



Okanagan Senate

THE SIXTH REGULAR MEETING OF THE OKANAGAN SENATE FOR THE 2014/2015 ACADEMIC YEAR

WEDNESDAY 25 FEBRUARY 2015

3:30 P.M.

ASC 130

- 1. Minutes of the Meeting of 28 January 2015 – Prof. Arvind Gupta**
 (approval) (docket pages 3-15)
- 2. Business Arising from the Minutes – Prof. Arvind Gupta** (information)
- 3. Remarks from the Chair and Related Questions – Prof. Arvind Gupta** (information)
- 4. Candidates for Degrees– Prof. Arvind Gupta**

The list as approved by the faculties and College of Graduate Studies is available for advance inspection at Enrolment Services, and will also be available at the meeting.

The Chair of Senate calls for the following motion:

That the candidates for degrees and diplomas, as recommended by the faculties and College be granted the degrees for which they were recommended, effective September 2014, and that a committee comprised of the Registrar, the relevant deans, and the Chair of the Senate be empowered to make any necessary adjustments. (approval)

(2/3 majority required).

- 5. Joint Report of the Admission & Awards and Curriculum Committees – Drs Spiro Yannacopoulos and Peter Arthur**
 New Programs: MSc and PhD in Medical Physics (approval) (docket pages 16-62)
- 6. Admission & Awards Committee – Dr Spiro Yannacopoulos**
 - a. New Awards (approval) (docket pages 63-64)
 - b. Revised Admission Requirements for MSc and PhD in Biology (approval) (docket pages 65-69)
 - c. Revised English Language Admission Standard (ELAS) for students from Okanagan College (approval) (docket pages 65. 70-71)

7. Curriculum Committee – Dr Peter Arthur

Curriculum Proposal from the faculties of Arts & Sciences, Creative & Critical Studies, and Health & Social Development (approval) (docket pages 72-83)

8. From the Provost – Dr. Cynthia Mathieson

Report on the Library (information) (docket pages 84-92)

9. From the Registrar – Dr Kate Ross

2015/2016 Academic Year (information) (docket page 93)

10. Other Business

The Rules and Procedures of the Okanagan Senate states that meetings will adjourn no later than 5:30 p.m. Regrets: Telephone 604.822.5239 or e-mail: facsec@mail.ubc.ca

UBC Senates and Council of Senate website: <http://www.senate.ubc.ca>



OKANAGAN SENATE

MINUTES OF 28 JANUARY 2015

DRAFT

Present: Prof. A. Gupta (President), Dr K. Ross (Secretary), Ms L. Allan, Dr P. Arthur, Dean *Pro Tem*. G. Binsted, Prof D. Buszard, Dr D. Carter Dr J. Castricano, Ms C. Comben, Dr J. Corbett, Ms T. Daramola, Dr M. Evans, Ms A. Fleming, Ms R. Giffen, Ms L. Gomez, Dean M. Grant, Mr D. Kadish, Dr D. Keyes, Dr D. Koslowsky, Mr J. Krupa, Ms A. Lakdawala Dr R. Lalonde, Dr R. Lawrence, Dr S. Lawrence, Mr M. Legault, Dr Y. Lucet, Dr V. Magnat, Dr C. Mathieson, Mr W. McLean, Dr S. McNeil, Dean *Pro Tem*. B. Rutherford, Dr R. Sadiq, Dr D. Salhani, Dr J. Stites Mor, Dean R. Sudgen, Acting Dean E. Taylor, Dean W. Tettey Ms J. Vinek, Dr D. Walker, Dr G. Wetterstrand, Ms N. Wong, Dr P. Wylie, Ms S. Sneg, Mr D. Xu, Dr S. Yannacopoulos

Regrets: Dr L. Berg, Ms H. Berringer, Dr R. Campbell, Mr I. Cull, Chancellor L. Gordon, Ms K. Henry, Dr J. Johnson, Mr D. Kundanmal, Dr C. Labun, Mr J. McEwan, Ms K. Panchyshyn, Dean M. Parlange, Ms S. Smith,

Recording Secretary: Mr C. Eaton

Call to Order

The President, Professor Arvind Gupta, called the fifth regular meeting of the Okanagan Senate for the 2014/2015 academic year to order at 3:33 pm.

Senate Membership

The Registrar declared that in response to the call for nominations issued, Mr Wesley McLean and Ms Kyla Henry were acclaimed as elected to the Senate Nominating Committee until 31 March 2015 and thereafter until replaced.

