City University of Hong Kong

Information on a Course
offered by School of Creative Media
with effect from Semester A in 2012 / 2013

Part I

Course Title: Digital Sound and Computer Music

Course Code: SM5317

Course Duration: One semester (13 weeks)

No. of Credit Units: 3

Level: P5

Medium of Instruction: English

Prerequisites: Nil

Precursors: Nil

Equivalent Courses: Nil

Exclusive Courses: Nil

Part II

1. Course Aims:

This course aims to equip students with the knowledge and technical skills to produce musical/audio material using digital audio workstations and various music technology applications. On completion of this module students should be able to:
- create sound and music to support various genres within digital entertainment;
- reflect and enumerate their own creative work;
- reflect on how sequencing and sound editing technology can be used to arrange musical and sound ideas for various applications;
- reflect on computer-based audio recording and manipulation techniques;
- analyze the underlying electronic/computer technology for audio production

2. Course Intended Learning Outcomes (CILOs)
Upon successful completion of this course, students should be able to:

No.	CILOs
1.	Enumerate and describe the basic design and operation of an audio recording studio.
2.	Describe the function and importance of sound and music in moving images and various applications.
3.	Record acoustic sources and create unique sound design and effects using audio sampling technology.
4.	Design and create an electronic soundtrack using synthesis.
5.	Critically listen and perform different techniques to restore or enhance an audio track.
6.	Apply mastering techniques and prepare final deliverable materials for broadcast
7.	Organize and operate a full audio studio project.
*8.	Conduct extra research on the subject in relation to one's own experience as a self-reflective process

* Negotiated Learning Outcome (NLO) explicitly articulating the elements of Discovery oriented learning.

3. Teaching and Learning Activities (TLAs)
(Indicative of likely activities and tasks designed to facilitate students' achievement of the CILOs.
Final details will be provided to students in their first week of attendance in this course)

TLAs	ILO No
Audio Recording Studio Basics and Operation (Software and Hardware)	CILO 1
Student Presentations, Basic Audio & Music Production	CILO 2
Audio Recording and Acoustic Sound Design	CILO 3
Electronic Sound Design using Synthesis	CILO 4
Post Production Techniques and Audio Restoration	CILO 5
Audio Mastering Exercises	CILO 6
Case Studies: Final Projects	CILO 7, 8

4. Assessment Tasks/Activities

Type of assessment tasks/activities	Weighting (if applicable)	ILO No	Remarks
Tutorial exercises	None	CILO 1	
1st Assignment	15%	CILO 2	
2nd Assignment	15%	CILO 3-4	
Tutorial exercises and student centred learning activities	None	CILO 5-8	
Final Project	50%	CILO 1-8	
Participation and contribution to class discussion	20%	CILO 1-8	

5. **Grading of Student Achievement:**
   Refer to Grading of Courses in the Academic Regulations for Taught Postgraduate Degrees.

   80% coursework and 20% participation
   Grading pattern: Standard (A+, A, A-…F)
   Grading is based on performance in assessment tasks / activities.

A. <u>Soundtrack Review and Critique</u>

This assessment will grade on rationality, clarity and fluency of argument and comment.

Letter Grade	Grade Point	Grade Definitions	Description
A+ A A-	4.3 4.0 3.7	Excellent	− Rich content, excellent ability to interpret and integrate various resources − Rigorous organization, coherent structure, systematic composition − Precision in argument, well defined and reasoned points of view grounded in insightful interpretation of existing literature − Readiness to respond to peer opinion and other views initiated in class discussion − Discussion shed light on new dimensions of the issue
B+ B B-	3.3 3.0 2.7	Good	− Adequate content, sufficient ability to integrate various resources based on demand − Reasonable organization with balanced structure and composition − Clear elaboration of ideas that sticks to the point, with clearly differentiated issues, ability to interpret opinions independently − Sufficient responses to peer comments to sustain a discussion

