SFU Office of Graduate Studies and Postdoctoral Fellows

Maggie Benston Student Services Centre 1100
8888 University Drive
Burnaby, BC
Canada V5A 1S6

TEL 778.782.3042
FAX 778.782.3080

report-dgs@sfu.ca
www.sfu.ca/Dean-GradStudies

MEMORANDUM

ATTENTION	Senate	DATE	14 January 2015
FROM	Wade Parkhouse, Dean of Graduate Studies	No.	GS2014.52
RE:	Faculty of Science		

For information:

Acting under delegated authority at its meeting of January 5, 2015, SGSC approved the following curriculum revisions effective Fall 2015:

Faculty of Science

Department of Biomedical Physiology and Kinesiology

New specialization: Interdisciplinary Oncology Graduate Specialization

New course: ONC 502 Concepts in Oncology

New course: ONC 510 Seminars in Oncology

New course: ONC 548 Rotation in Oncology

Department of Molecular Biology and Biochemistry

New specialization: Interdisciplinary Oncology Graduate Specialization

Department of Statistics and Actuarial Science

Program change: Masters in Statistics

Program change: Masters in Actuarial Science

SFU

MEMO

Faculty of Science

ATTENTION Mary-Ellen Kelm, Acting Dean, Graduate Studies

FROM Peter Ruben, Associate Dean, Faculty of Science

RE New Graduate Specialization Proposal – MBB & BPK

DATE November 3, 2014

TIME 12:29 PM

The graduate programs in the Departments of Molecular Biology and Biochemistry and Biomedical Physiology and Kinesiology seek to initiate a new program entitled Interdisciplinary Oncology Graduate Specialization. New courses are proposed for both Departments.

I sought comments from other Faculties and no overlaps or concerns were reported to me. This new program has my approval and that of the Faculty of Science Graduate Committee. Please submit the program for review and approval by the Senate Graduate Studies Committee.

P. Ruben

INTERDISCIPLINARY ONCOLOGY GRADUATE SPECIALIZATION (IOGS) **DEC 18, 2014**

Objectives: Increasingly, an interdisciplinary approach is required for the effective practice of science. To better prepare our students and to train the next generation of cancer research leaders, our goal is to establish an Interdisciplinary Oncology Graduate Training specialization (IOGS) at SFU in partnership with the BC Cancer Agency (BCCA). This program, IOGS, is a graduate level multi-departmental program designed to integrate with existing SFU departmental graduate programs (MSc and PhD) and attract top students interested in diverse facets of cancer research. The key impacts on science teaching and learning will include broad exposure to multiple aspects of oncology such as the biology and epidemiology of cancer and theories behind prevention, diagnosis and treatment. Opportunities to develop presentation skills, critique current cancer research, and shadow cancer clinicians will be provided. Importantly, students and faculty will benefit from networking and collaborative opportunities at both SFU and BCCA sites. The increased breadth in training and increased networking opportunities will improve our graduates' professional skills and job readiness.

Background and Justification: There is an existing graduate Interdisciplinary Oncology Program (IOP) that originated at the BC Cancer Agency (BCCA) and is currently partnered with UBC. The IOP is an ongoing program that began in 2007. In part because several BCCA researchers now have positions at SFU, and there is interest in further developing long-term partnerships between BCCA and SFU, we propose to make training in interdisciplinary oncology accessible to cancer-related researchers at SFU. The IOP Executive Committee has approved expanding this interdisciplinary oncology training to SFU.

IOP courses include ONCO 502, Concepts in Oncology, a lecture course on the biology and epidemiology of cancer and theories behind prevention, diagnosis and treatment; ONCO 510, Seminars in Oncology, in which students present and critique current cancer research and ONCO 548, rotations through specialty laboratories and shadowing of clinicians. We propose to make these high-quality oncology cancer courses easily accessible to SFU graduate students. We are creating SFU versions of these courses: ONC 502, ONC 510 and ONC 548. Many BCCA scientists are involved in teaching core courses for the IOP. These BCCA scientists hold faculty positions at local universities, the majority at UBC (particularly clinicians), with a few at SFU.

ONCO 502 is team taught, at BCCA, by a series of 22 basic and clinical experts on different types of cancer. It is overseen by Dr. Stephen Yip (MD PhD, BCCA Scientist and Assistant Professor at UBC); ONCO 510 and ONCO 548 are overseen by the Director of the IOP (currently BCCA Scientist / SFU Professor Dr. Angela Brooks-Wilson). The SFU versions of these courses will be overseen by the two co-leaders of the IOGS Steering Committee (BCCA Scientist / SFU Associate Professor Dr. Sharon Gorski for ONC 502 and ONC 548; and BCCA Scientist / SFU Professor Dr. Angela Brooks-Wilson for ONC 510). This responsibility will rotate as the membership of the SFU IOGS Steering Committee changes to different SFU faculty members.

