


# Course Syllabus

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## TCORE 102 Course Syllabus

- Autumn Term 2020 (SLN 22023)
- Instructor: Ruth Vanderpool
- Best method to contact: email [rvanderp@uw.edu](mailto:rvanderp@uw.edu) (<mailto:rvanderp@u.washington.edu>)
- Drop-In Hours: Tuesdays 3:30-4:30pm & Thursdays 9-10am
  - <https://washington.zoom.us/my/rvanderp>  (<https://washington.zoom.us/my/rvanderp>)

### Class Time:

- Tuesday & Thursday 1:30-3:30pm
- Zoom meeting ID: 983-94-782419
- Zoom Link: <https://washington.zoom.us/j/98394782419>  (<https://washington.zoom.us/j/98394782419>)

### Course Description:

Origami is an art (and mathematics!) that begins with just paper but produces some staggeringly beautiful and interesting forms. This course uses Origami and general paper folding to introduce students to geometric and scientific thinking, artistic and creative problem solving in restrictive settings, and the history of math & sciences.

Generally, the Core program consists of a coordinated series of courses that represent the various disciplines in the university. This course fulfills one of the university's general education requirements in each of the areas of knowledge. The core courses are designed to both support and challenge you to develop the critical thinking, writing, research, and analytical skills you'll need at UWT while introducing you to relevant topics in the social sciences, humanities, and sciences.

### Prerequisites:

Prerequisite Technical Knowledge: General familiarity with computers, email systems, accessing the internet, installing software, and manipulating/digitizing files. Specific requirements for this class are posted in the Computer Requirements page of the Technology Module.

### Course Objectives:

By the end of the course students should be able to:

- express geometric ideas to others through precise writing or speech.
- solve open-ended geometric problems involving lines, triangles, and circles.
- define origami & provide some history of its development.

More generally, by the end of this course students will have the skills to:

- express ideas clearly in writing and speaking in order to synthesize and evaluate information.
- identify, analyze, and summarize/represent the key elements of a text.
- self-assess personal strengths and how they help overcome weaknesses.
- approach a complex issue by breaking it down into manageable pieces.
- make connections among assignments and readings to develop a sense of the "big picture".
- collect, evaluate, and analyze information to solve problems or answer questions.

### Rights of the Learner:

As a student in this class, you have the right:

- to be confused,
- to make a mistake and to revise your thinking,
- to speak, listen, and be heard, and
- to enjoy doing mathematics.

## Opportunities for Mastery:

- Practice problems assigned have answers provided so work can be checked.
- Discussion board responses improve PattyHW averages.
- Two-stage quiz structure allows for improving quiz scores immediately.
- Existing tokens that allow for either a late PattyHW submission or OrigamiHW regrade.
- Project marks can be improved by participating in the second, optional project.

**Required Items:** Digital (free!!) copies of the below text are available through Canvas.

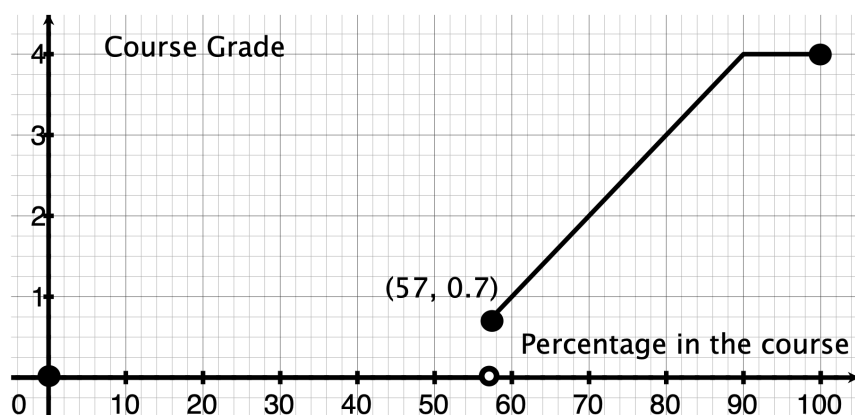
- Textbook: Lang, Robert. *Origami Design Secrets: Mathematical Methods for an Ancient Art* 2nd Ed. ISBN: 978-1-56-881436-0 Digital copies of the
- Wheater, Carolyn. *Practice Makes Perfect Geometry* ISBN: 978-0-07-163814-2
- Calculators: Either scientific or graphing are welcome. Although no internet is allowed in the first stage of the quizzes, you are welcome to use Desmos Test Mode on a smart device if you have one.

