




8888 University Drive,  
Burnaby, BC  
Canada V5A 1S6

TEL: 778.782.6654  
FAX: 778.782.5876

avpacad@sfu.ca  
www.sfu.ca/vpacademic

## MEMORANDUM

---

ATTENTION	Senate	DATE	December 6, 2019
FROM	Wade Parkhouse, Chair Senate Committee on Undergraduate Studies	PAGES	1/2
RE:	Course Changes (SCUS 19-70)		

---

**For information:**

Acting under delegated authority at its meeting of December 5, 2019 SCUS approved the following curriculum revisions effective Fall 2020.

**a. Beedie School of Business**

- (i) Equivalent Statement for BUS 232

**b. Faculty of Communication, Art and Technology****1. School for the Contemporary Arts**

- (i) Title change for CA 117 and 118
- (ii) Course number and equivalent statement change for CA 227
- (iii) Changes to course number, title, description, prerequisite and equivalent statement for CA 237
- (iv) Description change for CA 270 and 271
- (v) Title and description change for CA 312 and 314
- (vi) Changes to course number, units and equivalent statement for CA 317
- (vii) Description change for CA 325
- (viii) Course number, title, prerequisite and equivalent statement change for CA 335
- (ix) Course number, title, description, prerequisite and equivalent statement change for CA 337
- (x) Description change for CA 389
- (xi) Title, description and prerequisite change for CA 412W
- (xii) Title and description change for CA 414
- (xiii) Prerequisite change for CA 430
- (xiv) Course number, title, description, prerequisite and equivalent statement change for CA 436

## c. Faculty of Science

### 1. Department of Biological Sciences

- (i) Equivalent Statement change for BISC 204

### 2. Department of Physics

- (i) Prerequisite change for PHYS 120, 121, 125, 126, 132, and 133
- (ii) Title and prerequisite change for PHYS 233
- (iii) Course number, title and prerequisite change for PHYS 231
- (iv) Prerequisite change for PHYS 326, 332W, 365, 421, 455, 465 and 490

Senators wishing to consult a more detailed report of curriculum revisions may do so on the Senate Docushare repository at <https://docushare.sfu.ca/dsweb/View/Collection-12682>.

COURSE SUBJECT  NUMBER  TITLE

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number  Units  Prerequisite   
Title  Description  Equivalent Statement

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

An introduction to business statistics with a heavy emphasis on applications and the use of EXCEL. Students will be required to use statistical applications to solve business problems. Prerequisite: MATH 150, MATH 151, MATH 154, or MATH 157; 15 units. MATH 150, MATH 151, MATH 154, or MATH 157 may be taken concurrently with BUS 232. Students with credit for BUEC 232 or ECON 233 may not take this course for further credit. Quantitative.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

**RATIONALE** (must be included)

ECON 233 was created for Econ students, however it was determined that students could take either of ECON 233 or BUS 232 and still be equipped to continue with the requirements of their program. BUS 232 focuses on Excel and ECON 233 focuses on R, so students can select based on their interest and how one or the other of these will complement their future studies.



COURSE SUBJECT CA NUMBER 117 TITLE Visual Art and Culture I

TYPE OF CHANGES. Please type 'X' for the appropriate revision(s):

- Course number [ ] Units [ ] Prerequisite [ ] Title [X] Description [ ] Equivalent Statement [ ]

WORDING/DESCRIPTION EDITS. Indicate deleted or changed text using strike through, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under Information about specific course components if changing equivalent statement(s).

CA 117 - ~~Visual Art and Culture I~~ Modern Art History (3)
An introduction to the visual arts of the nineteenth century. Formal and thematic approaches to the arts will be introduced, with attention to the social, institutional, national, and international contexts of art. Students with credit for CA (or FPA) 167 may not take this course for further credit. Breadth-Humanities.

EFFECTIVE TERM AND YEAR FOR CHANGES

Fall, Spring, Summer and year (please enter in textbox)

Fall 2020

RATIONALE (must be included)

The proposed title better communicates the content (art history) and the temporal period (modern) of this course.



COURSE SUBJECT CA NUMBER 118 TITLE Visual Art and Culture II

TYPE OF CHANGES. Please type 'X' for the appropriate revision(s):

- Course number [ ] Units [ ] Prerequisite [ ] Title [X] Description [ ] Equivalent Statement [ ]

WORDING/DESCRIPTION EDITS. Indicate deleted or changed text using strike-through, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under Information about specific course components if changing equivalent statement(s).