Administration: The idea is that existing graduate programs at SFU would together offer a Graduate training specialization in Interdisciplinary Oncology. The program is intended to recognize oncology expertise in the context of an MSc or PhD degree. For example, in Biomedical Physiology and Kinesiology (BPK) this would mean that some supervisors and students could elect to have a graduate student do his or her degree within the BPK MSc or PhD graduate program but with a specialty focus in Interdisciplinary Oncology. The ONC courses and, if possible, "Interdisciplinary Oncology Specialization" would be indicated on the student's SFU transcript along with departmental graduate program information. To enroll in the Interdisciplinary Oncology graduate training specialization, interested students must contact one of the program coordinators, and must

be an MSc or PhD student at SFU. The proposed arrangement would provide access to oncology courses that are otherwise not predictably accessible to non-IOP non-UBC students. The advantage of this simple method is that it provides access to training in interdisciplinary oncology **without causing any changes to the way students are counted or resources partitioned between SFU units.** Administrative responsibility for the IOGS student would thus be provided by the student's "home" department where they are enrolled as an MSc or PhD student. For example, a Molecular Biology and Biochemistry (MBB) graduate student interested in specializing in Interdisciplinary Oncology would access the MBB Graduate Student administrative support. The composition of the graduate student's thesis committee will be determined by the student's home department, but the choice of committee members should take into account the cancer relatedness and interdisciplinary nature of the student's thesis topic.

Participation in the BC Interdisciplinary Oncology Annual Retreat: SFU Interdisciplinary Oncology students and their supervisors will participate in a yearly scientific retreat currently held by the BCCA/UBC Interdisciplinary Oncology program. Costs associated with retreat attendance by SFU students will be provided by the Senior Supervisor, or when possible obtained from other SFU sources. One goal of this yearly event is to enhance networking between students and faculty with cancer-related interests, with the local and provincial community of cancer researchers, trainees and clinicians.

IOGS course requirements: An MSc or PhD graduate student whose thesis project was oncology-related could decide in consultation with his/her graduate supervisor to pursue their SFU degree within the graduate program of their home department or faculty (e.g. BPK, MBB, Faculty of Health Sciences [FHS], or other), with a specialty focus in Interdisciplinary Oncology. They would need to fulfill the requirements of their home department's graduate program as well as those of the IOGS (two required courses and one or two elective courses); for **most** students this could be accomplished simply by choosing the two required ONC courses (502 and 510) as departmental graduate program electives, and **would not lead to an increased course load.** In some departments, the ONC 510 seminar course may be a suitable replacement for a required departmental seminar course. Requirements for completing a PhD degree in IOGS will vary depending on home department requirements and whether the candidate is a direct entry PhD student or MSc transfer student (see departmental-specific course requirements documents). Any student, in consultation with his/her senior supervisor, can take additional courses if desired. Note that to enroll in the Interdisciplinary Oncology Graduate Specialization, a student must be a thesis-based MSc or PhD student at SFU and must identify a home department (usually based on their senior supervisor's affiliation).

Elective courses for IOGS*
ONC 548-3 Oncology rotation
BPK 851-3 Recent advances in carcinogenesis
MBB 746-3 Cell Death and Cell Survival
MBB 762-3 Human Genomics
BISC 834-3 Cell Biology
HSCI 775-3 Epigenetics
HSCI 776-3 Molecular Basis of Drug Action
HSCI 778-3 Molecular Epidemiology

*Note: Eligible electives may change and additional elective courses may be added to this list. Any relevant Special Topics course from any department may be included upon permission of the IOGS Steering Committee. Oncology-related courses at other institutions may also be used to satisfy course requirements. Please consult

with the Interdisciplinary Oncology Graduate Specialization Steering Committee for queries regarding course eligibility.

STUDENT ENROLMENT PROJECTIONS:
We anticipate the enrolment of 2 to 5 new graduate students per year in the Interdisciplinary Oncology Graduate Specialization, with growth to a steady state total of approximately 10 to 25 students in the program by five years.

CALENDAR ENTRIES:

See specific calendar entries for each of the following departments:
Department of Biomedical Physiology and Kinesiology
Department of Molecular Biology and Biochemistry

Calendar entries for the following departments will be added:
Department of Biological Sciences, Department of Chemistry, Faculty of Health Sciences

Interdisciplinary Oncology (IO)

GRADUATE SPECIALIZATION

This program may be of interest to students interested in gaining exposure to diverse facets of cancer-related research. To enroll in this program, a student MUST be a thesis-based MSc or PhD student at SFU. Application to the program is through the Interdisciplinary Oncology Steering Committee. To be eligible, students must also be accepted to a departmental graduate program.

Program Requirements

The Interdisciplinary Oncology Graduate Specialization includes two required courses, ONC 502 and ONC 510 and one (or two) graduate level elective courses from a designated set of courses. Credit for graduate courses completed as part of this graduate specialization may be applied to the requirements for a departmental graduate degree. Requirements for completing an MSc or PhD degree with IO Specialization will vary depending on the home department's requirements. See individual department calendar entries for details.

Elective courses for IOGS*
ONC 548-3 Oncology rotation
BPK 851-3 Recent advances in carcinogenesis
MBB 746-3 Cell Death and Cell Survival
MBB 762-3 Human Genomics
BISC 834-3 Cell Biology
HSCI 775-3 Epigenetics
HSCI 776-3 Molecular Basis of Drug Action
HSCI 778-3 Molecular Epidemiology

*Note: Eligible electives may change and additional elective courses may be added to this list. Any relevant Special Topics course from any department may be included upon permission of the IOGS Steering Committee. Oncology-related courses at other institutions may also be used to satisfy course requirements. Please consult with the Interdisciplinary Oncology Graduate Specialization Steering Committee for queries regarding course eligibility.

STEERING COMMITTEE COMPOSITION (FOR THE FIRST 2 YEARS):
Dr. Sharon Gorski (MBB), sga49@sfu.ca
Dr. Angela Brooks-Wilson (BPK), arw6@sfu.ca

Calendar Entry change for MSc in Biomedical Physiology and Kinesiology:

Summary of Change: The Interdisciplinary Oncology Graduate Specialization should be added in the calendar after the thesis requirements for the MSc in BPK (Thesis option).

