

OFFICE OF THE ASSOCIATE VICE-PRESIDENT, ACADEMIC AND
ASSOCIATE PROVOST8888 University Drive,
Burnaby, BC
Canada V5A 1S6TEL: 778.782.4636
FAX: 778.782.5876avpcio@sfu.ca
www.sfu.ca/vpacademic

MEMORANDUM

ATTENTION	Senate	DATE	December 3, 2010
FROM	Bill Krane, Chair	PAGES	1/1
	Senate Committee on Undergraduate		
	Studies		
RE:	Faculty of Communication, Art and Technology (SCUS 10-59b)		

For information:

Acting under delegated authority at its meeting of December 2, 2010, SCUS approved the following curriculum revisions:

1. School of Interactive Arts and Technology (SCUS 10-59b)

- (i) Change to course number and title for TECH 106
- (ii) Prerequisite change for IAT 202
- (iii) Changes to title and description for IAT 100
- (iv) Title change for IAT 480

Effective Fall 2011

Senators wishing to consult a more detailed report of curriculum revisions may do so on the Web at http://www.sfu.ca/senate/Senate_agenda.html following the posting of the agenda. If you are unable to access the information, please call 778-782-3168 or email shelley_gair@sfu.ca.



MEMO

Office of the Dean

TASC2 8800
8888 University Drive
Burnaby BC
V5A 1S6

T 778-782-8790
F 778-782-8789

www.fcat.sfu.ca
fcatinfo@sfu.ca

TO: Bill Krane, Chair
Senate Committee on Undergraduate Studies

FROM: DD Kugler, Chair
Faculty of Communication, Art and Technology
Undergraduate Curriculum Committee

RE: Curricular Revisions: SIAT from TechOne

DATE: November 22, 2010

On November 18, 2010, the Faculty of Communication, Art and Technology Undergraduate Curriculum Committee approved the following curricular revisions passed by the School of Interactive Arts & Technology:

2010-FCAT-IAT-015

Course Change/Deletion TECH 106 (to IAT 106)

Motion to change the course number for TECH 106 (Spatial Thinking and Communicating) to IAT 106 (Spatial Thinking and Communicating)
Course Change Proposal Form:

2010-FCAT-IAT-014

Course Change/Deletion TECH 101W (to IAT 103W)

Motion to change the course number and title for TECH 101W (Communication, Teamwork and Collaborative Process) to IAT 106 (Design Communication and Collaboration)

2010-FCAT-IAT-013

New Course Proposal: IAT 167 - Digital Games: Genre, Structure, Programming and Play

2010-FCAT-IAT-012

SIAT Calendar Changes

2010-FCAT-IAT-011

Course Change/Deletion-IAT 265

2010-FCAT-IAT-010



FACULTY OF COMMUNICATION, ART AND TECHNOLOGY

Course Change/Deletion-IAT 267

2010-FCAT-IAT-009

Course Change/Deletion-IAT 100

2010-FCAT-IAT-008

Course Change/Deletion-IAT 202

2010-FCAT-IAT-007

Course Change/Deletion-IAT 480

Would you please place these items on the agenda of the next meeting of SCUS?

A handwritten signature in black ink, appearing to be "DD Kugler".

Digitally signed by DD
Kugler
DN: cn=DD Kugler, o,
ou,
email=smorrisa@sfu.c
a, c=CA
Date: 2010.11.24
12:45:44 -08'00'

DK:sam
Att.

Senate Committee on Undergraduate studies

COURSE CHANGE/DELETION FORM

Existing Course Number: TECH 106

Existing Title: Spatial Thinking and Communicating

Please check appropriate revision(s):

Course Number: x Credit Hours: Title: x
Description: Prerequisite: Vector:
Course deletion: (Lect/Sem/Tut/Lab)

FROM:
Title: TECH 106 – Spatial Thinking and Communicating

TO:
Title: LAT 106 – Spatial Thinking and Communicating

Pre-Requisite Text: Students with credit for TECH 106 may not take this course for further credit.