CA 118 - Visual Art and Culture II Contemporary Art History (3)
A study of the visual arts from the twentieth century to the present, with attention to the artists, artworks, movements, and discourses that redefined the functions and meanings of art. The debates of modernism, postmodernity, postcolonialism, feminism, and the avant-garde will be systematically explored. Students with credit for CA (or FPA) 168 may not take this course for further credit. Breadth-Humanities.

EFFECTIVE TERM AND YEAR FOR CHANGES

Fall, Spring, Summer and year (please enter in textbox)

Fall 2020

RATIONALE (must be included)

The proposed title better communicates the content (art history) and the temporal period (contemporary) of this course.



<b>COURSE SUBJECT</b>	CA	<b>NUMBER</b>	227	<b>TITLE</b>	History of Dance from the 20 <sup>th</sup> Century to the Present
-----------------------	----	---------------	-----	--------------	---

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input checked="" type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input type="checkbox"/>
Title	<input type="checkbox"/>	Description	<input type="checkbox"/>	Equivalent Statement	<input checked="" type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike-through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

CA ~~127~~ 227 (3) History of Dance from the 20<sup>th</sup> Century to the Present

Study of the development of modern dance and the reformation of the ballet from the beginning of the 20th century to the present. Emphasis will be placed on seminal dance artists and the impact their work has had upon the art form in western theatre dance. This course may be of particular interest to a range of students in departments across the University. Prerequisite: 12 credits. Students with credit for CA (or FPA) 227 may not take this course for further credit. Breadth-Humanities/Social Sciences.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2020

This course is offered in the first semester of the first year of the dance major in the School for the Contemporary Arts. We would like the course number to reflect the content and level of the course.

**RATIONALE** (must be included)



<b>COURSE SUBJECT</b>	CA	<b>NUMBER</b>	237	<b>TITLE</b>	Selected Topics in Film and Video Studies
-----------------------	----	---------------	-----	--------------	---

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input checked="" type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input checked="" type="checkbox"/>
Title	<input checked="" type="checkbox"/>	Description	<input checked="" type="checkbox"/>	Equivalent Statement	<input checked="" type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using strike through, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

CA ~~216237~~ - Selected Topics in ~~Film and Video~~ Cinema Studies (3)

This course will cover a specific topic within the field of ~~film and video~~ cinema studies not covered in depth in regularly scheduled courses. ~~The course may~~ This course can be repeated once for credit if ~~a different~~ the topic is different ~~taught~~.

Students with credit for CA (or FPA) 237 may not take this course for further credit.

Prerequisite: ~~3 units in film studies~~ (CA (or FPA) 135, 136, 137, 186, 235, 236, 318 (or 335), 316 (or 337), 416 (or 436) or 30 units. Breadth-Humanities.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2020

**RATIONALE** (must be included)

Title: The old title predates the establishment of a BA in Art, Performance and Cinema Studies. The proposed title reflects this new focus on cinema studies.

Course number: The proposed course code indicates that the course is taught within the Art Performance, and Cinema Studies area.

Description: to conform to the standard language regarding repeatability of courses, and to clarify the number of times course can be repeated for credit.

Prerequisites: modified to reflect course code modifications.

COURSE SUBJECT  NUMBER  TITLE

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input type="checkbox"/>
Title	<input type="checkbox"/>	Description	<input checked="" type="checkbox"/>	Equivalent Statement	<input type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

Students having a basic familiarity with elements of production and design participate in an in-depth theoretical and practical exploration of staging, audio and lighting for theatre, dance and music production. Assignments will be conducted in class and through practicum work on productions. May be of particular interest to students in other departments. ~~May repeat for credit.~~ Prerequisite: CA (or FPA) 170.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2020

**RATIONALE** (must be included)

The course does not provide significantly different opportunities for learning upon repetition to be repeatable for credit. This course is comprised of a practicum component and a lab component. The in-lab learning is step-based content that leads to third year level coursework. The practicum component is cumulative and leads to third year level experiential practicum work in CA370/371.



