CS4063 Digital Media Software and Systems 2

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Aims and Objectives: Develop knowledge and competence with digital audio systems through laboratory work.

Instructor notes: Any notes written by the instructor will NOT be available. It is your responsibility to attend labs and take sufficient notes.

Meeting times: This is a laboratory-based course. Each section is given a total of three hours lab time. The first hour will be headed by the instructor. The second hour may be a continuation of the first hour or an introduction to the week's assignment. The third hour is headed by the Teaching Assistant.

Homework: Reading will be assigned, and it is expected that you will come to lecture with the background knowledge provided for by the reading.

Labs: Combined 40% of final grade. Each week has a simple lab assignment that MUST be signed off by the TA. The grade is not based on the degree to which you were successful in implementing the assignment, but that you were in attendance and worked to complete the lab.

Project 1: Midterm project. 25% of final grade.
Project 2: Final project. 35% of final grade.
NOTE: There is NO repeatable portion of this module. Failing this module means that you must repeat the ENTIRE YEAR.

Required text:
Roads, C. 1996 *The Computer Music Tutorial,* MIT Press.

Recommended texts:
Boulanger, R. 2000. *The Csound Book,* MIT Press.
Dodge, C & Jerse, AJ. 1997. *Computer Music,* 2nd edition, Schirmer.

Provisional weekly plan:

1. Digital Audio Concepts
2. Introduction to digital sound synthesis
3. Sampling and additive synthesis
4. Multiple wave table, granular synthesis, subtractive synthesis
5. FM, AM, Ring modulation
6. Lab with TA only due to open days
7. Physical modelling, formants.
8. Waveform, graphic, noise, stochastic syntheses
9. Mixing and processing
10. Signal processing
11. Spectrum analysis