

# Creative Programming Workshop

## COURSE INFORMATION

**Instructor  
Info:**

**Lee Spector**

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Office Extension: x5352

Office Hours: Regular office hours: Tuesdays 9:30–11:00, Wednesdays 1:00–2:30, and Thursdays 2:00–3:30. Other times can be set up by arrangement (in person or via email). Sign up for regular office hours, advising day meetings, and occasionally other signup times on Hampedia here.

**Term:** 2010F

**Meeting  
Info:**

**Wednesday** 01:00 PM - 03:50 PM Adele Simmons Hall (ASH) 126

**Description:**

In this course students will work on collaborative programming projects, using programming tools and methodologies presented in class. The course will include topics from software engineering, graphics, and functional programming, but will be focused on student-directed, faculty-mentored programming projects. Students will program continuously and read, run, and criticize one another's programs. These programs may be written for any application area and may include utilities, games, artworks, cognitive models, and environmental or social simulations. We will develop the ability to critique programs from a variety of perspectives ranging from complexity theory to aesthetics. Prerequisite: one programming course (in any language). This course satisfies Division I distribution requirements. PRJ, PRS, QUA

**Course  
Objectives:**

To become more fluent in the process of transforming original ideas into running code.  
To develop skills for collaborating on programming projects and critiquing the code of others.  
To gain familiarity with the functional programming paradigm.  
To develop improved project management and presentation skills.

**Evaluation  
Criteria:**

Each student will be evaluated on the basis of:

Attendance and mandatory participation in classroom activities.  
A code portfolio.  
Performance in two portfolio presentation/critique sessions, one at mid-term and one at the end of the semester.

**Additional  
Info:**

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### Materials

*Programming Clojure*, by Stuart Halloway  
Free software including the *Eclipse* programming environment with the Counterclockwise plugin for Clojure development; see directions and links at:[http://www.assembla.com/wiki/show/clojure/Getting\\_Started\\_with\\_Eclipse\\_and\\_Counterclockwise](http://www.assembla.com/wiki/show/clojure/Getting_Started_with_Eclipse_and_Counterclockwise)

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## Schedule

With the exception of the Wednesday Advising Day (November 3) and the Wednesday during Thanksgiving break (November 24), we will meet each Wednesday during the semester from 1:00–3:50. Two days are reserved for portfolio presentation/critique sessions, with the mid-term session on October 13 and the final session on December 8. Each student must give a polished, well-organized presentation of the code in his/her portfolio in each of these sessions and must contribute to the critique of other portfolios. Final portfolios must be submitted by December 15.

Each class session that is not a portfolio review will have the following format:

Presentation session (with presentations by the professor and/or students and/or guests).

Demonic coding session.

In a demonic coding session the class is split into two groups (preferably different groups each session), and the available time is split into two periods. In the first period one of the groups is coders and the other is demons; in the second period the roles are reversed. Coders sit at workstations and work on their own projects for the entire period. Demons rotate among the coders (synchronously -- I will announce switch times), observing and interacting with one coder at a time. Demons may ask questions and/or make suggestions, and coders must dedicate a percentage of their time to demonic interactions. Initially this percentage will have to be somewhat high, as class members learn the language and tools that we are using and as students become familiar with the work of their classmates -- we will aim for a demonic load of 50% in our initial classes. As the semester progresses the demonic load should decrease to 10–20%.

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## Freedoms and constraints

Student project work may be on projects of *any* type, of the student's choosing. However, all projects must be based on Clojure code and developed using idiomatic Clojure coding style. We will initially use the Eclipse programming environment, the Counterclockwise plugin for Clojure development, and EGit version control, but we may change or allow diversity in tooling as the semester progresses.

Forking and joining are very much encouraged, whether at the level of code in a repository or at more abstract levels.

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## How to get an evaluation for this course

Attend every class, arrive on time, and participate fully in all class activities.

Submit a code portfolio containing a semester's worth of programming work, demonstrating mastery of the concepts discussed in class and significant improvement in programming skill over the course of the semester.

Prepare and give well-organized presentations of your portfolio at each presentation/critique session.

You should not expect to receive an evaluation unless you have met these expectations, or unless the ways in which you fall short are: 1) minor and/or unavoidable (e.g. because of illness), AND 2) well-explained both when the lapses occur and in your final self evaluation. If you are ever in doubt about your status in the class vis-a-vis evaluation then come talk to me.

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Course website: <https://moodle.hampshire.edu/course/view.php?id=1194>

[[classoutline]]



News forum



CPW General DiscussionForum

### **Wednesday, 8 September (01:00PM – 03:50PM)**

### **Wednesday, 15 September (01:00PM – 03:50PM)**



intro.cljFile



simple\_graphics.cljFile

### **Wednesday, 22 September (01:00PM – 03:50PM)**



clj-processing.zipFile

### **Wednesday, 29 September (01:00PM – 03:50PM)**

### **Wednesday, 6 October (01:00PM – 03:50PM)**



factorials.cljFile



kryptosolveFile

### **Wednesday, 13 October (01:00PM – 03:50PM)**

Was supposed to be "Mid-term portfolio presentation/critique session" but this has been delayed until next week.



dark-star.txtFile



slurp.cljFile

### **Wednesday, 20 October (01:00PM – 03:50PM)**

Mid-term portfolio presentation/critique session.

### **Wednesday, 27 October (01:00PM – 03:50PM)**

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 macros.cljFile

**Wednesday, 3 November (01:00PM – 03:50PM)**


Advising day -- no class

**Wednesday, 10 November (01:00PM – 03:50PM)**

**Wednesday, 17 November (01:00PM – 03:50PM)**

 concurrency.cljFile


 concur.cljFile

 Rich Hickey in Northampton on Concurrency in ClojureURL

**Wednesday, 24 November (01:00PM – 03:50PM)**

Thanksgiving -- no class.

**Wednesday, 1 December (01:00PM – 03:50PM)**

 multimethods.cljFile

**Wednesday, 8 December (01:00PM – 03:50PM)**

Last class.

Final portfolio presentation/critique session.

**Wednesday, 15 December (01:00PM – 03:50PM)**

Portfolios due.

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## LINKS

[Clojure – home](#)

[Clojure videos](#)

[ClojureDocs](#)

[TryClojure](#)

[Clojure Cookbook](#)

[Clojure IDEs – The Grand Tour](#)

[Clojurls – news and bits about Clojure](#)

[Planet Clojure](#)

[Eclipsepedia](#)

[Getting Started with Eclipse and Counterclockwise](#)

[EGit/User Guide](#)

[EGit - Download](#)

[Clojure Tutorial For the Non-Lisp Programmer](#)

[Clojure Programming/Getting Started](#)

[tricks of the trade](#)

[Clojure Programming/Examples/API Examples](#)

[Processing/Clojure/Incanter « Data Sorcery](#)

[Clojure - Wikipedia](#)

[Getting Clojure](#)