Minutes of the Previous Meeting

Peter Arthur	}	<i>That the Minutes of the Meeting of 18 December 2014 be adopted as presented.</i>
Barbara Rutherford		

Approved

Remarks from the Chair

The President advised Senate that after his first term, he estimated he was spending 50% of his time on UBC's campuses, 30% with external stakeholders, and 20% with various levels of

government. He further noted that he was having an ongoing series of meetings with faculties and faculty members, as well as with student leaders, to better acquaint himself with the various perspectives at UBC.

Professor Gupta noted many recent development meetings with interesting people who were passionate about the successes of UBC. As an example, he mentioned that in December he was in Hong Kong and met with HKU, where they seem interested in developing further programs with UBC.

The President further advised that he had now met with our new minister, Andrew Wilkinson, who clearly views UBC as a provincial success story. He noted that the Minister stressed the importance of a balanced budget for UBC, both for its own interests and for the effect on the Provincial budget. With the run-up to the Federal election, the President stated that he was meeting with various party leaders and officials. Professor Gupta suggested that across party lines, federal legislators seem supportive of post-secondary education, and advised that he had been working with some other university presidents to align our messages around federal funding.

President Gupta reminded Senate that since the 2008/2009 downturn, our budget support from the Province had been in decline; next year will be the last year of a 3 year cut, with UBC having lost 2.3% of its Provincial grant funding overall despite higher-than-CPI inflationary pressures. The President suggests that the sense of “busyness” has been part of how UBC have been dealing with those pressures, and took the view that it was time for UBC to recognize that there may be no further funding possible from the Province, at least in the near future. Professor Gupta opined that healthcare would remain the Province’s first priority and UBC needed to take control of our own budgets framework to have a long term plan to align our revenues, expenses, and aspirations. He further suggested that without a solid budget foundation it will be hard to build the academic core of the academy. He reiterated that when faced with budgetary pressures, the senior leadership of the University is strongly in favour of protecting the academic units as much as possible.

The President then stated that UBC needed to decide how we can invest in strategic directions for the University, drawing upon the five themes referenced in his inauguration: research, teaching & learning, internationalization, innovation, and integration & engagement.

- Research. There are opportunities with the Canada First Research Excellence Fund (CFREF) (\$1.3 billion over 9 years available) where the government has said they would like to go to universities that can build research groups that can operate on a world level of excellence. The government also expects that this money is in alignment with University priorities, that is to say, the government expects we will also be funding endeavours they fund.
- Teaching and Learning. We’ve had a lot of focus on flexible learning, with a cross-university committee. Discussion around professional graduate programs. One discussion around the Board would be a development campaign around the centennial of UBC. Experiential learning (differentiated from the narrow co-op programs).

- Internationalization. UBC is visited by a remarkable number of quality universities, but we do not yet have a coherent strategy for what we want to do with them. Our goals make sense but we do not yet have tactics to support those strategies. Early signs are that international applications are growing and we are getting a more diverse set of applicants to both campuses.
- Innovation. Off-campus stakeholders would like to work more with us, but find us hard to navigate. We haven't created pathways to help external people work with UBC.
- Integration and Engagement. The President advised that he had recently had a good discussion with the mayor of Kelowna, who has a solid understanding of the social and financial contribution made by UBC to the region. The president noted he was spending 4 to 5 days a month in the Okanagan Region to better understand the community. He noted that while Vancouver was heavily occupied at present by considerations around transit, this was also an area of interest for the Okanagan valley as well.

Senator Wylie noted that if projections were correct, with a growth to 20%, International students would provide some new revenues.

The President replied that yes, there would be a premium of around \$5000, which would help, but on the domestic side we essentially have had frozen grants for 6 years and with a 1-2% inflationary rate over CPI it actually only works out to around \$2000 a student. For Vancouver, 10% international growth only adds 2.5% to our budget, which is still less than inflation.

Senator Sneg asked if UBC would be making further investments in student mental health.

The President replied that we needed to do so, and needed to pay for it. The Okanagan campus was slightly better per capita for counsellors than Vancouver. In Vancouver the lack of resources was a serious concern, and this issue needed to be visited regularly and reviewed on a regular basis.

Senator Corbett asked how CFREF could benefit UBC.

