

**City University of Hong Kong
Course Syllabus**

**offered by School of Creative Media
with effect from Summer Term 2017**

Part I Course Overview

Course Title: Digital Media and Moving Images

Course Code: SM5307

Course Duration: One semester

Credit Units: 3

Level: P5

Medium of Instruction: English

Medium of Assessment: English

Prerequisites:
(Course Code and Title) Nil

Precursors:
(Course Code and Title) Nil

Equivalent Courses:
(Course Code and Title) Nil

Exclusive Courses:
(Course Code and Title) Nil

Part II Course Details

1. Abstract

(A 150-word description about the course)

The objectives of this studio course are twofold: to introduce computer programming as an artistic medium and to explore innovative and alternative forms of expressions for moving image-based media. Students will experiment with *Processing* and *Max/MSP/Jitter*, two artist-friendly programming environments, to develop their creative ideas and implement their projects. They are expected to design and create their own tools to address the specific artistic and technical needs as required by their respective projects. One of the main ideas of this class is to foster a holistic approach of moving image and audio-visual art-making in which the technology and artistic form of the work are closely integrated and informed by each other. Topics such as experimental cinema, new media art, computer music and media performance will be addressed in class in order to facilitate a cross-disciplinary understanding of the various contexts and issues of contemporary moving image practices.

2. Course Intended Learning Outcomes (CILOs)

(CILOs state what the student is expected to be able to do at the end of the course according to a given standard of performance.)

No.	CILOs	Weighting (if applicable)	Discovery-enriched curriculum related learning outcomes (please tick where appropriate)		
			A1	A2	A3
1.	Describe the basic concepts of computer programming for moving image and audio-visual media		x	x	
2.	Apply digital media and computational techniques in art-making				x
3.	Identify the characteristics of digital audio-visual art		x	x	
4.^	Produce artworks with the use of algorithmic techniques and transform basic technical competence into a unique style or personal signature				x
		100%			

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

A1: *Attitude*

Develop an attitude of discovery/innovation/creativity, as demonstrated by students possessing a strong sense of curiosity, asking questions actively, challenging assumptions or engaging in inquiry together with teachers.

A2: *Ability*

Develop the ability/skill needed to discover/innovate/create, as demonstrated by students possessing critical thinking skills to assess ideas, acquiring research skills, synthesizing knowledge across disciplines or applying academic knowledge to self-life problems.

A3: *Accomplishments*

Demonstrate accomplishment of discovery/innovation/creativity through producing /constructing creative works/new artefacts, effective solutions to real-life problems or new processes.

3. Teaching and Learning Activities (TLAs)

(TLAs designed to facilitate students' achievement of the CILOs.)

TLA	Brief Description	CILO No.						Hours/week (if applicable)
		1	2	3	4	5	6	
Workshops	Technical instruction on Processing and Max/MSP/Jitter	✓						
Workshops	Technical instruction on the use of sensors, actuators, controllers and DMX lighting equipment		✓					
Lectures/Screenings	Explain key concepts and introduce recent works in the field of digital art, media performance and contemporary audio-visual art			✓				
Presentations/Critiques	Students are required to present their final projects during group critique sessions				✓			

4. Assessment Tasks/Activities (ATs)

(ATs are designed to assess how well the students achieve the CILOs.)

Assessment Tasks/Activities	CILO No.						Weighting	Remarks
	1	2	3	4	5	6		
Continuous Assessment: 100%								
Project #1	✓	✓	✓					
Final Project & presentation	✓	✓	✓	✓				
Examination: 0% (duration: , if applicable)							100%	

5. Assessment Rubrics

(Grading of student achievements is based on student performance in assessment tasks/activities with the following rubrics.)