COURSE SUBJECT  NUMBER  TITLE

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input type="checkbox"/>
Title	<input type="checkbox"/>	Description	<input checked="" type="checkbox"/>	Equivalent Statement	<input type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using strike through, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

Students having a basic familiarity with elements of production and design participate in an in-depth theoretical and practical exploration of stage and production management for theatre, dance and music production. Students in this class will develop skills necessary to provide technical support for the School's productions. Assignments will be conducted in class and through practicum work on productions. Maybe of particular interest to students in other departments. ~~May repeat for credit.~~ Prerequisite: CA (or FPA) 171. Quantitative.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2020

**RATIONALE** (must be included)

The course does not provide significantly different opportunities for learning upon repetition to be repeatable for credit. This course is comprised of a practicum component and a lab component. The in-lab learning is step-based content that leads to third year level coursework. The practicum component is cumulative and leads to third year level experiential practicum work in CA370/371.

COURSE SUBJECT  NUMBER  TITLE

---

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input type="checkbox"/>
Title	<input checked="" type="checkbox"/>	Description	<input checked="" type="checkbox"/>	Equivalent Statement	<input type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using strike through, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

CA 312 - Selected Topics in Art and Performance ~~Culture~~ Studies (3)

Investigates a selected thematic topic in art and performance ~~culture~~ studies, for example, postcolonial theory and the arts; perception and embodiment; art activism and resistance; or urban art and culture. ~~May repeat for credit.~~ This course can be repeated twice for credit if the topic is different. Prerequisite: 45 units.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

**RATIONALE** (must be included)

Title: the old title pre-dates the establishment of a BA in Art, Performance and Cinema Studies. The proposed title (and modified description) reflect this new focus on art and performance studies.

Description: conforms to the standard language regarding repeatability of courses, and clarifies the number of times course can be repeated for credit.



<b>COURSE SUBJECT</b>	CA	<b>NUMBER</b>	314	<b>TITLE</b>	Readings in the History of Art and Culture
-----------------------	----	---------------	-----	--------------	--

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input type="checkbox"/>
Title	<input checked="" type="checkbox"/>	Description	<input checked="" type="checkbox"/>	Equivalent Statement	<input type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

CA 314 - Readings in the History of Art, Performance and Cinema and Culture (3)

Investigates a selected ~~historical~~ topic in the history of art, performance and cinema and culture. ~~May repeat for credit.~~ This course can be repeated twice for credit if the topic is different.

Prerequisite: CA (or FPA) 117 (or 167), 186, 210W (or 210).

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2020

**RATIONALE** (must be included)

The old title and description pre-date the establishment of a BA in Art, Performance and Cinema Studies. The proposed title and description reflect this new focus on art, performance and cinema studies.

The proposed description also clarifies the number of times a course can be repeated for credit, and conforms to a standard language regarding repeatability of courses.

<b>COURSE SUBJECT</b>	CA	<b>NUMBER</b>	317	<b>TITLE</b>	Introduction to Performance Studies
-----------------------	----	---------------	-----	--------------	-------------------------------------

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input checked="" type="checkbox"/>	Units	<input checked="" type="checkbox"/>	Prerequisite	<input type="checkbox"/>
Title	<input type="checkbox"/>	Description	<input type="checkbox"/>	Equivalent Statement	<input checked="" type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using strike through, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

CA-317 CA 217 - Introduction to Performance Studies ~~(4)~~ (3)

Traces the interdisciplinary origins of performance studies and brings its concepts and methods to bear on dance, music, theatre, performance art, and media performance. Prerequisite: 45 units including one history/theory course within the School for the Contemporary Arts. Students with credit for CA (or FPA) 311 under this topic may not take this course for further credit. Students with credit for CA ~~(or FPA 317)~~ may not take this course for further credit. Breadth-Humanities.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2020

**RATIONALE** (must be included)

We request changing this from a 3<sup>rd</sup> level course to a 2<sup>nd</sup> level course because as an introductory lecture, the content and delivery of this course are better suited to lower division students.

Because the course will now be recognized as a lower-division offering, we request changing the number of units from 4 to 3, in keeping with our equivalent 2<sup>nd</sup> year lecture course offerings.



<b>COURSE SUBJECT</b>	CA	<b>NUMBER</b>	325	<b>TITLE</b>	Special Project in Dance Composition (3)
-----------------------	----	---------------	-----	--------------	--

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input type="checkbox"/>
Title	<input type="checkbox"/>	Description	<input checked="" type="checkbox"/>	Equivalent Statement	<input type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

A specific topic or set of ideas will form the basis for choreographic exploration. Students will create one or more works and participate in research and critical analysis, depending on the particular topic in a given term. Prerequisite: 40 units in CA (or FPA) courses. May be repeated twice for credit if the topic changes. Students with credit for FPA 325 may not take this course for further credit.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2020

Description: modified to clarify the number of times the course can be repeated for credit.