The President replied it would most likely be no more than \$24 million a year, and UBC brings in \$600 million a year in research, so this is only around 3% a year. The government has not put a lot of restrictions on this money, and we have put in specific research proposals where we feel we can be raised to world quality and be of benefit to Canada. The money can go for research, for graduate students, for infrastructure, but we have to set out a concrete plan. If the money is for faculty spots for 7 years, we need a plan for what to do in 7 years. We learned with the CRC Chairs that 10 years later we were scrambling. Through this processes we identified a number of great groups that we couldn't support bringing forward under the CFREF rules, and we feel an obligation to still support these groups as a university.

Remarks from the Deputy Vice-Chancellor

The Deputy Vice-Chancellor advised that an outreach program with the Kelowna Friendship Society was recently highlighted in local press. The Program assisted at-risk youth and young parents who were benefitting from outreach and support from UBC in delivering pre-university writing and literacy classes.

Secondly, Professor Buszard noted that the Okanagan campus had hosted the 41st Great Northern Concrete Toboggan race with great success, and the Mayor has asked if we can host annually, although the race does move from university to university.

At a recent Community Advisory Committee the City of Kelowna presented on their plans for transit, and we presented our campus master plan. The City is putting the money forward but the Ministry of Transit has advised that there will be delay to negotiate the GID and Fortis gas lines, as well as growths in pedestrian traffic. Completion is now scheduled for 2017.

From the Board of Governors

The President confirmed that the material from the following meetings, as approved by Senate, were subsequently approved by the Board of Governors as required under the University Act:

24 SEPTEMBER 2014

Curriculum Proposals from the Faculties of Applied Science and Health & Social Development

New Awards

22 OCTOBER 2014

Curriculum Proposals from the Faculties of Applied Science, Arts & Sciences, and Health & Social Development

26 NOVEMBER 2014

Curriculum Proposals from the Faculties of Applied Science and Health & Social Development

New Awards

Academic Policy Committee

The Chair of the Committee, Dean Miriam Grant, presented.

REVISIONS TO THE COMPOSITION AND PROCEDURES DOCUMENT OF THE FACULTY OF CREATIVE AND CRITICAL STUDIES COUNCIL

Miriam Grant
Wisdom Tettey

} *That Senate approve the revisions to the Composition and Procedures Document of the Faculty of Creative*

and Critical Studies Council as outlined in the attached document.

David Kidesh asked why section E was listed as a power of the faculty.

Mr Eaton replied that it was from the University Act, and designed to ensure the faculties and faculty members taught to their areas of expertise.

Approved

SCHOOL OF NURSING GRADING PRACTICES

Miriam Grant	}	<i>That Senate approve the amendment to the footnote of the grading Practices table in the Academic Calendar regarding grading practices in the School of Nursing.</i>
Gord Binsted		

By General consent, the proposal was amended to strike footnote 1 and replace it with "Except where otherwise stated in the course syllabi or academic regulation, the School of Nursing defines Fail (F) as below 60%"

A senator asked if this had been a matter of dispute.

Senator Vinek replied that it had not yet presented an issue, but with the recent Master of Nursing curriculum renewal, it was realized that the School's policy was not clear in this area.

Approved as Amended

PROPOSAL TO ESTABLISH THE INSTITUTE FOR COMMUNITY ENGAGED RESEARCH

Miriam Grant	}	<i>That Senate approve the establishment of the Institute for Community Engaged Research and forward it to the Board of Governors for approval.</i>
Cynthia Mathieson		

In response to a question, Senator Berg indicated that the intent was to involve undergraduates in research opportunities.

Senator Mathieson advised that when she consulted with the deans, they strongly supported the configuration as supporting our needs around community engagement.

Raymond Lawrence asked where the funding would come from after 3 years.

Senator Binsted replied that the current approach was to give base support to institutes. Right now it is one-time funding as we have a large number of research facilitation pieces that we need to bring forward and tie together. The intention is to support this going forward but we do not yet know what that will look like.

Senator Wylie asked how faculty consultation was conducted and how the director would be appointed.

Senator Binsted replied that it was broad and included town hall events and that the director would be appointed under Policy 22. The director's stipend comes from the Vice-Principal Research budget and not from the institute budget so that this does not go towards that administrative expense.

Senator Buszard further advised that the \$50 000 was a seed fund for the institute and its successes would have to make it sustainable for the future.