If Title Change, indicate:

a) **Long Title for calendar/schedule:** max. 100 characters, including spaces/punctuation:
IAT 106 – Spatial Thinking and Communicating

b) Short Title for enrollment/transcript: max. 30 characters, including spaces/punctuation:
IAT 106 – Spatial Thinking & Comm

RATIONALE:

This course is replacing TECH 106 because TechOne as of Fall 2011 will become an integrated part of the School of Interactive Arts and Technology.

TechOne was originally developed as a stand-alone cohort program to serve the needs of students in Interactive Arts + Technology, Applied Sciences, and Business at Surrey. Over the years, with the development of separate programs for Business students (BusOne) and

Applied Sciences students (Systems One), the TechOne program has been serving as a feeder program for just the Interactive Arts & Technology.

With TechOne no longer being a feeder for other programs, the School of Interactive Arts & Technology is developing their own exciting, tailor-made first year that will better integrate with its undergraduate programs. While some of the content will be similar to the 'old' TechOne program, one other brand new course will be added.

A complete package for the program revision will be brought forward for information to the SSCC and for approval through the normal curriculum review processes with the goal of having this new program in place for Fall 2011. This package for a SIAT-based TechOne is expected to include:

- Revised lower division degree requirements for SIAT
- New course proposals for TechOne courses
- Changed admission requirement for TechOne to match SIAT requirements, specifically return to the Math 12 requirement

Once program approval is received, the university will make an announcement rolling out the new TechOne.

If this course replicates the content of a previously approved course to the extent that students should not receive credit for both courses, this should be noted in the prerequisite.

Effective term and year: Fall 2011

Senate Committee on
Undergraduate studies

COURSE CHANGE/DELETION FORM

Existing Course Number: TECH 101W

Existing Title: Communication, Teamwork and Collaborative Process

Please check appropriate revision(s):

Course Number: ☒ Credit Hours: _____ Title: ☒
Description: ☒ Prerequisite: ☒ Vector: _____
(Lect/Sem/Tut/Lab)
Course deletion: _____

FROM:

Number and Title: TECH 101W – Communication, Teamwork and Collaborative Process

Description:

Teaches essential skills for negotiating first-year course work successfully. Covers the principles, practice and understanding of effective communication, research, critical thinking and teamwork needed within both face-to-face and virtual environments. Presents opportunities to practice and develop communication and interpersonal skills, and make that expertise transferable from the classroom to the workplace. Writing.

Pre-Requisite Text: (none)

TO:

Number and Title: I

AT 103W – Design Communication and Collaboration.

Description:

Teaches skills essential for negotiating first-year course work successfully. Covers the principles, practices and understanding of the merging discipline of Interactive Arts & Technology, along with skills and knowledge essential for success: teamwork and collaboration, effective communication, research and critical thinking. Focuses on issues central to practice of the media, design, and informatics professions. Presents opportunities to practice and develop communication and interpersonal skills, and make that expertise transferable from the classroom to the workplace. Writing.

Pre-Requisite Text: Students with credit for TECH 101W may not take this course for further credit.

If Title Change, indicate:

a) Long Title for calendar/schedule: max. 100 characters, including spaces/punctuation:
LAT 103W – Design Communication and Collaboration

b) Short Title for enrollment/transcript: max. 30 characters, including spaces/punctuation:
IAT 103W – Design Collab & Cmn

RATIONALE:

This course is replacing TECH 106 because TechOne as of Fall 2011 will become an integrated part of the School of Interactive Arts and Technology.

TechOne was originally developed as a stand-alone cohort program to serve the needs of students in Interactive Arts + Technology, Applied Sciences, and Business at Surrey. Over the years, with the development of separate programs for Business students (BusOne) and Applied Sciences students (Systems One), the TechOne program has been serving as a feeder program for just the Interactive Arts & Technology.

With TechOne no longer being a feeder for other programs, the School of Interactive Arts & Technology is developing their own exciting, tailor-made first year that will better integrate with its undergraduate programs. While some of the content will be similar to the 'old' TechOne program, one other brand new course will be added.

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- Revised lower division degree requirements for SIAT
- New course proposals for TechOne courses
- Changed admission requirement for TechOne to match SIAT requirements, specifically return to the Math 12 requirement

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If this course replicates the content of a previously approved course to the extent that students should not receive credit for both courses, this should be noted in the prerequisite.