Calendar Entry:

Interdisciplinary Oncology Graduate Specialization (IOGS)

This specialization is for students who are interested in gaining exposure to diverse facets of cancer-related research. Application to the program is through the Interdisciplinary Oncology Steering Committee. The MSc course requirements for this specialization are as follows:

Students complete the following graduate courses:

- BPK 801-3 Seminar on Research in Biomedical Physiology and Kinesiology
- STAT 890-4 Applied Statistical Methods for Physiology and Kinesiology
- ONC 502-3 Concepts in Oncology
- ONC 510-3 Seminars in Oncology

Additional courses may be taken, at the discretion of the student's Senior Supervisor and Supervisory Committee. Such courses may be selected from the following:*

- ONC 548-3 Oncology rotation
- BPK 851-3 Recent advances in carcinogenesis
- MBB 746-3 Cell Death and Cell Survival
- MBB 762-3 Human Genomics
- BISC 834-3 Cell Biology
- HSCI 775-3 Epigenetics
- HSCI 776-3 Molecular Basis of Drug Action
- HSCI 778-3 Molecular Epidemiology

*Note: Any relevant Special Topics course from any department may be included upon permission of the IOGS Steering Committee. Oncology related courses at other institutions may also be used to satisfy the elective requirement. Please consult with the Interdisciplinary Oncology Graduate Specialization Steering Committee for queries regarding course eligibility.

MSc Research

A major part of the MSc specialization program will be devoted to original research. A thesis describing the work must be submitted and defended in accordance with SFU Graduate General Regulations.

Calendar Entry change for PhD in Biomedical Physiology and Kinesiology:

Summary of Change: The Interdisciplinary Oncology Graduate Specialization should be added in the calendar after the dissertation information for the PhD in BPK

Calendar Entry:

Interdisciplinary Oncology Graduate Specialization (IOGS)

This specialization is for students who are interested in gaining exposure to diverse facets of cancer-related research. Application to the program is through the Interdisciplinary Oncology Steering Committee. The PhD requirements for this specialization are as follows:

Entry with a BSc or equivalent:

Students who enter the program with a Bachelor of Science (BSc) degree, or equivalent, are required to complete the same course requirements as for the thesis MSc,

Entry with an MSc Degree:

Students who enter the program with a Master of Science (MSc) degree will complete a minimum of two courses, including:

- ONC 502-3 Concepts in Oncology
- ONC 510-3 Seminars in Oncology

Additional courses may be taken, at the discretion of the student's Senior Supervisor and Supervisory Committee. Such courses may be selected from the following:*

- ONC 548-3 Oncology rotation
- BPK 851-3 Recent advances in carcinogenesis
- MBB 746-3 Cell Death and Cell Survival
- MBB 762-3 Human Genomics
- BISC 834-3 Cell Biology
- HSCI 775-3 Epigenetics
- HSCI 776-3 Molecular Basis of Drug Action
- HSCI 778-3 Molecular Epidemiology

*Note: Any relevant Special Topics course from any department may be included upon permission of the IOGS Steering Committee. Oncology related courses at other institutions may also be used to satisfy the elective requirement. Please consult with the Interdisciplinary Oncology Graduate Specialization Steering Committee for queries regarding course eligibility.

If a student has already completed the specialization as an MSc student, they may still enroll in the IOGS as a PhD student upon approval by the IOGS steering committee. Note that in this

circumstance, ONC 510-3 must be taken for credit again in the PhD program, but ONC 502-3 cannot be taken again for credit.

Research

The major portion of the PhD specialization program will be devoted to original research. An original Thesis which contributes to new knowledge must be presented and defended at the end of the degree program in accordance with SFU Graduate General Regulations. In addition, all BPK PhD candidates must meet all other requirements for the BPK PhD degree.

SIMON FRASER UNIVERSITY
ENGAGING THE WORLD

Memorandum

TO: Peter ~~Paul~~ Ruben, Associate Dean, Research and Graduate Studies
Faculty of Science

FROM: Glen Tibbits, Chair
Biomedical Physiology and Kinesiology

RE: **New Graduate Courses, ONC 502, ONC 510, ONC 548**

DATE: October 9, 2014

The following new graduate courses have been approved by the Department of Biomedical Physiology and Kinesiology, and are forwarded to the Faculty of Science Graduate Studies Committee for approval. Please include them on the next FGSC agenda.

Department of Biomedical Physiology and Kinesiology

New Graduate Courses: ONC 502
ONC 510
ONC 548

Office of the Chair • Biomedical Physiology and Kinesiology • Simon Fraser University
8888 University Drive • Burnaby • BC • V5A 1S6 • Canada
778 782 3658 • tibbits@sfu.ca

SFU SIMON FRASER UNIVERSITY
DEAN OF GRADUATE STUDIES

New Graduate Course Proposal Form

PROPOSED COURSE

Subject (eg. MAPH) ONC	Number (eg. 810) 502	Units (eg. 4) 3

Course Title (max 80 characters)
Concepts in Oncology

Short Title (appears on transcripts, max 25 characters)
Concepts in Oncology

Course Description for SFU Calendar ☐ see attached document ☐ Learning outcomes identified

This course covers the biology and epidemiology of cancer and theories behind prevention, diagnosis and treatment of different types of cancer. A major goal of the course is to integrate knowledge and research on the biology of cancer with all disciplines in oncology.

