<tr>
<td>6 (design)</td>
<td><strong>Introduction to Crease Patterns and Maps</strong> crease patterns vs. crease maps, folding from crease patterns</td>
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<td>7 (design)</td>
<td><strong>Point Splitting</strong> How to get more flaps</td>
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<td>8 (design)</td>
<td><strong>Grafting</strong> How to get more paper</td>
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<td>9 (design)</td>
<td><strong>Box Pleating I</strong> Designing using box-pleating in a directed play style.</td>
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<tr>
<td>10 (design)</td>
<td><strong>Box Pleating II</strong> Designing using box-pleating in a systematic style.</td>
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<td>11 (design)</td>
<td><strong>Survey</strong> Miscellaneous cool topics: tessellations, modulars, wet folding, etc. Topics TBD based on the interests of the class.</td>
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<td>12 (design)</td>
<td><strong>Final Project Presentations</strong> Show-and-tell with everyone’s final projects!</td>
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