

ISE 108: Introduction to Programming

Stony Brook University, Fall 2016

Course Description

Introduces computer programming at a level suitable for those with no prior programming experiences, including liberal arts and humanities majors. Programming exercises involve state-of-the-art visual applications. Topics include problem-solving techniques, object-oriented design, and programming concepts such as conditionals, iteration, arrays, and modularity.

Course Objectives

- Introduce students to algorithmic problem-solving techniques and elementary program design
- Develop basic programming concepts including assignments, conditionals, loops, subroutines and common data types in a high-level programming language.

Course Information

Lecture Meetings: Tuesday and Thursday, 5:30–6:50 PM, in Computer Science 2120

Textbook: *Learning Processing: A Beginner's Guide to Programming, Images, Animation, and Interaction*, by Daniel Shiffman (Morgan Kaufmann 2008). Copies of the book are available on 2-hour reserve in the Science and Engineering Library.

Required Software: Students will need to download and install the free Processing software development environment, which is available from <http://www.processing.org> (the latest version is 3.1.2 as of this writing)

Course Web Site: <http://www.cs.stonybrook.edu/~ise108>

All course announcements, slides, homework, grades, and reading assignments will be posted on Blackboard.

Instructor Information

Instructor: Michael Tashbook (<tashbook@cs.stonybrook.edu>)

Instructor Office Hours: Office hours will be held in New Computer Science room 204 on Mondays and Thursdays from 1:00–3:30 PM. I am also available at other times by appointment.

TAs and TA Office Hours: To Be Announced

Important Dates

- 9/6: **NO CLASS MEETING** (Day after Labor Day)
- 9/29: Midterm 1 (in class)
- 11/3: Midterm 2 (in class)
- 11/24: **NO CLASS MEETING** (Thanksgiving Break)
- 12/20: Final exam (11:15 AM–1:45 PM, location TBA)

Grading Policy

Course grades will be based on a combination of:

- four homework assignments (20% total)
- one final project (15%)
- two computer-based midterm exams (15% and 20%, respectively)
- one computer-based final exam (30%)

See the course Web page for the letter grade conversion table. All grades will be posted on Blackboard.

Late Assignment and Make-up Exam Policy: Each assignment clearly states its due date and should be submitted through Blackboard. Late submissions may be accepted at the instructor's discretion, with an accompanying 50% penalty to the assignment grade. Make-up exams will **ONLY** be granted for valid medical reasons (a doctor's note is required), for religious reasons, or for documented participation in University-sponsored events. Except for medical excuses, reasonable prior notification (at least 48 hours prior to the exam) to the instructor is **REQUIRED** in order for a make-up opportunity to be granted.

Grade Challenge Policy: The TAs and I will endeavor to post grades as soon as possible after assignments/exams are turned in (normally within 7–10 days). Questions about or challenges to assignment or midterm exam grading **MUST** be made within **TWO WEEKS** of the grades being posted; after that period, grades are considered final for that assignment or exam.

Policy on Electronic Devices in Class

Students are encouraged to bring laptops and tablet devices to class *for note-taking purposes only*, especially during the programming lectures. All communication and entertainment devices should be silenced or (preferably) turned off for the duration of the class unless otherwise directed by the instructor. No electronic devices of any sort may be consulted or used during exams; this will be considered an instance of academic dishonesty, and will be treated as such.

Students With Disabilities

If you have a physical, psychological, medical or learning disability that may have an impact on your ability to carry out assigned course work, please contact the staff in the Disabled Student Services (DSS) office, 128 Educational Communications Center (E.C.C), Phone/TTY: (631) 632-6748. DSS will review your concerns and determine with you what accommodations are necessary and appropriate. All information and documentation of disability are confidential.

Students who require assistance during emergency evacuation are encouraged to discuss their needs with their professors and Disability Support Services. For procedures and information please visit <http://www.stonybrook.edu/ehs/fire/> and search Fire Safety and Evacuation.

Academic Integrity Policy

Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another person's work as your own is always wrong. Any suspected instance of academic dishonesty will be reported to the Academic Judiciary. For more comprehensive information on academic integrity, including categories of academic dishonesty, please refer to the academic judiciary website at <http://www.stonybrook.edu/uaa/academicjudiciary/> (Adopted by the Undergraduate Council 9/12/06)

Students who are found guilty of academic dishonesty will automatically receive a final grade of 'F' for the course.

Critical Incident Management

Stony Brook University expects students to respect the rights, privileges, and property of other people. Faculty are required to report to the Office of Judicial Affairs any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, or inhibits students' ability to learn.

Use of Email for Official Communication

Students, faculty, and staff are responsible for making sure they are receiving and checking for official University communications at their primary campus email address (@stonybrook.edu) on a regular basis, or making sure they forward their Stony Brook mail to a personal email account (Google Apps users only).

Tentative Course Calendar

Week	Date	Main Topic(s)	Notes
1	August 30	Introduction to Processing, Pixels and Shapes	Chapters 1 and 2
	September 1	Simple Drawing with Processing	Chapter 2
2	September 6	NO CLASS	
	September 8	Simple Programs, Interactive Programs	Chapters 2 and 3
3	September 13	Variables	Chapter 4
	September 15	Conditionals, Loops	Chapters 5 and 6; HW 1 due 9/16
4	September 20	Functions	Chapter 7
	September 22	Functions, Part 2	Chapter 7
5	September 27	Midterm 1 review (in class)	
	September 29	Midterm 1 (in class)	
6	October 4	Classes and Objects	Chapter 8
	October 6	Classes and Objects, Part 2	Chapter 8; HW 2 due 10/7
7	October 11	Arrays	Chapter 9
	October 13	Arrays, Part 2	Chapter 9
8	October 18	Text Processing and Strings	Chapters 17 and 18
	October 20	Text Processing and Strings	Chapters 17 and 18
9	October 25	Working in 3D	Chapter 14
	October 27	More 3D Manipulation	Chapter 14; HW 3 due 10/28
10	November 1	Midterm 2 review (in class)	
	November 3	Midterm 2 (in class)	

Week	Date	Main Topic(s)	Notes
11	November 8	Working with Images	Chapter 15
	November 10	Working with Images, Part 2	Chapter 15
12	November 15	Working with Sound	Chapter 20
	November 17	Programming Case Studies	HW 4 due 11/18
13	November 22	Programming Case Studies	
	November 24	THANKSGIVING BREAK — NO CLASS	
14	November 29	Programming Case Studies	
	December 1	Programming Case Studies	
15	December 6	Other topics as time permits	
	December 8	Other topics as time permits	Final project due Friday, 12/9
Finals		Final Exam (Tuesday, 12/20, 11:15 AM–1:45 PM, location TBA)	

Supplemental reading assignments will be posted on Blackboard as the semester progresses.