**RATIONALE** (must be included)

COURSE SUBJECT  NUMBER  TITLE

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input checked="" type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input checked="" type="checkbox"/>
Title	<input checked="" type="checkbox"/>	Description	<input type="checkbox"/>	Equivalent Statement	<input checked="" type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using strike through, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

CA 318 ~~335~~ - ~~Introduction to Film Theory and Cinema~~ (4)

This course is concerned with the systematic understanding of the general phenomenon called Cinema rather than with the properties or techniques of individual films. Various theoretical positions will be assessed and compared in terms of cinematic practice and its ideological functions. May be of particular interest to students in other departments.

Prerequisite: Six units from among CA (or FPA) 136, 137, 236, 216 (or 237).  
Recommended: CA (or FPA) 210W (or 210). Students who have credit for CA (or FPA) 234 may not take this course for further credit. Students with credit for CA (or FPA) 335 may not take this course for further credit.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

**RATIONALE** (must be included)

Title: The old title predates the establishment of a BA in Art, Performance and Cinema Studies. The proposed title reflects this new focus on cinema studies, and reflects that the course content is not introductory.

Course number: The proposed course code indicates that the course is taught within the Art Performance, and Cinema Studies area.

Prerequisites: modified to reflect course code modifications.

<b>COURSE SUBJECT</b>	CA	<b>NUMBER</b>	337	<b>TITLE</b>	Intermediate Selected Topics in Film and Video Studies
-----------------------	----	---------------	-----	--------------	--

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input checked="" type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input checked="" type="checkbox"/>
Title	<input checked="" type="checkbox"/>	Description	<input checked="" type="checkbox"/>	Equivalent Statement	<input checked="" type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using strike through, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

CA ~~316~~ ~~337~~ Intermediate Selected Topics in ~~Film and Video~~ Cinema Studies (4)

An intermediate course in critical studies in cinema ~~film~~ addressing a variety of topics. This course can be repeated once for credit if the topic is different. Students with credit for CA (or FPA) 337 may not take this course for further credit.

Prerequisite: ~~6 credits in film studies (CA (or FPA) 135, 136, 137, 186, 235, 236, 237, 335, 436)~~ or 9 credits in CA (or FPA) courses including CA (or FPA) 136 or 137.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2020

**RATIONALE** (must be included)

Title: The old title predates the establishment of a BA in Art, Performance and Cinema Studies. The proposed title reflects this new focus on cinema studies.

Course number: The proposed course code indicates that the course is taught within the Art Performance, and Cinema Studies area.

Description: modified to clarify the course's repeatability.

Prerequisites: modified to provide a simpler and clearer path.

COURSE SUBJECT  NUMBER  TITLE

---

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number       Units       Prerequisite   
Title       Description       Equivalent Statement

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

A specific topic in fine and performing arts which is not otherwise covered in depth in regular courses and which is not appropriately placed within a single arts discipline. The work will be practical, theoretical, or a combination of the two, depending on the particular topic in a given term. Prerequisite: 30 units of CA (or FPA) courses. May be of particular interest to students in other departments. May be repeated twice for credit if the topic changes.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2020

Description: modified to clarify the number of times the course can be repeated for credit.

**RATIONALE** (must be included)



<b>COURSE SUBJECT</b>	CA	<b>NUMBER</b>	412W	<b>TITLE</b>	Advanced Seminar in Art and Culture Studies
-----------------------	----	---------------	------	--------------	---

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input checked="" type="checkbox"/>
Title	<input checked="" type="checkbox"/>	Description	<input checked="" type="checkbox"/>	Equivalent Statement	<input type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using strike through, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

CA 412W - Advanced Seminar in Art and ~~Culture~~ Performance Studies (4)

Provides an in-depth investigation of a selected theoretical, historical or thematic topic in art and ~~culture~~ performance studies. This course requires independent research leading to a substantial paper, as well as directed reading preparation for seminars. Topics will vary from term to term. The course may be repeated four times for credit if the topic is different~~when different topics are offered~~. May be of particular interest to students in other departments. Prerequisite: Eight upper division units; and one of CA (or FPA) 210W (or 210), 318 (or 335), 316 (or 337), or 357W. Writing.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2020

**RATIONALE** (must be included)

Title and description: The old title and description pre-date the establishment of a BA in Art Performance and Cinema Studies. The proposed title and description reflect this new focus on art and performance studies. The modified description also conforms to the standard language regarding repeatability of courses, and clarifies the number of times course can be repeated for credit.