Available Course Components: ☑ Lecture ☐ Seminar ☐ Laboratory ☐ Practicum ☐ Online ☐ _____

Grading Basis ☑ Letter grades ☐ Satisfactory/Unsatisfactory ☐ In Progress/Complete | This is a capstone course ☐ Yes ☑ No

Prerequisites (if any) ☐ see attached document (if more space is required)

Enrollment in a participating graduate program. No specific courses are prerequisites.

☐ This proposed course is combined with an undergrad course: Course number and units: _____

Additional course requirements for graduate students ☐ See attached document (if this space is insufficient)

Note: this course can only be taken once, either during an MSc or during a PhD.

Campus at which course will be offered (check all that apply) ☐ Burnaby ☐ Vancouver ☐ Surrey ☐ GNW ☑ BC Cancer Research Centre

Estimated enrolment	Date of initial offering	Course delivery (eg. 3 hrs/week for 13 weeks)
5	Fall 2015	3 hrs/week for 13 weeks

☐ Yes ☑ No Practicum work done in this class will involve children or vulnerable adults
(If the "Yes" box is checked, all students will require criminal record checks)

Justification ☐ See attached document (if more space is required)

This course is core to the new Interdisciplinary Oncology Graduate Specialization.

RESOURCES

If additional resources are required to offer this course, the department proposing the course should be prepared to provide information on the source(s) of those additional resources.

Faculty member(s) who will normally teach this course ☐ information about their competency to teach the course is appended

This course is overseen and taught yearly by BC Cancer Research Centre scientists and clinicians.

Number of additional faculty members required in order to offer this course
None.

Additional space required in order to offer this course ☐ see attached document
None.

Additional specialized equipment required in order to offer this course ☐ see attached document
None.

Additional Library resources required (append details) ☐ Annually $_____ ☐ One-time $_____
None.

PROPOSED COURSE *from first page*

Program (eg. MAPH) ONC	Number (eg. 810) 502	Units (eg. 4) 3
Course title (max 80 characters) Concepts in Oncology		

APPROVAL SIGNATURES

When a department proposes a new course it must first be sent to the chairs of each faculty graduate program committee where there might be an overlap in course content. The chairs will indicate that overlap concerns have been dealt with by signing the appropriate space or via a separate memo or e-mail (attached to this form).

The new course proposal must also be sent to the Library for a report on library resources.

Once overlap concerns have been dealt with, signatures indicate approval by the department, home faculty and Senate Graduate Studies Committee.

Other Faculties
The signature(s) below indicate that the Dean(s) or designate of other Faculties affected by the proposed new course support(s) the approval of the new course.

Name of Faculty	Signature of Dean or Designate	Date
Science		
Health Sciences		

Departmental Approval (non-departmentalized faculties need not sign)

Department Graduate Program Committee MBB, Michel Leroux	Signature	Date OCT. 2/2014
Department Chair MBB, Lynne Quarmby	Signature	Date Oct 2, 2014

Faculty Approval
Faculty approval indicates that all the necessary course content and overlap concerns have been resolved, and that the Faculty/Department commits to providing the required Library funds and any other necessary resources.

Faculty Graduate Program Committee Peter Ruben (Faculty of Science)	Signature	Date 3 NOV 2014

Senate Graduate Studies Committee Approval
SGSC approval indicates that the Library report has been seen, and all resource issues dealt with. Once approved, new course proposals are sent to Senate for information.

Senate Graduate Studies Committee W. Parkhouse	Signature	Date Jan 14/15

CONTACT

Upon approval of the course, the Office of the Dean of Graduate Studies will consult with the department or school regarding other course attributes that may be required to enable the proper entry of the new course in the student record system.

Department / School / Program	Contact name	Contact email
Molecular Biology and Biochemis	Sharon Gorski	sga49@sfu.ca

ONC 502-3 Concepts in Oncology

Course Director: Dr. Stephen Yip, BC Cancer Agency

Location: BC Cancer Research Centre, 675 West 10th Avenue

The objective of Concepts in Oncology (ONC 502) is to have students learn to integrate knowledge and research activities in the biology of cancer with various disciplines in oncology. For example, at the end of the course students should be able to answer questions such as: How do current cancer treatments work and why do they often fail? How do you determine if a population has an increased incidence of a specific cancer due to genetic versus environmental versus lifestyle influences? How does genetic instability contribute to cancer initiation and progression? What are the advantages/difficulties of using gene therapy approaches to treat cancer? What drives the evolution of a cancer cell clone? How do cancer/host interactions limit or promote tumor expansion? What are the ethical issues involved in gathering genetic information for cancer control?

Course Structure:

1.5 hours per session, 2 sessions per week

Lecture format. The course is divided into sections based on the topics to be covered. Each section consists of two to five classes (1.5 hours per class) and is taught by experts in the field. A total of 22 cancer experts at the BC Cancer Agency are involved in the course. The course director arranges the schedule of experts, attends all lectures, manages the course and assignments and grading.

Course Content:

	Section Topics
Session 1	General course introduction Nature of the cancer problem
Session 2	Cellular pathology of cancer Clinical approaches to cancer Principles of clinical trials
Session 3	Systemic therapy of cancer, cancer chemotherapy
Session 4	Tumor heterogeneity, drug resistance
Session 5	Current issues in cancer research Review
Session 6, 7	Radiobiology
Session 8	Clinical radiotherapy
Session 9, 10	Cancer epidemiology
Session 11-14	Lymphoma
Session 15-17	Leukemia
Session 18, 19, 20	Breast cancer
Session 21, 22, 23	Prostate cancer

Course Materials:

"The Basic Science of Oncology" (Ian F. Tannock and Richard P. Hill edit., McGraw-Hill, New York, 1998) is used as a textbook for this course. Instructors also provide handouts.