Effective term and year: Fall 2011

COURSE NUMBER IAT 167-3**COURSE TITLE**

LONG — for Calendar/schedule, no more than 100 characters including spaces and punctuation

Digital Games: Genre, Structure, Programming and Play**AND**

SHORT — for enrollment/transcript, no more than 30 characters including spaces and punctuation

Digital Games**CREDITS**Indicate number of credits for: Lecture 2 Seminar 0 Tutorial 0 Lab 1**COURSE DESCRIPTION (FOR CALENDAR). 3-4 LINES MAXIMUM. ATTACH A COURSE OUTLINE TO THIS PROPOSAL.**

Introduces game genres, structures, and programming methods basic to developing games. Students learn how games are designed and how to program the underlying patterns that facilitate play and engagement. Issues of user interface, skills and competition are discussed as are principles of compelling entertainment for players

PREREQUISITE

CMPT 166 (or equivalent first programming course such as CMPT 120, 125, 126, or 128). Students who have obtained credit for, or are currently enrolled in, a CMPT course at the 200 level or higher, or IAT 265 or 267 may not take this course for further credit.

COREQUISITENone**SPECIAL INSTRUCTIONS**

That is, does this course replicate the content of a previously-approved course to such an extent that students should not receive credit for both courses? If so, this should be **noted in the prerequisite**.

COURSES(S) TO BE DELETED IF THIS COURSE IS APPROVED**NOTE: APPROPRIATE DOCUMENT FOR DELETION MUST BE SUBMITTED TO SCUS****RATIONALE FOR INTRODUCTION OF THIS COURSE**

SIAT's recent curriculum review (by faculty, students, alumni, and industry) revealed unanimous agreement to strengthen students' technical skills. There is strong interest by students and faculty to expand game making instruction. This course will be the second of a required two course sequence starting with CMPT 166. By combining video game history and design with programming, it will help students develop technical skill in the context of contemporary video game culture and industry, drawing in students who might otherwise be programming averse. This course will be part of the SIAT-based TechOne starting in Fall 2011.



SCHEDULING AND ENROLLMENT INFORMATION

Indicate effective **term and year** course would first be offered and planned **frequency** of offering thereafter:

Spring 2012, at minimum once per year.

(NOTE: There is a two-term wait for implementation of any new course.)

Indicate if there is a waiver required: ☐ YES ☒ NO Will this be a required or elective course in the curriculum? ☒ Required ☐ Elective

What is the probable enrollment when offered? Estimate 150-200/yr

Which of your present CFL faculty have the expertise to offer this course?

Shaw, Bartram, Seif El Nasr, Pasquier, Neustaedter, Yang, Serban, DiPaola, Woodbury

Are there any proposed student fees associated with this course other than tuition fees? ☐ YES ☐ NO
(If yes, attach mandatory supplementary fee approval form.)

RESOURCE IMPLICATIONS

NOTE: Senate has approved (S.93-11) that no new course should be approved by Senate until funding has been committed for necessary library materials. Each new course proposal must be accompanied by a library report and, if appropriate, confirmation that funding arrangements have been addressed.

Campus where course will be taught: Surrey

Library report status: _____

Provide details on how existing instructional resources will be redistributed to accommodate this new course. For example, will another course be eliminated or will the frequency of offering of other courses be reduced; are there changes in pedagogical style or class sizes that allow for this additional course offering?

This course will be offered using existing SIAT funds

List any outstanding resource issues to be addressed prior to implementation: space, laboratory equipment, etc:

Course will use standard SIAT (Surrey) computing labs.

Articulation agreement reviewed? ☐ YES ☐ NO ☒ Not applicable

OTHER IMPLICATIONS



APPROVALS

- 1 Departmental approval indicates that the Department or School has approved the content of the course, and has consulted with other Departments/Schools/Faculties regarding proposed course content and overlap issues.

John Bowes

Nov 17, 2010

Chair, Department/School

Date

Don Kugler

Chair, Faculty Curriculum Committee

Date

- 2 Faculty approval indicates that all the necessary course content and overlap concerns have been resolved, and that the Faculty/School/Department commits to providing the required Library funds.

