DAT330 – Principles of Digital Audio 3 (3,0)
Course Syllabus
Cogswell Polytechnical College
Spring 2009

Instructor: Adnan Marquez-Borbon
Class Meetings: M W 1:30-3:15pm
Office Hours: TBA
Room : 211 (Smart Lab)
Email: adnanm@ccrma.stanford.edu
(when emailing, put as subject the title of the class)

Course Description:
Survey of digital audio technologies. Topics include disk and tape media formats, network protocols, basic DSP, error detection and correction, sub-codes, and data compression.

Prerequisites: MATH120, Upper Division Status

DAT Learning Outcomes fulfilled by this course:
Explain the conceptual basis of the tools and processes used in audio production from a scientific, mathematical or engineering perspective.

GE Learning Outcomes fulfilled by this course:
Describe scientific principles and apply scientific research skills to retrieve information.

Materials: The required text is *Principles of Digital Audio. 5th edition* by Ken C. Pohlmann. Supplementary handouts and assignments will be provided by the instructor.

Exams: A midterm will be provided sometime during the 8th or 9th week of the semester. A final exam will be administered during the last week of the semester.
The material covered will include the textbook readings and any other extra material provided as noted by the instructor.

Grading: Each assignment will be graded on a 100-point scale. No grade curving will be done. Exercises are due the following week during the regular class meeting.

Midterm – 35%
Final – 35%
Homework – 20%
Attendance - 10%

Grade breakdown
A: 90 - 100
B: 80 - 89
C: 70 - 79
D: 60 - 69
F: < 60

Course Outline

Week:	Topic
1.	Sound and Numbers and the Fundamentals of Digital Audio
2.	Digital Audio Recording
3.	Digital Audio Reproduction
4.	Error Correction
5.	Magnetic Storage Media and Digital Audio Tape (DAT)
6.	Optical Disc Media and The Compact Disc
7.	Perceptual Coding
8.	DVD - Midterm
9.	“Break”
10.	Audio Interconnection
11.	Desktop Audio
12.	Internet Audio
13.	Digital Radio and Television Broadcasting
14.	Digital Signal Processing
15.	Sigma-Delta Conversion and Noise Shaping
16.	Final Exam