Letter Grade	Grade Point	Grade Definitions	Description
C+ C C-	2.3 2.0 1.7	Adequate	− Adequate content, fair ability to integrate various resources based on demand − Fair organization with adequate structure and composition − Relevant points made to the subject matter in question − Ability to respond to other statements and engage in class discussion
D	1.0	Marginal	− Weak content, limited use of resources − Poor organization, structure and composition − Relevant points to the subject matter, marginal ability to interpret opinions − Ability to respond to other comments in simple terms
F	0.0	Failure	− Inadequate content, no/ irrelevant use of resources − No organization, structure or/and composition − Irrelevant points to the subject matter, no ability to interpret opinions − Fail to respond to other comments

Note: All A+/A/A- grade assignment should comply with the highest performance of Discovery-oriented learning.

B. Mini Project

Students should demonstrate ability to utilize primary and secondary sources, execute creative ideas and projects.

Letter Grade	Grade Point	Grade Definitions	Description
A+ A A-	4.3 4.0 3.7	Excellent	− Work has strong affective quality and the articulation of personal styles and signature − Excellent appreciation, exploration and/or application of the aesthetic and expressive qualities of the medium − Work raises questions and instill insights about the process of conception, creative strategization and production − Innovative exploration by combining knowledge from different disciplines (e.g. mathematics, psychology, physics, anthropology, etc.) to create an inter-disciplinary project − Efficient adjustment of plans and strategies in response to resources (time, space, equipment, etc) available with constructive adjustment
B+ B B-	3.3 3.0 2.7	Good	− Strong appreciation, exploration and/or application of the aesthetic and expressive qualities of the medium − Ability to create project/ work that demonstrate the processes of thinking and creative exploration − Proper adjustment of plans and strategies in response to resources (time, space, equipment, etc) available and constructive feedback/ suggestions

C+ C C-	2.3 2.0 1.7	Adequate	– Basic appreciation and/or application of the aesthetic and expressive qualities of the medium – Limited ability to create project/ work that demonstrate the processes of thinking and creative exploration – Adjustment of plans and strategies in response to resources (time, space, equipment, etc) available
D	1.0	Marginal	– Marginal appreciation of the aesthetic and expressive qualities of the medium – Marginal ability to create project/ work that demonstrate the processes of thinking and creative exploration – Limited adjustment of plans and strategies in response to resources (time, space, equipment, etc) available
F	0.0	Failure	– No appreciation of the aesthetics and expressive qualities of the medium – Fail to create project/ work that demonstrate the processes of thinking and creative exploration – Minimal adjustment of plans and strategies in response to resources (time, space, equipment, etc) available

Note: All A+/A/A- grade assignment should comply with the highest performance of Discovery-oriented learning.

C. Final Project

Students should demonstrate ability to utilize primary and secondary sources, execute creative ideas and projects.

Letter Grade	Grade Point	Grade Definitions	Description
A+ A A-	4.3 4.0 3.7	Excellent	– Work has strong affective quality and the articulation of personal styles and signature – Excellent appreciation, exploration and/or application of the aesthetic and expressive qualities of the medium – Work raises questions and instill insights about the process of conception, creative strategization and production – Innovative exploration by combining knowledge from different disciplines (e.g. mathematics, psychology, physics, anthropology, etc.) to create an inter-disciplinary project – Efficient adjustment of plans and strategies in response to resources (time, space, equipment, etc) available with constructive adjustment
B+ B B-	3.3 3.0 2.7	Good	– Strong appreciation, exploration and/or application of the aesthetic and expressive qualities of the medium – Ability to create project/ work that demonstrate the processes of thinking and creative exploration – Proper adjustment of plans and strategies in response to resources (time, space, equipment, etc) available and constructive feedback/ suggestions