Dean or designate

Date

LIST which other Departments, Schools and Faculties have been consulted regarding the proposed course content, including overlap issues. Attach documentary evidence of responses.

The School of Computing Science, in particular the Software Systems major at the Surrey campus.

Other Faculties approval indicated that the Dean(s) or Designate of other Faculties AFFECTED by the proposed new course support(s) the approval of the new course:

Date _____

Date _____

- 3 SCUS approval indicates that the course has been approved for implementation subject, where appropriate, to financial issues being addressed.

COURSE APPROVED BY SCUS (Chair of SCUS):

Date _____

APPROVAL IS SIGNIFIED BY DATE AND APPROPRIATE SIGNATURE.

IAT 167-3-Digital Games: Genre, Structure, Programming and Play

COURSE DESCRIPTION:

Introduces game genres, structures, and programming methods basic to developing games. Students learn how games are designed and how to program the underlying patterns that facilitate play and engagement. Issues of user interface, skills and competition are discussed as are principles of compelling entertainment for players.

This is a second programming course that covers practical programming concepts in the context of game development. The course introduces game mechanics or systems and programming methods basic to game development. Students learn how games are structured and designed, and how to program the underlying methods that facilitate play and engagement. Issues of user interface, skills and competition are discussed as are principles of compelling entertainment for players.

Students will be introduced to these key ideas through event-driven object oriented programming. The course will use the 2D programming tool Flash Actionscript to design and develop games of complexity similar to 2D casual digital games. An important aspect of this course is a consideration of the cultural and social place of digital games in culture, and an introduction to aspects of game design.

COURSE OBJECTIVES:

The course consists of several learning objectives. Students should demonstrate ability to:

- Understand the fundamental concepts and components concerned with the representation and processing of 2D game imagery and animation.
- Understand the fundamentals of game mechanics and interaction game design.
- Develop a simple 2D game through game development cycle: design, implementation, testing, and iteration on this cycle to develop a successful game.
- Program a simple 2D game using tools used in class, thus demonstrating understanding of basic programming principles of
 - Variables
 - Conditionals
 - Loops
 - Data structures
 - Event-driven programming, including handling of user input, handling of collision detection events, etc.
- Understand and design user interfaces and environments, thus showing understanding of basic color theory and visual design.
- Situate their game design within the context of current game genre and game culture.

DELIVERY METHOD:

Computing concepts are introduced as needed for game mechanics, image manipulation, animation, narrative delivery, and event handling. The course is based on unit sequences which build in programming complexity.

The units will be as follows:

- Weeks 1-3: Introduction to Games and Culture, Game Mechanics, Genre, programming constructs (variables, events, input, etc.)
- Weeks 4-6: Introduction to Serious Games and educational games, animation through sprites, game process (testing and iteration) and documentation

- Weeks 7-10: Platform game: manipulation of imagery, space representation and movement, inventory management, basics of game systems: collision systems, inventory systems, interaction design and feedback systems to the users
- Weeks 11-13: Platform game 2: rotations of images, dynamic manipulation of HUD (Heads up Display) as an indication of tension

EVALUATION:

Assignments (individual): 40%

- Memory Game: 5%
- Brain Game: 10%
- Platformer: 10%
- Platformer 2: 15%

Quizzes (in-class): 10%

Midterm exam 20%

Final Exam: 30%

Required Text:

Ernest Adams. *Fundamentals of Game Design*. New Riders, 2009.

Reference Texts:

For Game Maker:

Nanu Swamy and Naveena Swamy. *Basic Game Design & Creation for Fun & Learning*, Charles River Media, 2006.

For Flash 3:

Gary Rosenzweig. *ActionScript 3.0 Game Programming* University. Que, 2007.

For Multiplayer Flash games:

Jobe Makar. *ActionScript for Multiplayer Games and Virtual Worlds*. New Riders, 2009.

Other:

Tracy Fullerton. *Game Design Workshop, Second Edition: A Playcentric Approach to Creating Innovative Games*. Morgan Kaufmann, 2008.

Jesse Schell. *The Art of Game Design*. Morgan Kaufmann, 2008.