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B, B-)	Adequate (C+, C, C-)	Marginal (D)	Failure (F)
1. Creative Project	Students should demonstrate ability to utilize primary and secondary sources, execute creative ideas and projects. The threshold of 'discovery' lies in a student's proactively turning theory into praxis, to transform course material into self-owned authorship.	<ul style="list-style-type: none"> - 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-disciplinar 	<ul style="list-style-type: none"> - 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 	<ul style="list-style-type: none"> - 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 	<ul style="list-style-type: none"> - 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 	<ul style="list-style-type: none"> - 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

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B, B-)	Adequate (C+, C, C-)	Marginal (D)	Failure (F)
		<ul style="list-style-type: none"> Efficient adjustment of plans and strategies in response to resources (time, space, equipment, etc) available with constructive adjustment 				
2. Presentation	This assessment will grade on content and fluency of presentation. Students should show their co-operation to conduct a well-organized presentation with their own argument and evidence from readings and notes. The threshold of 'discovery' lied in a student's self initiatives to conduct additional research and to personalize theories for her/his personal daily experience.	<ul style="list-style-type: none"> Rich, informative content, excellent grasp of the material with in-depth and extensive knowledge of the subject matter Rigorous organization, coherent structure, and systematic exposition with a strong sense of narrative Superior presentation skills: distinct pronunciation, fluent expression and appropriate diction, exact time-management 	<ul style="list-style-type: none"> Adequate content with firm grasp of the material that informs the audience on a subject matter Reasonable organization, balanced structure and composition Good verbal communication: comprehensible pronunciation, fluent expression and diction, fair time-management 	<ul style="list-style-type: none"> Adequate content with comprehensive grasp of the material demonstrating basic knowledge of the subject matter Fair organization, weak structure and composition Fair presentation skills: acceptable pronunciation, expression and diction, fair time-management 	<ul style="list-style-type: none"> Weak content, loose grasp of the general ideas with some knowledge of the subject matter Poor organization, structure and composition Poor presentation skills: marginal pronunciation, expression and diction, poor time-management 	<ul style="list-style-type: none"> Inadequate content, fail to identify the general ideas with knowledge of the subject matter No organization, structure or/and composition Poor presentation skills: marginal pronunciation, expression and diction, minimal time-management

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B, B-)	Adequate (C+, C, C-)	Marginal (D)	Failure (F)
		– Critical analysis with insightful comments opening up new issues, or suggesting the ability to theorize				

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

Part III Other Information (more details can be provided separately in the teaching plan)

1. Keyword Syllabus

(An indication of the key topics of the course.)

Digital literacy and creativity, Max/MSP/Jitter, Processing, software prototyping and design, computational cinema, video art, new media art, media performance, algorithmic techniques in art-making

2. Reading List

2.1 Compulsory Readings

(Compulsory readings can include books, book chapters, or journal/magazine articles. There are also collections of e-books, e-journals available from the CityU Library.)

	<u>Programming</u>
1.	Cipriani, Alessandro. Electronic Music and Sound Design - Theory and Practice with Max/MSP . Rome: ConTempoNet, 2010.
2.	Elsea, Peter. Peter Elsea's Max Tutorials , (from ftp://arts.ucsc.edu/pub/ems/maxtutors/)
3.	Levin, Golan. " Computer Vision for Artists and Designers: Pedagogic Tools and Techniques for Novice Programmers ", 2006. (from http://www.flong.com/writings/)
4.	Maeda, John. Design by numbers . Cambridge, Mass: MIT Press, 1999.
5.	Manzo, V.J. Max/MSP/Jitter for music : a practical guide to developing interactive music systems for education and more . New York : Oxford University Press, 2011.
6.	Reas, Casey and Ben Fry. Processing: a programming handbook for visual designers and artists . Cambridge, Mass: MIT, 2014.
7.	Shiffman, Daniel. Learning Processing: a beginner's guide to programming images, animation, and interaction . Amsterdam; Boston : Morgan Kaufmann/Elsevier, c2008.
8.	Dixon, Steve. Digital performance: a history of new media in theater, dance, performance art, and installation . Cambridge, Mass. : MIT Press, 2007.
9.	Faulkner, Michael (ed.). VJ: audio-visual art + VJ culture . London: Laurence King, 2006.
10.	Reas, Casey. Form+Code in Design, Art, and Architecture . New York : Princeton Architectural Press, 2010.
11.	Shaw, Jeffrey (ed.). Future cinema: the cinematic imaginary after film . Cambridge, Mass: MIT, 2003.
12.	Youngblood, Gene. Expanded cinema . New York: Dutton, 1970.

