# Welcome to CS116x

CS 116 LEC 002
Global Business and Digital Arts (GBDA) only
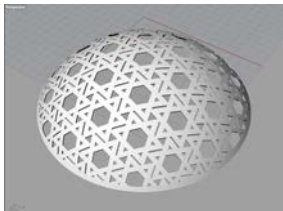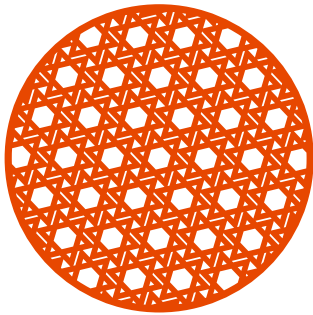
# Audience

This course is a continuation of the Fall 2014 offering of CS115x. If you didn't take that course, don't take this one.

# Course staff



Instructor: Craig S. Kaplan
Email: csk@uwaterloo.ca
Office hours: Wednesdays 11–12, DC 2110

# Course staff


Instructional Assistant: Alyssa Jamal
Email: amjamal@uwaterloo.ca
Office hours: Mondays, 1–2:30, MC 4065


Instructional Assistant: Chrissy Schreiner
Email: lcschrei@uwaterloo.ca


Instructional Assistant: Aaron Voelker
Email: arvoelke@uwaterloo.ca

# Course staff


Coordinator: Ahmed HajYasien
Email: ahajyasien@uwaterloo.ca

Teaching assistants

Undergraduate advisors

# Organization

Lectures: MW 2:30pm–3:50pm, MC 4059
Labs: F 2:30pm-3:50pm, MC 3003 & MC 3027

Roughly ten assignments, due Tuesdays at noon

Midterm: Thursday, 5 March, 7:00pm–8:50pm, MC 4045, MC 4061

Final exam: TBA

# Marking

| Participation | 5% |
|---|---|
| Labs | 5% |
| Assignments | 30% |
| Midterm | 20% |
| Final | 40% |

You must pass the weighted sum of the exams:
`if( 0.33*M + 0.67*F < 50 ) { fail(); }`

# Assignments

**No Late Submissions!**

Submitted online using LEARN

All work done individually (labs and assignments)



NO CHEATING!

# Resources

Course web page
   www.student.cs.uwaterloo.ca/~cs116/x/

LEARN
   learn.uwaterloo.ca/

Piazza
   piazza.com/class#winter2015/cs116x
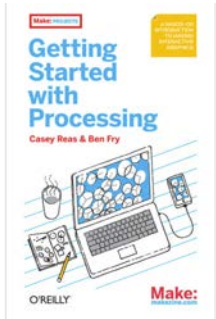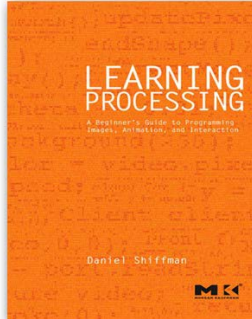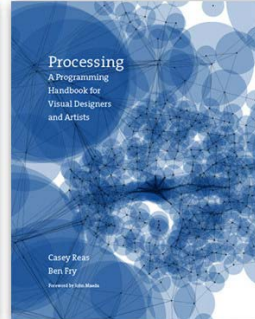
Processing
   processing.org

# Books



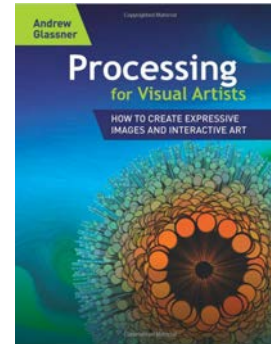Reas and Fry     Shiffman     Reas and Fry

# Books



Glassner

The Imaginary Institute

imaginary-institute.com

# Technology in class



Bad idea     Good idea

# Philosophy

You don't have to become a computer scientist.

But some art and design problems are best solved using code.

Code is an infinitely flexible medium.

# Philosophy

Learn how programs
work and how
developers think.



WHEN A USER TAKES A PHOTO, THE APP SHOULD CHECK WHETHER THEY'RE IN A NATIONAL PARK...

SURE, EASY GIS LOOKUP. GIMME A FEW HOURS.

...AND CHECK WHETHER THE PHOTO IS OF A BIRD.

I'LL NEED A RESEARCH TEAM AND FIVE YEARS.

IN CS, IT CAN BE HARD TO EXPLAIN THE DIFFERENCE BETWEEN THE EASY AND THE VIRTUALLY IMPOSSIBLE.

xkcd.com/1425

# Content

Assume you understand the basics of
programming.

How can we make programming more useful?
How can we solve more problems?

Make use of more built-in functions and add-on
libraries.

# Content

1. Input/Output
2. User interfaces
3. Physics and animation
4. Geometric context
5. Procedural content
6. Advanced programming
7. Image processing
8. Text processing
9. Structured data processing