Letter Grade	Grade Point	Grade Definitions	Description
C+ C C-	2.3 2.0 1.7	Adequate	– Basic appreciation and/or application of the aesthetic and expressive qualities of the medium – Limited ability to create project/ work that demonstrate the processes of thinking and creative exploration – Adjustment of plans and strategies in response to resources (time, space, equipment, etc) available
D	1.0	Marginal	– Marginal appreciation of the aesthetic and expressive qualities of the medium – Marginal ability to create project/ work that demonstrate the processes of thinking and creative exploration – Limited adjustment of plans and strategies in response to resources (time, space, equipment, etc) available
F	0.0	Failure	– No appreciation of the aesthetics and expressive qualities of the medium – Fail to create project/ work that demonstrate the processes of thinking and creative exploration – Minimal adjustment of plans and strategies in response to resources (time, space, equipment, etc) available

Note: All A+/A/A- grade assignment should comply with the highest performance of Discovery-oriented learning.

D. Participation and Contribution to Class Discussion

Students' participation and performance in discussions, debates and other class activities and tutorials… Students have to show their pre-class preparation.

Letter Grade	Grade Point	Grade Definitions	Description
A+ A A-	4.3 4.0 3.7	Excellent	– Active in-class participation, positive listening, strong ability to stimulate class discussion and comment on other points – In-depth pre-class preparation and familiarity with peer reports and other materials – Interpret others' views with an open mind and ready to negotiate – Readiness to share personal insight via analysis and synthesis with informed views – Constructively critical, thus facilitating the discovery of new issues
B+ B B-	3.3 3.0 2.7	Good	– Active in-class participation, positive listening, ability to initiate class discussion and comment on other points – Adequate pre-class preparation and familiarity with peer reports and other materials – Interpret opinions effectively
C+ C C-	2.3 2.0 1.7	Adequate	– Attentive in in-class participation, listening with comprehension, but only infrequently contributing – Adequate pre-class preparation but little familiarity with peer reports and other materials – Fair ability in interpreting opinions
D	1.0	Marginal	– Unmotivated to participate in class discussion or

			comment on other people's views
			− Little pre-class preparation and familiarity with peer reports and other materials
			− Poor ability in interpreting opinions
F	0.0	Failure	− Unwilling to participate in class discussion and comment on other points, even when requested by the teacher
			− No pre-class preparation and familiarity with peer reports and other materials
			− Minimal ability in interpreting opinions

Note: All A+/A/A- grade assignment should comply with the highest performance of Discovery-oriented learning.

Part III

Keyword Syllabus:

Principles of acoustics and digital audio, MIDI sequencing, audio sampling techniques, sound synthesis, audio recording, audio mastering, sound design, music composition using technology, surround sound production, sound for interactive applications.

Recommended Reading:

Key Text(s):

Chion, Michel. *Audio-Vision*, New York: Columbia University Press, 1994.

Bartlett, B. and J. Bartlett (2007). Recording music on location : capturing the live performance. Burlington, Mass., Focal Press.

Bartlett, B. and J. Bartlett (2009). Practical recording techniques : the step-by-step approach to professional audio recording. Amsterdam ; Boston, Elsevier/Focal Press.

Rumsey, F. (1994). MIDI systems and control. Oxford ; Boston, Focal Press.

General Reading List:

Pohlmann, K. C. (2005). Principles of digital audio. New York, McGraw-Hill.

Rumsey, F. and T. McCormick (2009). Sound and recording. Amsterdam ; London, Elsevier/Focal.

Rumsey, F. and J. Watkinson (2004). Digital interface handbook. Amsterdam ; Boston, Elsevier/Focal Press,.

Online Resources:

Film Sound Reference
http://www.FilmSound.org

Music and Sound Production

http://sweb.cityu.edu.hk/soundlib

Cinema Sound and EQ Curves
http://www.hometheaterhifi.com/volume_9_2/feature-article-curves-6-2002.html

MIDI
http://www.midi.org

http://www.borg.com/%7Ejglatt/tech/midispec.htm

DPA Microphones
http://www.dpamicrophones.com

Holophone (Surround Microphone)
http://www.holophone.com