Course Evaluation:

The criteria for the assessment of essays will be the level of students' understanding of the problems discussed in the lectures. Students will be evaluated by term essays and final examination essays.

Letter grades: During the course, students write two short essays (one or two printed pages) on subjects given by instructors (40%). Students also write a final examination. For the final examination, students are given a list of short essay questions, one from each section, and select four to answer (60%). The essays and final examination are marked by appropriate instructors. The overall grading is calculated by the course director.

SFU SIMON FRASER UNIVERSITY
DEAN OF GRADUATE STUDIES

New Graduate Course Proposal Form

PROPOSED COURSE

Subject (eg. MAPH) ONC	Number (eg. 810) 510	Units (eg. 4) 3

Course Title (max 80 characters)
Seminars in Oncology

Short Title (appears on transcripts, max 25 characters)
Seminars in Oncology

Course Description for SFU Calendar ☐ see attached document ☐ Learning outcomes identified

This course features cancer-related research by trainees and faculty at the BC Cancer Research Centre. Topics include recent developments in the molecular basis of oncogenesis, cancer bioinformatics, cancer epidemiology, cancer treatment and other clinical studies, and ethical issues. Students are required to present seminars on their research. Students undertaking the Interdisciplinary Oncology Graduate Specialization must enroll in this course throughout their entire time as a graduate student.

Available Course Components: ☐ Lecture ☑ Seminar ☐ Laboratory ☐ Practicum ☐ Online ☐ _____

Grading Basis ☐ Letter grades ☐ Satisfactory/Unsatisfactory ☑ In Progress/Complete | This is a capstone course ☐ Yes ☑ No

Prerequisites (if any) ☐ see attached document (if more space is required)

Enrollment in a participating graduate program. No specific courses are prerequisites.

☐ This proposed course is combined with an undergrad course: Course number and units: _____

Additional course requirements for graduate students ☐ See attached document (if this space is insufficient)

Note: this course can be taken twice, if a student does the Interdisciplinary Oncology Graduate Specialization (IOGS) as an MSc student, and also does it as a PhD student. Students who transfer from MSc to PhD would only take it once.

Campus at which course will be offered (check all that apply) ☐ Burnaby ☐ Vancouver ☐ Surrey ☐ GNW ☑ BC Cancer Research Centre

Estimated enrolment	Date of initial offering	Course delivery (eg. 3 hrs/week for 13 weeks)
5	Fall 2015	1 hr/week during entire degree

☐ Yes ☑ No Practicum work done in this class will involve children or vulnerable adults
(If the "Yes" box is checked, all students will require criminal record checks)

Justification ☐ See attached document (if more space is required)

This course is core to the new Interdisciplinary Oncology Graduate Specialization.

RESOURCES

If additional resources are required to offer this course, the department proposing the course should be prepared to provide information on the source(s) of those additional resources.

Faculty member(s) who will normally teach this course ☐ information about their competency to teach the course is appended

This course is overseen yearly Sept-April by BC Cancer Research Centre scientists.

Number of additional faculty members required in order to offer this course

None.

Additional space required in order to offer this course ☐ see attached document

Access to a room with videoconferencing equipment (e.g. K9624) for 1 hr/week.

Additional specialized equipment required in order to offer this course ☐ see attached document

Access to videoconferencing facilities (e.g. in K9624) for 1 hr/week

Additional Library resources required (append details) ☐ Annually $_____ ☐ One-time $_____

None.

PROPOSED COURSE *from first page*

Program (eg. MAPH) ONC	Number (eg. 810) 510	Units (eg. 4) 3
Course title (max 60 characters) Seminars in Oncology		

APPROVAL SIGNATURES

When a department proposes a new course it must first be sent to the chairs of each faculty graduate program committee where there might be an overlap in course content. The chairs will indicate that overlap concerns have been dealt with by signing the appropriate space or via a separate memo or e-mail (attached to this form).

The new course proposal must also be sent to the Library for a report on library resources.

Once overlap concerns have been dealt with, signatures indicate approval by the department, home faculty and Senate Graduate Studies Committee.

Other Faculties
The signature(s) below indicate that the Dean(s) or designate of other Faculties affected by the proposed new course support(s) the approval of the new course.

Name of Faculty	Signature of Dean or Designate	Date
Science		
Health Sciences		

Departmental Approval (non-departmentalized faculties need not sign)

Department Graduate Program Committee MBB, Michel Leroux	Signature	Date Oct. 2/2014
Department Chair MBB, Lynne Quarmby	Signature	Date Oct 2, 2014

Faculty Approval
Faculty approval indicates that all the necessary course content and overlap concerns have been resolved, and that the Faculty/Department commits to providing the required Library funds and any other necessary resources.

Faculty Graduate Program Committee Peter Ruben (Faculty of Science)	Signature	Date 3 Nov 2014

Senate Graduate Studies Committee Approval
SGSC approval indicates that the Library report has been seen, and all resource issues dealt with. Once approved, new course proposals are sent to Senate for information.

Senate Graduate Studies Committee W. Parkhouse	Signature W Parkhouse	Date Jan 14/15

CONTACT

Upon approval of the course, the Office of the Dean of Graduate Studies will consult with the department or school regarding other course attributes that may be required to enable the proper entry of the new course in the student record system.