## Tentative Schedule:

Upcoming due dates for assignments and quizzes are posted in the "Coming Up" section on the right side of your screen immediately after you log into Canvas. The due dates for the entire course are listed at the bottom of this Syllabus and can also be found on the Calendar link (at the top of this page). Details about topics to learn, material to review, and projects that need work are posted in Daily Modules (whose link is always available on the left when in the TCore 102 Canvas course) and summarized in the "Objectives & Tasks" page.

## Evaluation/Grading:

Category:	Course Weight:	
Journal	15%	
Origami HW	15%	
Patty HW	20%	
Quizzes	15%	
Scaffolding for Project	10%	
Project	25%	



## Communications/Netiquette:

Regular and respectful communication with classmates and the instructor is expected. Required discussions and video presentations will be made explicit on the "Objectives & Tasks" page in the weekly Module that they are assigned. The due dates for the required communications will appear in the same locations as the due dates for WrittenHW, WebHW, and exams (mainly the "Coming Up" section when you first log in and on all course calendars). These required communication assignments are designed to build technical skills so that you can make use online resources such as the TLC's online tutoring service. General communications policies and netiquette are posted [here](#).

## Journal:

Journal prompts will be posted on Canvas and are due an hour before the next class meeting. These prompts are to get you to think about assigned materials and prepare you for class. They are marked only for completion. Late journal entries are not accepted but you can miss up to four journals without it impacting your grade.

## Homework Policies:

There are two kinds of home works regularly assigned and collected for this class: Origami Homework (OrigamiHW) and Patter Paper Activity (PattyHW) write-up's. Ten minutes will be set aside at the start of every class to address homework questions that come up. Assignments are due by the start of class the day they are due. Once I have started marking an assignment, I no longer accept late work unless a Token is used.

- OrigamiHW: These are to be completed individually although you are welcome to work with others for help. Once completed, students must take three photo's of the object (generally from the top, side, and front), convert the photo's into one pdf (consider using CamScanner for the conversion), and upload these into the associated Canvas Assignment.
- PattyHW: These activities are begun in class and worked on as a group. Given the Student Learning Objectives described above, your work will be largely graded by the *process*, *explanation*, in addition to the *correctness*. Because of this, you will have to spend more time on your homework than you would on a more traditional, computation-based math course.

### Tokens:

You start the quarter with **4 tokens**.

- You may exchange one token for the opportunity to *rework and resubmit an OrigamiHW or PattyHW*. The new points earned will be added to the original score.
- You may exchange one token to submit a late assignment without penalty.

Late assignments without tokens will be penalized 50%, if marked at all.

At the end of the quarter, any unused tokens will accumulate extra credit towards your overall PattyHW score.

## Quiz Policy:

Quizzes are administered in a two-stage process that begins once opening up a Quiz Assignment. They are provided Thursdays during class & remain open until 8pm Friday. Quizzes focus on materials introduced the previous week.

In the first stage (corresponding with question 1), students have 15 minutes to take the quiz with no collaborations but with a prearranged amount of notes (generally a 3in x 5in notecard). After 15 minutes, students are given 15 additional minutes to convert their work to a pdf and upload their answers to Canvas. Once the first stage is complete, students indicate their completion with a green checkmark on Zoom. If everyone completes the first stage early, then the class can move to the second stage early and increase their time accordingly.

The second stage (corresponding with question 2) again gives students 15 minutes to take the quiz, but now with open notes, open book, and collaboration with an assigned student group. If you take the quiz during class, your group will be given a breakout room for this second stage in which you can collaborate freely with each other. After 15 minutes, one (pdf) copy of

the completed quiz is uploaded by one group member into Canvas. Be sure to write your group's names on the top of these second submission.

The marks recorded for your exam will be the higher of the two options:

1. the score from the individual stage-one of the quiz, or
2. the average of your individual stage-one quiz and the group completed stage-two quiz.