Steve Swink. *Game Feel: A Game Designer's Guide to Virtual Sensation*. Morgan Kaufmann, 2008.

Joshua Noble. *Flex 3 Cookbook: Code-Recipes, Tips, and Tricks for RIA Developers*. O'Reilly Media, 2008.

**Senate Committee on
Undergraduate studies**

COURSE CHANGE/DELETION FORM

Existing Course Number: IAT 202

Existing Title: New Media Images

Please check appropriate revision(s):

Course Number: _____	Credit Hours: _____	Title: _____
Description: _____	Prerequisite: <u> X </u>	Vector: _____ (Lect/Sem/Tut/Lab)
Course deletion: _____		

FROM:

Prerequisite: Minimum of 18 units. Recommended: IAT 100. Students with credit for IAT 101, TECH 121, 122, 123 may not take this course for further credit. Students who have taken TECH 124 before January 2008 may not take this course for further credit. Breadth-Humanities.

TO:

Prerequisite: Minimum of 18 units, including IAT 100. Students with credit for IAT 101, TECH 121, 122, 123 may not take this course for further credit. Students who have taken TECH 124 before January 2008 may not take this course for further credit. Breadth-Humanities.

RATIONALE:

IAT100 is required to graduate but is currently NOT a pre-req to any SIAT course. Many students are skipping IAT100 and in their senior year either have to take this course, or they have this course waived as a pre-req.

IAT 100 is being slightly revised to encompass more digital photographic (bitmap and raster graphics and processing) and vector graphics (drawing with Wacoms). These skills are required in many 200 and upper level IAT courses, particularly in the media arts and design areas.

If this course replicates the content of a previously approved course to the extent that students should not receive credit for both courses, this should be noted in the prerequisite.

Effective term and year: Fall 2011

Senate Committee on
Undergraduate studies

COURSE CHANGE/DELETION FORM

Existing Course Number: IAT 265

Existing Title: Multimedia Programming for Art and Design

Please check appropriate revision(s):

Course Number: _____ Credit Hours: _____ Title: _____
Description: _____ Prerequisite: x Vector: _____
(Lect/Sem/Tut/Lab)
Course deletion: _____

FROM:

Prerequisite: CMPT 120 (or equivalent first programming course). Recommended: IAT 265 or other second year programming course. This course is equivalent to CMPT 267; students with credit for CMPT 267 may not take this course for further credit.

TO: (change shown in **bold/underline**)

Prerequisite: **18 units, including CMPT 166 (or equivalent first programming course such as CMPT 120, 125, 126, or 128).** This course is equivalent to CMPT 265; students with credit for CMPT 265 may not take this course for further credit.

If Title Change, indicate:

- a) Long Title for calendar/schedule: max. 100 characters, including spaces/punctuation:
- b) Short Title for enrollment/transcript: max. 30 characters, including spaces/punctuation:

RATIONALE:

CMPT 166 has been developed as an introductory programming course better suited to Interactive Arts and Technology students than the existing CMPT 120. While it is expected the majority of IAT students will enroll in CMPT 166, some may take CMPT 120 at colleges or elsewhere because it has more equivalencies.

If this course replicates the content of a previously approved course to the extent that students should not receive credit for both courses, this should be noted in the prerequisite.

Effective term and year: Fall 2011

Senate Committee on
Undergraduate studies

COURSE CHANGE/DELETION FORM

Existing Course Number: IAT 267

Existing Title: Intro to Technological Systems

Please check appropriate revision(s):

Course Number: _____ Credit Hours: _____ Title: _____
Description: _____ Prerequisite: x Vector: _____
(Lect/Sem/Tut/Lab)
Course deletion: _____

FROM:

Prerequisite: CMPT 120 (or equivalent first programming course). Recommended: IAT 265 or other second year programming course. This course is equivalent to CMPT 267; students with credit for CMPT 267 may not take this course for further credit.

TO: (change shown in **bold/underline**)

Prerequisite: **18 units, including CMPT 166 (or equivalent first programming course such as CMPT 120, 125, 126, or 128).** Recommended: IAT 265 or other second year programming course. This course is equivalent to CMPT 267; students with credit for CMPT 267 may not take this course for further credit.

