

The final grade obtained from the above marking scheme will be based on the following percentage-to-grade point conversion:

Passing Grades	Grade Point Value	Percentage for Instructor Use Only	
A+	9	90 – 100	
A	8	85 – 89	
A-	7	80 – 84	
B+	6	77 – 79	
B	5	73 – 76	
B-	4	70 – 72	
C+	3	65 – 69	
C	2	60 – 64	
D	1	50 – 59	
Failing Grades	Grade Point Value	Percentage for Instructor Use Only	Description
E	0	35 - 49	Fail, conditional supplemental exam. (For undergraduate courses only)
F	0	0 – 49	Fail, no supplemental.
N	0	0 – 49	Did not write examination, Lab or otherwise complete course requirements by the end of term or session; no supplemental exam.

The rules for supplemental examinations are found on page 80 of the current 2013/14 Undergraduate Calendar.

Term in which E Grade Was Obtained	Application Deadline for Supplemental Exam	Supplemental Exam Date
First term of Winter Session (Sept – Dec)	February 28 in the following term	First week of following May
Second term of Winter Session (Jan – Apr)	June 30 in the following term	First week of following September
Summer Session (May – Aug)	October 31 in the following term	First week of following January

Deferred exams will normally be written at the start of the student's next academic term; i.e., approximately 4 months following the deferral of the exam.

■ Course Description

1. Course Objectives

To learn the structure, principles, implementation, and applications of digital signal processing systems.

2. Learning Outcomes

Working knowledge of signal sampling, digital filtering and signal interpolation; working knowledge of FFT, DCT, two-channel based filter banks and adaptive filtering; working knowledge DCT based JPEG, adaptive system identification and channel estimation techniques, and restoration and compression of audio signals and digital images.

3. Syllabus

Introduction

Motivation and structure of DSP systems.

Sampling and Aliasing

The Shannon Theorem. Anti-aliasing Filtering. Sampling of bandpass signals.

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Oversampling.	
<u>Analysis of Discrete Signals</u>	4
z transform, Discrete Fourier transform, and Discrete cosine transform	
<u>Digital Filters and Filter Banks</u>	8
FIR filters. IIR filters. Filter banks. Applications.	
<u>Signal Interpolation</u>	7
Lagrange polynomial. Upsampling-lowpass-filtering method. FFT-based method.	
<u>De-Noising and Compression of Digital Signals</u>	5
Subband denoising. Noise removal by subspace methods. Subband coding.	
Examples and case studies.	
<u>Adaptive Filtering</u>	7
General structure of adaptive systems. Wiener filters. Steepest descent and LMS algorithms. Applications.	

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 ECE Chair by email or the ECE Chair's secretary to set up an appointment.

Accommodation of Religious Observance

See <http://web.uvic.ca/calendar2013/GI/GUPo.html>

Policy on Inclusivity and Diversity

See <http://web.uvic.ca/calendar2013/GI/GUPo.html>

Standards of Professional Behaviour

You are advised to read the Faculty of Engineering document Standards for Professional Behaviour at <http://www.uvic.ca/engineering/current/undergrad/index.php#section0-25> 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

<http://web.uvic.ca/calendar2013/FACS/UnIn/UARe/PoAcI.html> for the UVic policy on academic integrity.

Plagiarism detection software may be used to aid the instructor and/or TA's in the review and grading of some or all of the work you submit.