The Hong Kong University of Science and Technology

Division of Arts and Machine Creativity (AMC)

AMCC5210, in Fall 2025/26

Course code: AMCC5210 (3 credits)
Course title: Practice and Techniques for Visual Creatives
Abbreviated title:
Course instructor: Dr. Wenhan LUO
Target students: MA/MPhil/PhD students
Class quota: 30
Grading requirement: Letter grades

Course description: This course provides a practical foundation in digital art and design, exploring how technology fuels modern creativity. Students will learn to create generative art through code, utilize AI and computer vision as artistic tools, and develop interactive and immersive media experiences. The curriculum blends hands-on technical skills with conceptual exploration, culminating in a final project that synthesizes these disciplines.

Enrolment requirement: N.A.

Course Intended Learning Outcomes
On successful completion of the course, students will be able to:

1, Apply foundational principles of computational thinking and digital aesthetics to create visual artifacts.

2, Develop generative art and data-driven visuals using core creative coding techniques.

3, Integrate AI tools and computer vision methods to create interactive and adaptive visual experiences.

4, Design and prototype an interactive or immersive media project that synthesizes technical skills and conceptual inquiry.

Teaching and learning activities:
1, Interactive Lectures & Live Demos: Introducing core concepts and techniques.
2, Creative Project Assignments: focused projects assignment
3, Guided Technical Workshops: Hands-on, step-by-step coding and tool sessions
4, Self-Directed Final Project: Applying learned skills to an individual culminating work.

Planned Assessment & Weightings:

Assessment	**Percentage**
Attendance	10%
In-class Activities	20%
After-class Assignments	30%
Final Project Presentation	40%

Weakly Course Outline

Week	**Topics**	**Briefly outline what this topic will cover** *(Include reading assignments if available)*	**Indicate which course ILOs this topic is related to** *(Write CILO-1, CILO-2, etc.)*

1	Evolution of Visual Media	Introduction to Visual Media, Brief History of Visual Media, and Case Studies	CILO-1
2	Computational Aesthetics & Tools Overview	What Makes an Artwork Computational, and Survey of Tools	CILO-1
3	Computational Aesthetics & Tools Overview	What Makes an Artwork Computational, and Survey of Tools	CILO-1
4	Introduction to Creative Coding	Key Concepts of Creative Coding, Tools of Creative Coding, Practice: Drawing, Motion, and Interactivity	CILO-2
5	Introduction to Creative Coding	Key Concepts of Creative Coding, Tools of Creative Coding, Practice: Drawing, Motion, and Interactivity	CILO-2
6	Introduction to Creative Coding	Key Concepts of Creative Coding, Tools of Creative Coding, Practice: Drawing, Motion, and Interactivity	CILO-2
7	Algorithmic Art & Data Visualization	Introduction of using the logic and power of code to create visuals that are either beautiful, informative, or both	CILO-2
8	Introduction to AI Art Tools	Key Concepts of AI Art, Tools & Approaches of AI Art, Ethics in AI Art	CILO-3
9	Computer Vision for Interactive Art	How Computer Vision Works in Art, and Case Study	CILO-3
10	Sensor-Based Interaction	Key Concepts of Sensor-based Interaction, Technical Pipeline of Sensor-based Interaction, and Case Study	CILO-4
11	Immersive Media	Key Concepts of Immersive Media, Applications of Immersive Media, And Case Study	CILO-4
12	Final Project Presentation	Students will present final project	CILO-1, CILO-2, CILO-3, CILO-4
13	Final Project Presentation	Students will present final project	CILO-1, CILO-2, CILO-3, CILO-4

Student learning resources:

N/A