The first quiz will only count towards your average if you earn 100% so that you can focus on learning the system.

## Project:

One group origami project completed in pairs or groups of three. The project consists of a presentation and paper focused on an origami design of your choosing. The detailed instructions will be handed out soon but you may want to start searching for a pattern that you find enjoyable and can teach others.

An optional project will be introduced in week 6. The optional project has the same structure of a paper and presentation and can be done in it's entirety or in sections if anyone wishes to improve their marks from the first origami project described above.

## General Policies:









[. \(https://www.google.com/url?](https://www.google.com/url?q=https://docs.google.com/document/d/1FjxC22UgjVM7JT_2e6DHKSpk5ZWdIEVUU34AJhQMhY/edit&sa=D&ust=15850076736770)

[q=https://docs.google.com/document/d/1FjxC22UgjVM7JT\\_2e6DHKSpk5ZWdIEVUU34AJhQMhY/edit&sa=D&ust=15850076736770](https://docs.google.com/document/d/1FjxC22UgjVM7JT_2e6DHKSpk5ZWdIEVUU34AJhQMhY/edit&sa=D&ust=15850076736770)

Campus-wide and class policies regarding inclement weather and emergency procedures are posted [here](#)

[. \(https://uw.instructure.com/courses/603479/wiki/general-policies.\)](https://uw.instructure.com/courses/603479/wiki/general-policies).

## Course Summary:

Date	Details	Due
Thu Oct 1, 2020	 <a href="https://canvas.uw.edu/calendar?event_id=1580143&amp;include_contexts=course_1402551">TCORE 102 Origami Math</a> ( <a href="https://canvas.uw.edu/calendar?event_id=1580143&amp;include_contexts=course_1402551">https://canvas.uw.edu/calendar?event_id=1580143&amp;include_contexts=course_1402551</a> )	1:30pm to 3:45pm
	 <a href="https://canvas.uw.edu/courses/1402551/assignments/5661076">Journal 1</a> ( <a href="https://canvas.uw.edu/courses/1402551/assignments/5661076">https://canvas.uw.edu/courses/1402551/assignments/5661076</a> )	due by 12:30pm
Tue Oct 6, 2020	 <a href="https://canvas.uw.edu/calendar?event_id=1580144&amp;include_contexts=course_1402551">TCORE 102 Origami Math</a> ( <a href="https://canvas.uw.edu/calendar?event_id=1580144&amp;include_contexts=course_1402551">https://canvas.uw.edu/calendar?event_id=1580144&amp;include_contexts=course_1402551</a> )	1:30pm to 3:45pm
	 <a href="https://canvas.uw.edu/courses/1402551/assignments/5661132">Butterfly</a> ( <a href="https://canvas.uw.edu/courses/1402551/assignments/5661132">https://canvas.uw.edu/courses/1402551/assignments/5661132</a> )	due by 1:30pm
	 <a href="https://canvas.uw.edu/courses/1402551/assignments/5661096">Journal 2</a> ( <a href="https://canvas.uw.edu/courses/1402551/assignments/5661096">https://canvas.uw.edu/courses/1402551/assignments/5661096</a> )	due by 12:30pm
Thu Oct 8, 2020	 <a href="https://canvas.uw.edu/calendar?event_id=1580145&amp;include_contexts=course_1402551">TCORE 102 Origami Math</a> ( <a href="https://canvas.uw.edu/calendar?event_id=1580145&amp;include_contexts=course_1402551">https://canvas.uw.edu/calendar?event_id=1580145&amp;include_contexts=course_1402551</a> )	1:30pm to 3:45pm
	 <a href="https://canvas.uw.edu/courses/1402551/assignments/5661163">PattyHW1</a> ( <a href="https://canvas.uw.edu/courses/1402551/assignments/5661163">https://canvas.uw.edu/courses/1402551/assignments/5661163</a> )	due by 1:30pm
Fri Oct 9, 2020	 <a href="https://canvas.uw.edu/courses/1402551/assignments/5783516">Quiz 0</a> ( <a href="https://canvas.uw.edu/courses/1402551/assignments/5783516">https://canvas.uw.edu/courses/1402551/assignments/5783516</a> )	due by 8pm