Department / School / Program	Contact name	Contact email
Molecular Biology and Biochemis	Sharon Gorski	sga49@sfu.ca

ONC 510-3 Seminars in Oncology

Seminars in Oncology (ONC 510) features cancer-related research by trainees and faculty at the BC Cancer Research Centre. Topics include recent developments in the molecular basis of oncogenesis, cancer bioinformatics, cancer epidemiology, cancer treatment and other clinical studies, and ethical issues. Students are required to present seminars on their research.

Students in their 2nd, 3rd and more advanced years of graduate study present one 30 minute seminar per year. First year students are not required to present. All students attend weekly seminars given by students and post doctoral fellows engaged in various aspects of cancer research. The course continues from Sept to approximately May each year. Students are required to maintain continuous registration in ONC 510 throughout their MSc or PhD. Faculty members offer constructive written and oral feedback for each seminar immediately after the presentation.

Attendance is taken each week by means of iclickers, which can also be used by speakers to enhance audience engagement. Students in ONC 510 are expected to learn and demonstrate an ability to ask thoughtful questions at seminars. Students are required to ask a minimum of 5 questions over the first 2 years, and questions should be continued to be asked in subsequent years. Each question and answer (including the speaker and date) should be emailed to the SFU ONC 510 course coordinator.

As an additional opportunity to hone presentation skills, students may request that their seminar be videotaped for personal review.

SFU SIMON FRASER UNIVERSITY
DEAN OF GRADUATE STUDIES

New Graduate Course Proposal Form

PROPOSED COURSE

Subject (eg. MAPH) ONC	Number (eg. 810) 548	Units (eg. 4) 3

Course Title (max 80 characters)
Rotation in Oncology

Short Title (appears on transcripts, max 25 characters)
Rotation in Oncology

Course Description for SFU Calendar ☐ see attached document ☐ Learning outcomes identified

This course allows students to gain hands-on experience by rotations through specialty laboratories and/or by shadowing clinicians. Students can use the rotation opportunity to learn new techniques and/or gain an understanding of the clinical aspects of their research project. The supervisor and supervisory committee create a custom rotation plan for the student. A grade is assigned based on a written report by the student, which is evaluated by the student's supervisory committee.

Available Course Components: ☐ Lecture ☐ Seminar ☑ Laboratory ☐ Practicum ☐ Online ☐ _____

Grading Basis ☑ Letter grades ☐ Satisfactory/Unsatisfactory ☐ In Progress/Complete | This is a capstone course ☐ Yes ☑ No

Prerequisites (if any) ☐ see attached document (if more space is required)

Enrollment in a participating graduate program. No specific courses are prerequisites. Permission from instructor required.

☐ This proposed course is combined with an undergrad course: Course number and units: _____

Additional course requirements for graduate students ☐ See attached document (if this space is insufficient)

Note: this course can only be taken once, either during an MSc or during a PhD.

Campus at which course will be offered (check all that apply) ☑ Burnaby ☑ Vancouver ☑ Surrey ☑ GNW ☑ BC Cancer Research Centre

Estimated enrolment	Date of initial offering	Course delivery (eg. 3 hrs/week for 13 weeks)
2	Fall 2015	At least 3 hrs/week for 13 weeks

☐ Yes ☐ No Practicum work done in this class will involve children or vulnerable adults
(If the "Yes" box is checked, all students will require criminal record checks)

Justification ☑ See attached document (if more space is required)

This course is part of the new Interdisciplinary Oncology Graduate Specialization.

RESOURCES

If additional resources are required to offer this course, the department proposing the course should be prepared to provide information on the source(s) of those additional resources.

Faculty member(s) who will normally teach this course ☐ information about their competency to teach the course is appended

Rotations can be hosted by any suitable researcher or clinician.

Number of additional faculty members required in order to offer this course

None.

Additional space required in order to offer this course ☐ see attached document

None.

Additional specialized equipment required in order to offer this course ☐ see attached document

None.

Additional Library resources required (append details) ☐ Annually $_____ ☐ One-time $_____

None.

PROPOSED COURSE *from first page*

Program (eg. MAPH) ONC	Number (eg. 810) 548	Units (eg. 4) 3
Course title (max 80 characters) Rotation in Oncology		

APPROVAL SIGNATURES

When a department proposes a new course it must first be sent to the chairs of each faculty graduate program committee where there might be an overlap in course content. The chairs will indicate that overlap concerns have been dealt with by signing the appropriate space or via a separate memo or e-mail (attached to this form).

The new course proposal must also be sent to the Library for a report on library resources.

Once overlap concerns have been dealt with, signatures indicate approval by the department, home faculty and Senate Graduate Studies Committee.

Other Faculties
The signature(s) below indicate that the Dean(s) or designate of other Faculties affected by the proposed new course support(s) the approval of the new course.

Name of Faculty	Signature of Dean or Designate	Date
Science		
Health Sciences		

Departmental Approval (non-departmentalized faculties need not sign)

Department Graduate Program Committee BPK, Thomas Claydon	Signature	Date 25th Nov 2014
Department Chair BPK, Glen Tibbits	Signature	Date 24 NOV 14

Faculty Approval
Faculty approval indicates that all the necessary course content and overlap concerns have been resolved, and that the Faculty/Department commits to providing the required Library funds and any other necessary resources.

