IMDM127 Creative Coding for Digital Media

Instructor: Roger Eastman
Credits: 3
Grading: Regular
Tu/Th 12:30–1:45 p.m.
Prerequisites: None
Restriction: Permission of the instructor

Why take this course:
This course is for those interested in computers and art, and exploring new forms of digital media. The primary question will be, can we capture the beauty of nature and art in the dry logic of computers? Can we recreate by computer program the beauty of butterfly wings or pencil sketches? In this course we will do hands-on work with computational systems, such as random walks, particle systems and Lindenmeyer grammars, that from simple rules produce complex patterns found in nature and used in art. We will use these systems to explore basic programming and the creation of web pages with graphics, manipulated photos and interactive animations, as well deeper questions about the mechanization of creativity and limits of computers. The course assumes no background in computer programming. Priority in enrollment will be given those interested in the new IMDM major as it is required for those in Track 2, Emerging Creatives.

Course Description
An introduction to the principles of computer science supported by exercises in computer programming with an emphasis on creative coding, algorithmic image creation and manipulation, and interactive experiences. Students will make use of both exploratory coding approaches, and problem/solution-driven approaches, to design and implement software with visual and auditory output. The course also includes an introduction to a wide variety of issues relating to computer science and software, including software design and construction, problem-solving, and fundamental questions about the nature, limitations, and ethical use of computers and algorithms. It also explores how creativity tools can be used and as well as providing some insight into how they are implemented. The course is targeted to students with a broad diversity in backgrounds and interests. No prerequisites are assumed beyond high school algebra.