Prerequisites: modified to reflect course code modifications.

COURSE SUBJECT  NUMBER  TITLE

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number  Units  Prerequisite   
 Title  Description  Equivalent Statement

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike-through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

CA 414 - Advanced Topic in the History of Art, Performance and Cinema ~~and Culture~~ (3)

An in-depth investigation of a selected topic in the history of art, performance and cinema ~~and culture~~. This course can be repeated four times for credit if the topic is different. Prerequisite: CA (or FPA) 117 (or 167), 186, 210W (or 210) and 45 units.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2020

**RATIONALE** (must be included)

Title and description: The old title and description pre-date the establishment of a BA in Art Performance and Cinema Studies. The proposed title and description reflect this new focus on art, performance and cinema studies. The modified description also conforms to the standard language regarding repeatability of courses, and clarifies the number of times course can be repeated for credit.



COURSE SUBJECT CA NUMBER 430 TITLE Filmmaking VI

TYPE OF CHANGES. Please type 'X' for the appropriate revision(s):

- Course number, Units, Prerequisite, Title, Description, Equivalent Statement checkboxes

WORDING/DESCRIPTION EDITS. Indicate deleted or changed text using strike through, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under Information about specific course components if changing equivalent statement(s).

CA 430 (6) - Filmmaking VI
The first half of a two term project in advanced film and/or video production. Students are expected to participate in the realization of one or more projects during the two terms. Students seeking entry into this course are required to present a completed script (for a drama) or detailed proposal (for a documentary or experimental film) prior to enrolment. The exact nature of each student's participation will be determined in consultation with the instructor. This course is open only to approved film majors. Students should be advised that film production will probably incur significant financial costs in addition to required lab fees. Prerequisite: CA (or FPA) 149, 186, 231, 285 and 10 units in film or cinema video studies (CA (or FPA) 135, 136, 137, 186, 235, 236, 216 (or 237), 318 (or 335), 316 (or 337), 416 (or 436)) plus prior approval. Students with credit for FPA 430 may not take this course for further credit.

EFFECTIVE TERM AND YEAR FOR CHANGES

Fall, Spring, Summer and year (please enter in textbox)

Fall 2020

RATIONALE (must be included)

Description: modified to reflect new SCA focus on "cinema studies"
Prerequisites: modified to reflect course code modifications, and new SCA focus on "cinema studies".



<b>COURSE SUBJECT</b>	CA	<b>NUMBER</b>	436	<b>TITLE</b>	Advanced Seminar in Film and Video Studies
-----------------------	----	---------------	-----	--------------	--

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input checked="" type="checkbox"/>
Title	<input checked="" type="checkbox"/>	Description	<input checked="" type="checkbox"/>	Equivalent Statement	<input checked="" type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using strike through, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

CA ~~416436~~ - Advanced Seminar in ~~Film and Video~~ Cinema Studies (4)

Features intensive study and analysis of selected topics in film theory, history, criticism and aesthetics. Examples include: work of specific directors or periods; theories of narrativity; particular aspects of national cinemas, etc. This course can be repeated once for credit if the topic is different. Students with credit for CA (or FPA) 436 may not take this course for further credit.

Prerequisite: CA (or FPA) 318 (or 335) or CA (or FPA) 316 (or 337).

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2020

**RATIONALE** (must be included)

Title and description: The old title and description pre-date the establishment of a BA in Art Performance and Cinema Studies. The proposed title and description reflect this new focus on cinema studies. The modified description also conforms to the standard language regarding repeatability of courses, and clarifies the number of times course can be repeated for credit.

Prerequisites: modified to reflect course code modifications.

COURSE SUBJECT  NUMBER  TITLE

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input type="checkbox"/>
x Title	<input type="checkbox"/>	Description	<input type="checkbox"/>	Equivalent Statement	<input checked="" type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using strike through, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

Students with credit for ~~GEOG 215~~ may not take this course for further credit.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2020

**RATIONALE** (must be included)

Geography has changed the course description for GEOG 215 and removed their equivalency statement with BISC 204 from their calendar entry due to the reduced overlap in the two courses. This change was discussed with BISC DUCC and approved by Senate. Our motion brings BISC 204 in line with GEOG 215.