Faculty Graduate Program Committee Peter Ruben (Faculty of Science)	Signature	Date 25 NOV 2014

Senate Graduate Studies Committee Approval
SGSC approval indicates that the Library report has been seen, and all resource issues dealt with. Once approved, new course proposals are sent to Senate for information.

Senate Graduate Studies Committee W. Parkhouse	Signature	Date Jan 14/15

CONTACT

Upon approval of the course, the Office of the Dean of Graduate Studies will consult with the department or school regarding other course attributes that may be required to enable the proper entry of the new course in the student record system.

Department / School / Program	Contact name	Contact email
Biomedical Physiology and Kinesiology	Angela Brooks-Wilson	arw6@sfu.ca

ONC 548-3

Rotations in Oncology

Course Coordinator: IOP Director, Angela Brooks-Wilson

Rotations in Oncology (ONC 548) allows students to gain hands-on experience by rotations through specialty laboratories and/or by shadowing clinicians. Students can use the rotation opportunity to learn new techniques and/or gain an understanding of the clinical aspects of their research project.

The supervisor and supervisory committee work with the student to create a custom rotation plan and learning objectives. The rotation plan, rationale and objectives are submitted to the Course Coordinator for approval.

A grade is assigned based on a written report by the student, which is evaluated by the student's supervisory committee. The committee will assess the level of understanding of the theories and techniques addressed in the rotation and how well the student has achieved rotation-specific learning objectives.

Research ethics board approval, biosafety approval and criminal records check will be done as required by SFU, based on the activities planned for each student.

MOLECULAR BIOLOGY AND BIOCHEMISTRY
Memorandum

To: Chair, Faculty Graduate Studies Committee, Faculty of Science	**From:** Michel Leroux – Chair, MBB Graduate Studies Committee
Re: New Interdisciplinary Oncology Graduate Specialization (IOGS)	**Date:** October 16, 2014

We are requesting approval of this new Interdisciplinary Oncology Graduate Specialization (IOGS) to be added to the MBB graduate programs.

Attached please find the following:

1. A memo that summarizes the IOGS
2. MSc and PhD calendar additions for the Specialization (in MBB)
3. 3 new course forms and the course outlines – ONC 502, ONC 510, ONC 548
4. Library Report for ONC 502, 510, 548

* submitted to SGSC with BPK proposal

Sincerely,

M.R. Leroux

Dr. M.R. Leroux

Calendar Entry change for MSc in Molecular Biology and Biochemistry:

Summary of Change: The Interdisciplinary Oncology Graduate Specialization should be added in the calendar after the thesis requirements for the MSc in MBB

Calendar Entry:

Interdisciplinary Oncology Graduate Specialization (IOGS)

This specialization is for students who are interested in gaining exposure to diverse facets of cancer-related research. Application to the program is through the Interdisciplinary Oncology Steering Committee. The MSc course requirements for this specialization are as follows:

Students complete the following graduate courses, including

- MBB 801-3 Student Seminar in Molecular Biology and Biochemistry I
- ONC 502-3 Concepts in Oncology
- ONC 510-3 Seminars in Oncology

and one unit of MBB colloquia by completing one of:

- MBB 821-1 Cell and Molecular Biology Colloquium
- MBB 822-1 Cell and Molecular Biology Colloquium
- MBB 823-1 Cell and Molecular Biology Colloquium
- MBB 861-1 Biomolecular Structure and Function Colloquium
- MBB 862-1 Biomolecular Structure and Function Colloquium
- MBB 863-1 Biomolecular Structure and Function Colloquium

And at least one of the following elective courses*

- ONC 548-3 Oncology rotation
- BPK 851-3 Recent advances in carcinogenesis
- MBB 746-3 Cell Death and Cell Survival
- MBB 762-3 Human Genomics
- BISC 834-3 Cell Biology
- HSCI 775-3 Epigenetics
- HSCI 776-3 Molecular Basis of Drug Action
- HSCI 778-3 Molecular Epidemiology

*Note: Any relevant Special Topics course from any department may be included upon permission of the IOGS Steering Committee. Oncology related courses at other institutions may also be used to satisfy the elective requirement. Please consult with the Interdisciplinary Oncology Graduate Specialization Steering Committee for queries regarding course eligibility.

MSc Research

A major part of the MSc specialization program will be devoted to original research. A thesis describing the work must be submitted and defended in accordance with SFU Graduate General Regulations.

Calendar Entry change for PhD in Molecular Biology and Biochemistry:

Summary of Change: The Interdisciplinary Oncology Graduate Specialization should be added in the calendar after the thesis requirements for the PhD in MBB.

Calendar Entry:

Interdisciplinary Oncology Graduate Specialization (IOGS)

This specialization is for students who are interested in gaining exposure to diverse facets of cancer-related research. Application to the program is through the Interdisciplinary Oncology Steering Committee. The PhD requirements for this specialization are as follows:

Entry with a BSc or equivalent:

Students who enter the program with a Bachelor of Science (BSc) degree, or equivalent, will complete all of:

- MBB 801-3 Student Seminar in Molecular Biology and Biochemistry I
- MBB 806-3 PhD Graduate Research Seminar at the earliest opportunity following four terms of program enrolment
- ONC 502-3 Concepts in Oncology
- ONC 510-3 Seminars in Oncology

and one unit of MBB colloquia by completing one of

- MBB 821-1 Cell and Molecular Biology Colloquium
- MBB 822-1 Cell and Molecular Biology Colloquium
- MBB 823-1 Cell and Molecular Biology Colloquium
- MBB 861-1 Biomolecular Structure and Function Colloquium
- MBB 862-1 Biomolecular Structure and Function Colloquium
- MBB 863-1 Biomolecular Structure and Function Colloquium

and at least two of the following elective courses*

- ONC 548-3 Oncology rotation
- BPK 851-3 Recent advances in carcinogenesis
- MBB 746-3 Cell Death and Cell Survival
- MBB 762-3 Human Genomics
- BISC 834-3 Cell Biology
- HSCI 775-3 Epigenetics
- HSCI 776-3 Molecular Basis of Drug Action
- HSCI 778-3 Molecular Epidemiology