2.2 Additional Readings

(Additional references for students to learn to expand their knowledge about the subject.)

	<u>Programming/software tools</u>
1	ARToolkit http://www.aranarproductions.com/artk/
2	CNMAT external downloads http://cnmat.berkeley.edu/downloads
3	CV objects http://jmpelletier.com/cvjit/
4	CCV http://ccv.nuigroup.com/
5	EyesWeb http://www.infomus.org/EywMain.html
6	EyeCon http://eyecon.palindrome.de/
7	Field http://openendedgroup.com/field/
8	GEM http://gem4mac.sourceforge.net/
9	Isadora http://www.troikaranch.org/isadora.html/
10	jit.kinect http://jmpelletier.com/freenect/
11	JMax http://freesoftware.ircam.fr/rubrique.php3?id_rubrique=14
12	Korsakow http://www.korsakow.com/ksy/index.html

13	Keyworx	http://www.keyworx.org/
14	Lily	http://www.lilyapp.org/
15	Max	http://www.cycling74.com/
16	Modul8	http://www.modul8.ch/
17	Mrmr	http://poly.share.dj/projects/#mrmr
18	NodeBox	http://nodebox.net/code/index.php/Home
19	Open Sound Control (OSC)	http://opensoundcontrol.org/
20	oscP5	http://www.sojamo.de/libraries/oscP5/index.html
21	OpenFrameworks	http://www.openframeworks.cc/
22	Processing	http://processing.org/
23	Pure Data	http://puredata.info/
24	reactIVision	http://reactivision.sourceforge.net/
25	Resolume	http://www.resolume.com/
26	Syphon	http://syphon.v002.info/
27	TouchDesigner	http://www.touch077.com/
28	Tx-transform	http://www.tx-transform.com/Eng/index.html
29	Vidvox	http://vidvox.net/
30	Voodoo camera tracker	http://www.digilab.uni-hannover.de/docs/manual.html
31	VPT	http://hcgilje.wordpress.com/vpt6-manual/
32	VVVV	http://vvvv.org/tiki-index.php/
	<u>Hardware</u>	
33	Arduino	http://www.arduino.cc/
34	Eowave	http://www.eowave.com/
35	Electrotap	http://www.electrotap.com/
36	ENTTEC (DMX)	http://www.enttec.com/
37	iCube	http://infusionsystems.com/
38	Imaging Source	http://www.theimagingsource.com
39	Ms Pinky	http://www.mspinky.com/
40	Phidgets	http://www.phidgets.com/
41	Unibrain	http://www.unibrain.com/
	<u>Artists/People/Groups</u>	
42	Alva Noto	http://www.alvanoto.com/
43	Anti VJ	http://www.antivj.com/
44	Avatar	http://www.lenomdelachose.org/
45	Blast Theory	http://www.blasttheory.co.uk/
46	Burst TV	http://www.burst-tv.net
47	Camille Utterback	http://www.camilleutterback.com/
48	Casey Reas	http://reas.com/
49	Christian Moeller	http://www.christian-moeller.com/
50	Cory Arcangel	http://beigerecords.com/cory/
51	D-fuse	http://www.dfuse.com/
52	Diane Landry	http://www.clic.net/~dilandry/
53	Daniel Shiffman	http://www.shiffman.net/
54	David Rokeby	http://homepage.mac.com/davidrokeby
55	Daito Manabe	http://www.daito.ws/
56	Daniel Rozin	http://www.smoothware.com/danny/newbio.html
57	Daniel Sauter	http://daniel-sauter.com/
58	deKam	http://www.node.net/main.shtml
59	Dumbtype	http://dumbtype.com/
60	Exonemo	http://www.exonemo.com/
61	Golan Levin	http://www.flong.com/
62	Granular Synthesis	http://www.granularsynthesis.info/ns/index.php
63	GRL	http://graffitiresearchlab.com/