COURSE SUBJECT  NUMBER  TITLE

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number  Units  Prerequisite   
 Title  Description  Equivalent Statement

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using strike through, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

A general calculus-based introduction to mechanics. Topics include translational and rotational motion, momentum, energy, gravitation, and selected topics in modern physics. Prerequisite: BC Principles of Physics 12 or PHYS 100 or equivalent, with a minimum grade of C-. This prerequisite may be waived, at the discretion of the department, as determined by the student's performance on a regularly scheduled PHYS 100 final exam. Please consult the physics advisor for further details. Corequisite: MATH 150 or 151 or 154 ~~must precede or be taken concurrently~~. **Recommended corequisite: PHYS 132.** Students with credit for PHYS 101, 125 or 140 may not take this course for further credit. Quantitative/Breadth-Science.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

**RATIONALE** (must be included)

Rationale: we would like to encourage students to take our first year lab as we feel it enhances their appreciation and understanding of the course material. Redundant wording removed - Corequisite means that the course must precede or be taken concurrently.

COURSE SUBJECT	PHYS	NUMBER	121	TITLE	Optics, Electricity and Magnetism
----------------	------	--------	-----	-------	-----------------------------------

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input checked="" type="checkbox"/>
Title	<input type="checkbox"/>	Description	<input type="checkbox"/>	Equivalent Statement	<input type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using strike through, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

A general calculus-based introduction to electricity, magnetism and optics. Topics include electricity, magnetism, simple circuits, optics and topics from applied physics.  
Prerequisite: PHYS 120 or 125 or 140, **with a minimum grade of C-**, (for PHYS 101, with **a minimum grade of B** ~~a grade of A or B~~). Corequisite: MATH 152 or 155 ~~must precede or be taken concurrently~~. **Recommended corequisite: PHYS 133.** Students with credit for PHYS 102, 126 or 141 may not take this course for further credit.  
Quantitative/Breadth-Science.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2020

**RATIONALE** (must be included)

Rationale: we would like to encourage students to take our first year lab as we feel it enhances their appreciation and understanding of the course material. Redundant wording removed – Corequisite means that the course must precede or be taken concurrently. Grade requirement added explicitly to be consistent with other courses.





<b>COURSE SUBJECT</b>	PHYS	<b>NUMBER</b>	125	<b>TITLE</b>	Mechanics and Special Relativity
-----------------------	------	---------------	-----	--------------	----------------------------------

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input checked="" type="checkbox"/>
Title	<input type="checkbox"/>	Description	<input type="checkbox"/>	Equivalent Statement	<input type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using strike through, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

An enriched course in mechanics for students with good preparation in physics and mathematics. Special relativity and classical topics such as translational and rotational dynamics and conservation laws will be given a much more sophisticated treatment than in our other first-year courses. Prerequisite: Permission of the department. Corequisite: ~~MATH 125~~ or MATH 151. **Recommended corequisite: PHYS 132.** Students with credit for PHYS 101, 120 or PHYS 140 may not take PHYS 125 for further credit. Quantitative.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2020

**RATIONALE** (must be included)

Rationale: MATH 125 is no longer offered. We would like to encourage students to take our first year lab as we feel it enhances their appreciation and understanding of the course material.

<b>COURSE SUBJECT</b>	PHYS	<b>NUMBER</b>	126	<b>TITLE</b>	Electricity, Magnetism and Light
-----------------------	------	---------------	-----	--------------	----------------------------------

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input checked="" type="checkbox"/>
Title	<input type="checkbox"/>	Description	<input type="checkbox"/>	Equivalent Statement	<input type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using strike through, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

An enriched course in electromagnetism for students with good preparation in physics and mathematics. Classical topics such as waves, electricity and magnetism, as well as wave particle duality and the birth of Quantum Mechanics, will be given a much more sophisticated treatment than in our other first year courses. Prerequisite: PHYS 125 or permission of the department. Corequisite: ~~MATH 126~~ or MATH 152. **Recommended corequisite: PHYS 133.** Students with credit in PHYS 102, 121 or 141 may not take this course for further credit. Quantitative.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2020

**RATIONALE** (must be included)

Rationale: MATH 126 is no longer offered. We would like to encourage students to take our first year lab as we feel it enhances their appreciation and understanding of the course material.