*Note: Any relevant Special Topics course from any department may be included upon permission of the IOGS Steering Committee. Oncology related courses at other institutions may also be used to satisfy the elective requirement. Please consult with the Interdisciplinary Oncology Graduate Specialization Steering Committee for queries regarding course eligibility.

Entry with an MSc Degree:

Students who enter the IOGS program with a Master of Science (MSc) degree will complete the following courses:

- MBB 801-3 Student Seminar in Molecular Biology and Biochemistry I*
- MBB 806-3 PhD Graduate Research Seminar (at the earliest opportunity following two terms of program enrolment)
- ONC 502-3 Concepts in Oncology
- ONC 510-3 Seminars in Oncology

*If MBB 801 has already been completed, then a minimum three courses are required, i.e. MBB 806, ONC 502 and ONC 510.

If a student has already completed the specialization as an MSc student, they may still enroll in the IOGS as a PhD student upon approval by the IOGS steering committee. Note that in this circumstance, ONC 510-3 must be taken for credit again in the PhD program, but ONC 502-3 cannot be taken again for credit.

Research

The major portion of the PhD specialization program will be devoted to original research. An original Thesis which contributes to new knowledge must be presented and defended at the end of the degree program in accordance with SFU Graduate General Regulations. In addition, all MBB PhD candidates must present a public seminar on their research.

SFU

MEMO

Faculty of Science

ATTENTION Wade Parkhouse, Dean, Graduate Studies

FROM Peter Ruben, Associate Dean, Research and Graduate Studies, Faculty of Science

RE Statistics and Actuarial Science Reduction in Course Credit Requirement

DATE December 11, 2014

TIME 10:49 AM

The Department of Statistics and Actuarial Science seeks to reduce the number of credits required for their MSc in Statistics and MSc in Actuarial Science. Students who have completed a Bachelor's degree in Statistics or Actuarial Science, who have completed an Honours degree, or who have received approval from the Graduate Program Chair, will be required to complete 24 course credits and a 6 credit project rather than 30 credits plus a 6 credit project. This proposal achieves a similar result to that of a concurrent BSc/MSc program but was more acceptable to the Department membership than a concurrent program. As such, this proposal has my approval. Please include this proposal for consideration by the SGSC at a future meeting.

P. Ruben

SFU

MEMO

Department of
Statistics & Actuarial Science
Phone: 604-291-3803
Fax: 604-291-4368
http://www.stat.sfu.ca

street address
8888 University Drive,
Burnaby BC V5A 1S6
Canada

mailing address
Room SC K10545
8888 University Drive,
Burnaby BC V5A 1S6
Canada

ATTENTION: Peter Ruben, Associate Dean
Research and Graduate Studies

TEL

FROM: Tim Swartz, Grad Chair - Statistics and Actuarial Science

RE: Program Revisions: Department of Statistics and Actuarial Science

DATE: December 8, 2014

TIME

Following the Departmental Meeting of October 17, 2014 of the Department of Statistics and Actuarial Science, an electronic vote was held. A motion was passed to make changes in the MSc program requirements for both Statistics and Actuarial Science. The changes involve reducing the number of course requirements for students who have previously completed an honours or majors degree in Statistics or Actuarial Science at SFU.

Program Change for Masters in Statistics

Summary of change:
SFU Statistics undergraduates who are admitted to the MSc program will have reduced course requirements.
Rationale for change:
Our intention is for SFU Statistics undergraduates to be able to complete the MSc more quickly. Sufficient breadth was obtained via the undergraduate program.
Will this change impact current students? If yes, what is the plan for current students?
No

FROM	TO
The MSc in Statistics requires a total of 36 units consisting of a 6 unit project and a further 30 units of course work of which at least 24 must be at the graduate level.	The MSc in Statistics requires a total of 36 units consisting of a 6 unit project and a further 30 units of course work of which at least 24 must be at the graduate level. **Students who have completed the undergraduate Statistics major or honours program at SFU or have received approval of the Graduate Chair based on an equivalent program, are required to complete 24 graduate course units plus 6 project units for a total of 30 units in total for a master's degree.**

Program Change for Masters in Actuarial Science

Summary of change: SFU Actuarial Science undergraduates who are admitted to the MSc program will have reduced course requirements.
Rationale for change: Our intention is for SFU Actuarial Science undergraduates to be able to complete the MSc more quickly.
Will this change impact current students? If yes, what is the plan for current students? No

FROM	TO
The MSc in Actuarial Science requires a total of 36 units consisting of a 6 unit project and a further 30 units of course work of which at least 24 must be at the graduate level.	The MSc in Actuarial Science requires a total of 36 units consisting of a 6 unit project and a further 30 units of course work of which at least 24 must be at the graduate level. **Students who have completed the undergraduate Actuarial Science major or honours program at SFU or have received approval of the Graduate Chair based on an equivalent program, are required to complete 24 graduate course units plus 6 project units for a total of 30 units in total for a master's degree.**