If Title Change, indicate:

- a) Long Title for calendar/schedule: max. 100 characters, including spaces/punctuation:
- b) Short Title for enrollment/transcript: max. 30 characters, including spaces/punctuation:

RATIONALE:

CMPT 166 has been developed as an introductory programming course better suited to Interactive Arts and Technology students than the existing CMPT 120. While it is expected the majority of IAT students will enroll in CMPT 166, some may take CMPT 120 at colleges or elsewhere because it has more equivalencies.

If this course replicates the content of a previously approved course to the extent that students should not receive credit for both courses, this should be noted in the prerequisite.

Effective term and year: Fall 2011

**Senate Committee on
Undergraduate studies**

COURSE CHANGE/DELETION FORM

Existing Course Number: LAT 100

Existing Title: Systems of Media Representation

Please check appropriate revision(s):

Course Number: _____ **Credit Hours:** _____ **Title:** x
Description: x **Prerequisite:** _____ **Vector:** _____
(Lect/Sem/Tut/Lab)
Course deletion: _____

FROM:

Title: Systems of Media Representation

Description:

Systems of two dimensional, three dimensional and interactive visual representation are surveyed as they apply to both physical and digital media. Classical notions of 2D mark making and 3D linear perspective are introduced along with contemporary alternatives with digital media. Topics in interactivity include narrative concepts, color and composition as meaning, and modes of perception and reception. The course culminates with the development of an interactive time-based group project centered on multimedia, user interactions and medium of delivery. Students with credit for TECH 117, 118, 119 and 120 may not take this course for further credit. Breadth-Humanities.

TO:

Title: Digital Image Design

Description:

Digital Image Design is a project-based course that introduces the theory and hands-on practice of art and design in digital media. As the introductory course in IAT this course teaches the core fundamental principles in 2D visual design, sequential and animation design. Students learn the fundamentals of digital photography and vector image creation. The theory is contextualized in contemporary new media design practice and is broadly applicable across disciplines. Students with credit for TECH 117, 118, 119 and 120 may not take this course for further credit. Breadth-Humanities.

If Title Change, indicate:

a) Long Title for calendar/schedule: max. 100 characters, including spaces/punctuation:

Digital Image Design

b) Short Title for enrollment/transcript: max. 30 characters, including spaces/punctuation:

Digital Image Design

RATIONALE:

IAT 100 is being slightly revised to encompass more digital photographic (bitmap and raster graphics and processing) and vector graphics (drawing with Wacoms). These skills are required in many 200 and upper level IAT courses, particularly in the media arts and design areas.

If this course replicates the content of a previously approved course to the extent that students should not receive credit for both courses, this should be noted in the prerequisite.

Effective term and year: Fall 2011

Senate Committee on
Undergraduate studies

COURSE CHANGE/DELETION FORM

Existing Course Number: IAT 480

Existing Title: Special Topics in Interactive Arts and Technology

Please check appropriate revision(s):

Course Number: _____ Credit Hours: _____ Title: x
Description: _____ Prerequisite: _____ Vector: _____
(Lect/Sem/Tut/Lab)
Course deletion: _____

FROM:

Special Topics in Interactive Arts and Technology

TO:

Special Topics in Interactive Arts and Technology (Arts)

If Title Change, indicate:

a) Long Title for calendar/schedule: max. 100 characters, including spaces/punctuation:
Special Topics in Interactive Arts and Technology (Arts)

b) Short Title for enrollment/transcript: max. 30 characters, including spaces/punctuation:
Special Topics in IAT (Arts)

RATIONALE:

This was an oversight in our curriculum changes from 2007. The other existing IAT special topics courses are:

IAT 380 – Special Topics in IAT (Arts)
IAT 381 – Special Topics in IAT (Science)
IAT 481 – Special Topics in IAT (Science)

This change is being introduced for consistency and clarity. The reason special topics are separated into arts and science is because we offer both a BA and BSc and as such have a need for special topics catering to those areas.

If this course replicates the content of a previously approved course to the extent that students should not receive credit for both courses, this should be noted in the prerequisite.

Effective term and year: Fall 2011