COURSE SUBJECT  NUMBER  TITLE

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input checked="" type="checkbox"/>
Title	<input type="checkbox"/>	Description	<input type="checkbox"/>	Equivalent Statement	<input type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using strike through, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

Introduction to experimental physics with an emphasis on measurement and experimental design. Includes elementary experiments in mechanics designed to support and enrich conceptual learning. Corequisite: PHYS 101 or 120 or 125. Students with credit for ~~PHYS 130, 131, or 140~~ may not take PHYS 132 for further credit. Quantitative.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2020

**RATIONALE** (must be included)

Rationale: PHYS 130 and PHYS 131 are no longer offered and are being deleted.

COURSE SUBJECT  NUMBER  TITLE

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number  Units  Prerequisite   
 Title  Description  Equivalent Statement

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using strike through, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

Introduction to experimental physics with an emphasis on measurement and experimental design. Includes elementary experiments in electromagnetism and optics designed to support and enrich conceptual learning. Prerequisite: PHYS 132 or 140 or ENSC 120 (no substitutions), with a minimum grade of C-. Corequisite: PHYS 102 or 121 or 126. Students with credit for ~~PHYS-130, 131, or 141~~ may not take PHYS 133 for further credit. Quantitative.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

**RATIONALE** (must be included)

Rationale: PHYS 130 and PHYS 131 are no longer offered and are being deleted.

COURSE SUBJECT  NUMBER  TITLE

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input checked="" type="checkbox"/>
Title	<input checked="" type="checkbox"/>	Description	<input type="checkbox"/>	Equivalent Statement	<input type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using strike-through, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

PHYS 233 - Physics Laboratory ~~IV~~ III (3)

Statistical data analysis, experimental design and scientific communication, studied in the context of experiments spanning a range of physical systems. Prerequisite: ~~PHYS 231 or ENSC 280~~ **PHYS 133 or PHYS 141 or ENSC 280, with a minimum grade of C-**.  
**Recommended prerequisite: CMPT 120.** Quantitative.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

**RATIONALE** (must be included)

Rationale: We are reordering our second year labs; PHYS 233 will be the first lab in the new sequence. This change requires renumbering and change in prerequisites. We will be using Python in the lab and wish to recommend that students complete their first computing course before attempting this course. Grade requirement added explicitly to be consistent with other courses.

COURSE SUBJECT  NUMBER  TITLE 

TYPE OF CHANGES. Please type 'X' for the appropriate revision(s):

Course number	<input checked="" type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input checked="" type="checkbox"/>
Title	<input checked="" type="checkbox"/>	Description	<input type="checkbox"/>	Equivalent Statement	<input type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using strike through, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

~~PHYS 231 - Physics Laboratory III (3)~~ **PHYS 234 - Physics Laboratory IV (3)**

Introduction to modern techniques in experimental physics, including computer-aided data acquisition, electronics, control theory, and statistical data analysis. ~~Prerequisite: PHYS 130, 133 or 141 (no substitutions)~~ **CoPrerequisite: PHYS 233 and PHYS 255, with a minimum grade of C-. Students with credit for PHYS 231 may not take PHYS 234 for further credit.** Quantitative.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

**RATIONALE** (must be included)

Rationale: We are reordering our second year labs; PHYS 234 will be the second lab in the new sequence. This change requires renumbering and change in prerequisites. PHYS 130 is no longer offered.

COURSE SUBJECT  NUMBER  TITLE

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number  Units  Prerequisite   
 Title  Description  Equivalent Statement

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using strike through, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

Circuits and circuit theory, passive and active devices, amplifiers, feedback, modern measurement techniques and instrumentation. Prerequisite: PHYS ~~231~~ 234 and ~~255~~, with a minimum grade of C-. Quantitative.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

**RATIONALE** (must be included)

Change of course number PHYS 231 -> PHYS 234. PHYS 255 is required for PHYS 234 so no need to specify it here.

