University of Victoria Engineering

Faculty of Engineering

COURSE OUTLINE

ELEC 484 – Audio Signal Processing

Term – SUMMER 2015 (201505)

Instructor

Dr. Peter Driessen
Phone: 8688
E-mail: peter@ece.uvic.ca
Section(s): A01 / CRN 30349, A02/CRN 30350

Office Hours

Days: Monday Thursday
Time: 11:30-12:50
Location: ECS 130 and ELW B326

Course Objectives

Understand and apply digital signal processing as applied to audio signals.

Learning Outcomes

Able to describe and explain algorithms for audio signal processing

Able to implement, test and evaluate algorithms for audio signal processing using Matlab and other languages

Syllabus

Introduction to digital audio effects and applications. Parametric filters, shelving filters, time- varying filters. Delay structures, delay-based audio effects. Dynamics processing, non-linear processing. Spatial effects, 3D audio, reverberation. Time segment processing, pitch shifting, time stretching. Time-frequency processing, phase vocoder.

Required Text

Title: DAFX Digital Audio Effects
Author: U. Zolzer
Publisher: Wiley
Year: 2010 or 2002

References:

Notes and readings on CourseSpaces site

Assessment:

Assignments:	35	%	Due Dates: TBD
Mid-term	35	%	Date: Thursday 23 July 2015
Final Project	30	%	

The final grade obtained from the above marking scheme for the purpose of GPA calculation will be based on the percentage-to-grade point conversion table as listed in the current Undergraduate Calendar.

There will be no supplemental examination for this course.

Note to Students:

Students who have issues with the conduct of the course should discuss them with the instructor first. If these discussions do not resolve the issue, then students should feel free to contact the Chair of the Department by email or the Chair's Secretary to set up an appointment.

Accommodation of Religious Observance
http://web.uvic.ca/calendar/GI/GUPo.html

Policy on Inclusivity and Diversity
http://web.uvic.ca/calendar/GI/GUPo.html

Standards of Professional Behaviour

You are advised to read the Faculty of Engineering document Standards for Professional Behaviour in current Undergraduate Calendar, which contains important information regarding conduct in courses, labs, and in the general use of facilities.

Cheating, plagiarism and other forms of academic fraud are taken very seriously by both the University and the Department. You should consult entry in current Undergraduate Calendar for the UVic policy on academic integrity.

http://www.uvic.ca/engineering/assets/docs/professional-behaviour.pdf

Course Lecture Notes

Unless otherwise noted, all course materials supplied to students in this course have been prepared by the instructor and are intended for use in this course only. These materials are NOT to be re-circulated digitally, whether by email or by uploading or copying to websites, or to others not enrolled in this course. Violation of this policy may in some cases constitute a breach of academic integrity as defined in the UVic Calendar.