CAP 3032: Interactive Modeling and Animation I
Section 2606, Spring 2014

1. Catalog Description (3 credits):
Introduction to programming and data structures for interactive two-dimensional multimedia applications. Representing form and transforms in two dimensions, capturing user actions and driving application behavior interactively. Graphical interfaces, image processing, automata and basic artificial intelligence.

2. Pre-requisites and Co-requisites:
Pre-requisite Course: MAC 1147 Precalculus: Algebra and Trigonometry (or equivalent)

3. Course Objectives:
At the end of the semester, students are expected to be able to:

   • Understand the foundations of computing
   • Write/execute programs written in Processing
   • Create two dimensional animations
   • Handle object interaction
   • Implement input and event listeners

4. Instructor & Teaching Assistant:
Instructor: Joseph Murphy, jhmurphy@cise.ufl.edu
Teaching Assistant: Yifan Wang, yifan@cise.ufl.edu
Office location: TBD (Temporarily CSE 520)
Office Hours: MW 4th Period, 10:40am–11:30am (by appointment, at instructor’s discretion)

5. Meeting Times and Location:
MWF 5th Period, 11:45am – 12:35pm in CSE E211A

6. Textbooks and Software Required:
   • Required Software: the Processing Language and Environment (free). www.processing.org

7. Course Outline:
There may be a slight shift in topics depending on the backgrounds or interests of the students, but topics are likely to include:

   • Introduction to digital imagery
   • Basic programming concepts: variables, conditionals, loops, etc.
   • Intermediate programming concepts: arrays, functions, objects, etc.
   • Basic geometry, shapes
• 2-D Transformations: translation, scale, and rotation
• Object interaction
• Interactivity, input, and event listeners
• Graphical user interfaces
• Image handling
• Automata and Artificial Intelligence

8. Attendance and Expectations:
Class attendance is required. If you must miss a class session, you are responsible for getting notes from a classmate. Make sure to submit your completed work before the due dates to avoid penalties. Cell phones should be turned off or set to vibrate during class.

9. Homework Policies:
There will be six homework assignments given during the course of the semester. You may discuss assignments with other students, but you must write your answers by yourself. If your work is copied from another student, 0 points will be given to both students. Late assignments will be accepted with a penalty deduction of 20% of the maximum point value every 12 hours, for up to 2 days. The lowest homework score will be dropped from your final grade.

10. Quiz Policies:
There will be six 20-minute quizzes given during lectures. No notes, books, or other assistance will be allowed during the quizzes. There will be no makeup quizzes. The lowest quiz score will be dropped from your final grade.

11. Grading Scale:
Final grade is calculated according to the following schedule:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Score Range</th>
<th>Grade</th>
<th>Score Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>100-95</td>
<td>C</td>
<td>76-73</td>
</tr>
<tr>
<td>A–</td>
<td>94-90</td>
<td>C–</td>
<td>72-70</td>
</tr>
<tr>
<td>B+</td>
<td>89-87</td>
<td>D+</td>
<td>69-67</td>
</tr>
<tr>
<td>B</td>
<td>86-83</td>
<td>D</td>
<td>66-63</td>
</tr>
<tr>
<td>B–</td>
<td>82-80</td>
<td>D–</td>
<td>62-60</td>
</tr>
<tr>
<td>C+</td>
<td>79-77</td>
<td>F</td>
<td>59-0</td>
</tr>
</tbody>
</table>

A C– will not be a qualifying grade for critical tracking courses. In order to graduate, students must have an overall GPA and an upper-division GPA of 2.0 or better (C or better). Note: a C-average is equivalent to a GPA of 1.67, and therefore, it does not satisfy this graduation requirement. For more information on grades and grading policies, please visit: https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx

Updated 1/16/14
12. Make-up Exam Policy:
All students should plan to take their exams at the scheduled time. In the case of sudden or unexpected events that will cause them to miss an exam, students are required to notify the instructor prior to the exam or as early as possible. Make-up exams are given only in exceptional circumstances with the Instructor’s permission.

13. Honesty Policy:
UF students are bound by The Honor Pledge which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code.” On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.” The Honor Code (http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor in this class. Note that failure to comply with this commitment will result in disciplinary action compliant with the UF Student Honor Code Procedures. See http://www.dso.ufl.edu/sccr/procedures/honorcode.php

14. Accommodation for Students with Disabilities:
Students requesting classroom accommodation must first register with the Dean of Students Office. That office will provide the student with documentation that he/she must provide to the course instructor when requesting accommodation.

15. UF Counseling Services:
Resources are available on-campus for students having personal problems or lacking clear career and academic goals. Resources include:

- UF Counseling & Wellness Center, 3190 Radio Rd, 392-1575, http://www.counseling.ufl.edu/cwc/Default.aspx: counseling services and mental health services
- Career Resource Center, Reitz Union, 392-1601: career and job search services
- University Police Department, 392-1111

16. Software Use:
All faculty, staff and student of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.

17. Evaluations:
Students are expected to provide feedback on the quality of instruction in this course based on 10 criteria. These evaluations are conducted online at https://evaluations.ufl.edu. Evaluations are typically open during the last two to three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at https://evaluations.ufl.edu/results.

Updated 1/16/14