COURSE SUBJECT  NUMBER  TITLE

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number  Units  Prerequisite   
 Title  Description  Equivalent Statement

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using strike through, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

Experiments investigating a range of physical phenomena such as Brownian motion, molecular order, chaotic dynamics, Doppler broadening of stellar spectra, and biophysical forces using techniques such as interference, optical trapping, and spectroscopy. Attention will also be given to more general skills, including experimental design, operating and troubleshooting experimental equipment, modeling of experimental results, data analysis, and the presentation of experimental results. Biological Physics students will do a selected set of experiments. Prerequisite: ~~Either PHYS 233; or both (PHYS 231 and either CHEM 266 or PHYS 347) and either PHYS 285 or CHEM 260, both~~ with a minimum grade of C-. ~~PHYS 347 may be taken concurrently. Students with credit for PHYS 332 may not take this course for further credit.~~ Writing/Quantitative.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

**RATIONALE** (must be included)

Rationale: CHPH and BIPH will be modified to require PHYS 233 instead of PHYS 231. The alternative requirements were provided for students in the BIPH and CHPH programs, which did not require PHYS 233. PHYS 332 (without W) has not been offered for > 10 years.



COURSE SUBJECT  NUMBER  TITLE

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number  Units  Prerequisite   
 Title  Description  Equivalent Statement

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using strike through, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

Structure and properties of semiconductors, semiconductor theory, theory and operation of semiconductor devices, semiconductor device technology. ~~Pre~~Corequisite: **PHYS 285; PHYS 321, or 221; PHYS 255; both with a minimum grade of C-, or ENSC 380 permission from the department. PHYS 321, and ENSC 380, and PHYS 365 may be taken concurrently. Recommended: PHYS 285. Students with credit for ENSC 224 or ENSC 324 may not take PHYS 365 for further credit. Quantitative.**

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

**RATIONALE** (must be included)

PHYS 221 is no longer offered. PHYS 255 is required for PHYS 285, so no need to specify it again. ENSC 380 is not a useful prerequisite. Interested students can request permission from the department.

COURSE SUBJECT  NUMBER  TITLE

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number  Units  Prerequisite   
 Title  Description  Equivalent Statement

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using strike through, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

A continuation of PHYS 321: properties of electromagnetic waves and their interaction with matter. Transmission lines and waveguides; antennas, radiation and scattering; propagation of electromagnetic waves in free space and in matter; reflection and refraction at boundaries; polarization, interference and diffraction. Prerequisite: PHYS 321 (no substitution); PHYS 255 or ENSC 380, **both with a minimum grade of C-**. ~~Students with credit for PHYS 324 or 425 may not take PHYS 421 for further credit.~~ Quantitative.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

**RATIONALE** (must be included)

COURSE SUBJECT  NUMBER  TITLE

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number  Units  Prerequisite   
 Title  Description  Equivalent Statement

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using strike-through, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

Optical physics, including geometrical and physical optics, waves in anisotropic media, coherence, image formation and Fourier optics, guided wave optics and selected advanced topics such as lasers, nonlinear optics, photonics and quantum optics. Prerequisite: PHYS 321-~~or~~-221, with a minimum grade of C-. Corequisite: PHYS 385. Quantitative.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

**RATIONALE** (must be included)

COURSE SUBJECT  NUMBER  TITLE

---

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number  Units  Prerequisite   
Title  Description  Equivalent Statement

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using ~~strike through~~, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

Crystal structure, lattice vibrations and thermal properties of solids, free electron model, band theory, and applications. Prerequisite: PHYS 385 **or** CHEM 364, with a minimum grade of C-. Quantitative.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

**RATIONALE** (must be included)

COURSE SUBJECT	PHYS	NUMBER	490	TITLE	General Relativity and Gravitation
----------------	------	--------	-----	-------	------------------------------------

**TYPE OF CHANGES.** Please type 'X' for the appropriate revision(s):

Course number	<input type="checkbox"/>	Units	<input type="checkbox"/>	Prerequisite	<input checked="" type="checkbox"/>
Title	<input type="checkbox"/>	Description	<input type="checkbox"/>	Equivalent Statement	<input type="checkbox"/>

**WORDING/DESCRIPTION EDITS.** Indicate deleted or changed text using strike through, indicate added or new text using underline. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under [Information about specific course components](#) if changing equivalent statement(s).

Gravity and space-time, Einstein's equations and their solution, tests of relativity, black holes, stellar equilibrium and collapse, and cosmological models. Prerequisite: PHYS 285 ~~or~~ MATH 471; PHYS 384, **both** with a minimum grade of C-; **or permission of the department.** Quantitative.

**EFFECTIVE TERM AND YEAR FOR CHANGES**

Fall, Spring, Summer and year (please enter in textbox)

Fall 2020

**RATIONALE** (must be included)

MATH 471 is no longer offered, encourage interested students (e.g. MATH) to seek permission.