64	HC Gilje	http://www.nervousvision.com/
65	Interactive Sonic Systems	http://mtg.upf.es/reactable/
66	Jasch	http://www.jasch.ch/
67	Jennifer & Kevin McCoy	http://www.mccoospace.com/
68	Jeffrey Shaw	http://www.jeffrey-shaw.net/
69	Jim Campbell	http://www.jimcampbell.tv/
70	John Klima	http://www.cityarts.com/lmno/
71	John Maeda	http://www.maedastudio.com
72	Joshua Goldberg	http://www.goldbergs.com/
73	Julien Maire	http://julienmaire.ideenshop.net/
74	Kurt Ralske	http://retnull.com/
75	Lia	http://www.strangethingshappen.org/
76	Light Surgeons	http://www.thelightsurgeons.co.uk/
77	Lev Manovich	http://www.manovich.net/
78	Luc Courchesne	http://www.din.umontreal.ca/courschesne
79	Marc Lafia	http://www.marclafia.net/
80	Martijn van Boven	http://www.474746.org/
81	Masaki Fujihata	http://www.fujihata.jp/
82	Masayuki Akamatsu	http://www.iamas.ac.jp/~aka/
83	Michael Mateas	http://users.soe.ucsc.edu/~michaelm/
84	Miller Puckette	http://crca.ucsd.edu/~msp/
85	Otolab	http://www.otolab.net/
86	Paul Kasier	http://www.openendedgroup.com/
87	Philip Worthington	http://www.worthersoriginal.com
88	Rafael Lozano-Hemmer	http://www.lozano-hemmer.com/eprlh.html
89	Robert Rowe	http://homepages.nyu.edu/~rr6/
90	Ryoji Ikeda	http://www.ryojiikeda.com/
91	Ryoichi Kurokawa	http://www.ryoichikurokawa.com/
92	Scott Snibbe	http://www.snibbe.com/
93	Semiconductor	http://www.semiconductorfilms.com/
94	Stelarc	http://www.stelarc.va.com.au
95	Sue C.	http://www.sue-c.net/
96	Suguru Goto	http://suguru.goto.free.fr/Contents/SuguruGoto-e.html
97	Telcosystems	http://www.telcosystems.net/
98	Teatro Cinema	http://www.teatrocinema.cl/
99	Troika Ranch	http://www.troikaranch.org
100	Ulf Langheinrich	http://langheinrich.net/
101	Vasulkas	http://www.vasulka.org/
102	Wooster group	http://www.thewoostergroup.org/
103	Young-Hae Chang	http://www.yhchang.com/
104	Zachary Lieberman	http://www.thesystemis.com/
	<u>Organizations/Centers</u>	
105	CNMAT	http://cnmat.berkeley.edu/
106	CRCA	http://crca.ucsd.edu/
107	EMPAC	http://empac.rpi.edu/
108	Eyebeam	http://eyebeam.org/
109	iAMAS	http://www.iamas.ac.jp/
110	ICC	http://www.ntticc.or.jp/index_e.html
111	iCinema	http://www.icinema.unsw.edu.au/
112	IRCAM	http://www.ircam.fr/
113	The Labyrinth Project	http://college.usc.edu/labyrinth/
114	MIT Media Lab	http://www.media.mit.edu/research/
115	Sonar	http://www.sonar.es/
116	Sonic Acts	http://www.sonicacts.com/

117	V2	http://www.v2.nl/
118	STEIM	http://www.steim.org/
119	ZKM	http://onl.zkm.de/zkm/e/