

# Creative Coding



SYLLABUS

VU Amsterdam Summer School

16-30 July 2023



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Any general questions for the Summer School support team? Contact [amsterdamsummerschool@vu.nl](mailto:amsterdamsummerschool@vu.nl).

## Course Details

Title	Creative Coding
Coordinator(s)	Mauricio Verano Merino
Other lecturers	Tim Rodenbröker
Study credits	3 ECTS
Form(s) of tuition	On campus,
Approximate contact hours	50
Approximate self-study hours	10

### Teaching staff (in order of appearance)

**Mauricio Verano Merino** (Coordinator) is an Assistant professor in the Computer Science department at the VU. He obtained his PhD at TU Eindhoven, where he explored how to engineer different end-user programming environments for DSLs. As a researcher, he has a particular interest in understanding code as a medium of expression and communication. Therefore, his research topics include and combine software language engineering, art, and design. Through his research, he aims to lower the entry barrier to programming for end-users by creating more usable software languages and their tooling. In his free time, he loves sports and is fascinated with using analog, old-fashioned technologies in today's world.

**Tim Rodenbröker** (Guest lecturer) is a designer and Master of Arts with several years of experience in teaching creative coding. As part of who has an online learning platform for creative coding. He helps people become creative technologists. Those who are often traumatized through uninspiring and misleading courses for programming. Breaking this barrier reveals a world of unexplored territories

### Course description

Programming literacy has become an essential skill for the society we live in these days, and this is also important in arts because programming has become an artistic medium for exploring creativity. It allows people to express possibilities built on top of the computer's interactivity and multimedia features. In this course, we will explore the cutting edge of programming and visual arts by understanding the basics of programming for creative purposes.

The programming language that we will use during the course is Processing, but learning processing is just a side effect. The knowledge and skills acquired by the students during the course are transferable to other programming languages like Java or JavaScript.

## Learning objectives

By the end of this course, students will be able to:

- use programming as a medium for exploring their creativity via computer programs.
- read technical documentation (e.g., programming language and library references).

## Assignments

Students will be taught through 10 sessions in the afternoons. The sessions are hybrid, with a theoretical part and practical session. After each session students submit their progress.

## Grading

- 10% partial submissions after each session
- 90 % final project

## Provisional reading list

TBD

## Course Schedule

Date	Topic
July 16: Welcome	<ul style="list-style-type: none"> <li>○ Introduction</li> <li>○ Creative Coding: <ul style="list-style-type: none"> <li>▪ “Creative Coding as a School of Thought”</li> </ul> </li> <li>○ Programming</li> </ul>
July 17 - July 20: Programming essentials	<ul style="list-style-type: none"> <li>○ Pixels</li> <li>○ Processing</li> <li>○ Basic geometry</li> <li>○ Interaction</li> <li>○ Variables</li> <li>○ Conditionals</li> <li>○ Loops</li> <li>○ Functions</li> </ul>

	<ul style="list-style-type: none"><li>○ Object Oriented Programming</li><li>○ Arrays</li></ul>
July 22: Coding in the wild	<ul style="list-style-type: none"><li>○ Background: Vera Molnár</li><li>○ Walkthrough to reverse engineer Vera Molnár artworks with code</li></ul>
July 23- July 25: Reverse engineer artwork	<ul style="list-style-type: none"><li>○ Select artwork to reverse engineer</li><li>○ Reverse engineer and extend selected artwork</li></ul>
July 26: outro	<ul style="list-style-type: none"><li>○ Final projects presentations by students</li><li>○ Reflection</li><li>○ Closing</li></ul>

