CSCI/CITA 180 – Computers, Music and Art

Course Syllabus

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Office Hours: MWF, 10:30am-11:30pm
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Course Description: A course introducing the creative side of computing in the context of music, sounds, images, and other digital artifacts. Emphasis will be given to computer programming for music making, live performance, and interaction. Students will develop several digital artifacts and elementary musical compositions.

Prerequisites/Requirements:
- Must bring your laptop and headphones.
- Basic computer experience (e.g., file organization and software installation).
- Interest in music and developing skills in musical practice.
- Course is open to all majors. No previous programming experience required.

Tentative Outline: This course will introduce computer programming and music through the study, transcription, and creation of musical works. Music topics may include notation, scales, key signatures, intervals, chord construction, sight-singing, ear training, and readings in music history and aesthetics. Computing topics include data types, variables, assignment, selection, iteration, lists, functions, classes, events, and graphical user interfaces. Students will experience the computer as a musical instrument and a creative environment to develop fluency with musical practices, such as algorithmic composition, developing simple computer instruments, electroacoustic music, and minimalism.

The above outline is tentative; some topics may be added, others subtracted, as interest suggests and time permits.

Textbook:

References:
- Jython Music website.
- K. Shaffer and R. Wharton, Open Music Theory, Hybrid Pedagogy Publishing.

Additional reading materials will provided via handouts and the class website.
Learning Outcomes:

• Understand the fundamentals of music theory.
• Analyze music and create musical studies modeled on pre-existing works.
• Perform rhythmic patterns and sing melodies.
• Understand important developments in musical styles in the twentieth century and the present.
• Apply numeric and string data types to represent information.
• Use variables in program development.
• Understand arithmetic operators and use them to design expressions.
• Understand for-loops and use them to design processes involving repetition.
• Understand if statements and use them to design processes involving selection.
• Understand functions and use them to design processes involving modularization.
• Use predefined classes in program development (object-based programming).
• Understand events and graphical user interfaces and use them to develop simple computer-based instruments for electroacoustic music.
• Learn basic principles for group collaboration.

Grading: To receive a passing grade for the course, you must average a passing grade on each of the following: assignments, tests, and final exam.

Scale: A: 90-100; B+: 85-89; B: 80-84; C+: 75-79; C: 70-74; D+: 65-69; D: 60-64; F: 0-59.

Final Grade Computation: Assignments (4-6) 30%, Tests (2) 40%, Final Project 10%, and Class Participation 20%.

Test Policies:

• Attendance at tests is mandatory. You must complete tests with no discussion or sharing of information with other students.
• Calculators, computers, cell phones, etc. may not be used during a test, unless otherwise directed.

Classroom Policies:

• You are expected to attend all classes, and be in class on-time. If you accumulate 4 or more absences, you may be given a 'WA' grade.
  o If you miss class, you must fill out Absence Memo Request Form from the Absence Memo Office.
  o If you miss class, you are responsible for announcements made in class, assignment due dates, etc.
• You are expected to take good notes during lecture.
• You should turn off all electronic devices (e.g., cell phones, etc.).
• Use a regular notebook (pen and paper) for note-taking. Studies show that taking notes in longhand (as opposed to laptop, etc.) results in higher grades. Studies also show that use of computers in class invites multi-tasking behavior (e.g., checking email, facebook, instant messaging, etc.). Time spent in such behavior is underestimated by students; also impact of such behavior is underestimated by students - i.e., such students earn lower grades; this also affects other students who have direct view of students using laptops - they also earn lower grades. Therefore, computers are not allowed for note taking. You must use computers only as directed in class. Outside of class, you may use computers as you wish. Also, note-taking may involve drawing and other diagrams, which cannot be captured well by
computer - only by longhand. So, use a regular notebook (pen and paper) for note-taking.

Here is the relevant research (read the first two articles, for grade):


- You are expected to participate in class with questions and invited discussion.
- You are expected to do your own work during class activities, exercises, and assignments.
- Any student who feels he or she may need an accommodation based on the impact of a disability should contact me individually to discuss your specific needs. Also, please contact the Center for Disability Services for additional help.
- In summary, you should contribute positively to the classroom learning experience, and respect your classmates right to learn (see College of Charleston Student Handbook, section on Classroom Code of Conduct (p. 58)).

Assignment

- Assignment grades will be based on creative inspiration, design, style, and
Policies: correctness of result.
• Assignments may NOT be submitted via email.
• Submission instructions will be provided for each assignment.

Honor Code:
• You must do your assignments alone (or with your teammates, for group assignments).
• You are not allowed to discuss assignments and possible solutions with any person other than the instructor (or with your teammates, for group assignments). Any violation of these rules is an honor offense.
• On assignments you will be asked to identify the person(s) you received help from, if any.
• Lying, cheating, attempted cheating, and plagiarism are violations of our Honor Code that, when suspected, are investigated. Each incident will be examined to determine the degree of deception involved.

Incidents where the instructor determines the student’s actions are related more to a misunderstanding will be handled by the instructor. A written intervention designed to help prevent the student from repeating the error will be given to the student. The intervention, submitted by form and signed both by the instructor and the student, will be forwarded to the Dean of Students and placed in the student’s file.

Cases of suspected academic dishonesty will be reported directly by the instructor and/or others having knowledge of the incident to the Dean of Students. A student found responsible by the Honor Board for academic dishonesty will receive a XXF in the course, indicating failure of the course due to academic dishonesty. This status indicator will appear on the student’s transcript for two years after which the student may petition for the XX to be expunged. The F is permanent.

Students should be aware that unauthorized collaboration--working together without permission-- is a form of cheating. Research conducted and/or papers written for other classes cannot be used in whole or in part for any assignment in this class without obtaining prior permission from the instructor.

Students can find the complete Honor Code and all related processes in the Student Handbook.

Late Policy:
• You have four "late" days for the whole semester. You may use these days as you wish for assignment submission. If you use them up, no late assignments will be accepted.
• If you submit everything on time (i.e., use no late days), you will earn an additional 2.5 bonus points on your course grade.