Approved

PROPOSAL TO ESTABLISH THE REGIONAL SOCIO-ECONOMIC DEVELOPMENT INSTITUTE OF CANADA

Miriam Grant
Roger Sugden

} *That Senate approve the establishment of the
Regional Socio-Economic Development Institute of
Canada and forward it to the Board of Governors for
approval.*

David Kozlowski questioned the initial membership, noting that some, but not all, had experience in socio-economic development. Secondly, he noted that the relationship with Orkestra was a specific concern as they did research with an intense focus on the Basque region. Their research method however ignored journal rankings and was light on empirical research. If adopted as a model, this could present a challenge for graduate students as hiring in North America was very empirically driven.

Dean Sugden replied that, firstly, the point of the program was to be cross-disciplinary and beyond the narrow definition used by economists. We have already had some interesting work with Engineering, Arts & Sciences, and Creative & Critical Studies in areas that relate to socio-economic development, and there is a lot of expertise on that basis.

Secondly, Orkestra is one partner and we do have a formal relationship with them. Orkestra is world-leading in engaging with communities, with within the Basque region and in other areas as well such as the former Soviet Union and Latin America. Other international partners included ICL, Cambridge, etc.

Senator Buszard noted that she had recently been involved in conversations federally and locally around a range of initiatives around UBCO, and there was tremendous enthusiasm around this as our institution supporting regional development and understandings.

Senator Tettey suggested that it was important to look at this institute as having part of its strength as its people coming from different disciplines and bringing different perspectives. How one measures impact is beyond just journal rankings and there are issues with the validity of journal rankings as a measure.

Senator Wylie said he did not see a strong culture of research in this area yet on this campus, compared to the other institute just approved which had a long track record. He asked if a centre would not be a better idea to start.

Dr Stites Mor asked if the administrative responsibilities of 7 of 20 members listed would detract them from working in this area.

Dean Sugden replied that they would not. Further, in response to Senator Wylie's comments he said that clearly some of the proposal was aspirational and that it would grow organically towards its goals.

Senator Binsted replied that this was an emerging concept, and that an imbedded unit would not work as well.

Senator Buszard replied that an institute was an appropriate entity for this organization. She further noted that academic administrators are still capable of having a highly active research program.

Senator Taylor noted that one of the unique goals was to broaden the concept of socio-economics. As an example, mental health was involved as they were looking at the increases in cost of service for the mentally ill.

Approved

Agenda Committee

The Chair of the Senate Agenda Committee, Dr Daniel Keyes, presented.

SENATE MEETING SCHEDULE

Daniel Keyes	}	<i>That Senate amend Rule 15 (a) of the Rules and Procedures of Senate as follows (new text in bold):</i>
Peter Arthur		
		<i>15. Regular Meetings</i>
		<i>a. The Senate shall schedule nine regular meetings each academic year, normally on either the third, or the fourth, or fifth Wednesday Thursday Thursday of the month from September through May. Such meetings shall normally be called to order at 3:30 p.m.; and</i>

That, in accordance with Rule 15 (b), the regular senate meeting schedule for 2015-2016 be established as follows: 24 September 2015, 29 October 2015, 26 November 2015, 17 December 2015, 28 January 2016, 25 February 2016, 31 March 2016, 28 April 2016. 19 May 2016.

A student senator asked if UBC could work with the faculties to avoid scheduling so many classes on Thursday.

The Associate Registrar, Mr Eaton, replied that we tried to balance out the schedule as much as possible, and that hoped with advanced notice, faculty members and students could construct workable schedules.

Approved

Curriculum Committee

Dr Peter Arthur, Senate Curriculum Committee, presented.

JANUARY CURRICULUM PROPOSALS

See Appendix A: Curriculum Report

Peter Arthur	}	<i>That Senate approve the new courses, revised courses, and revised program requirements brought forward from the Faculty of Arts & Science.</i>
Barbara Rutherford		

Senator Rutherford clarified that the 70% average required for Economics, Philosophy, and Political Science would be an average over any courses attempted.

Senator Lalonde noted the lack of detail on the special topics course.

Senator McNeil replied that this was standard for special topics courses.

Senator Lalonde asked what unit would be responsible for courses in Sustainability.

Mr Eaton replied that Human Geography would be the responsible unit.

Approved

Nominating Committee

The Chair of the Senate Nominating Committee, Dr Daniel Keyes, presented.

COMMITTEE ADJUSTMENTS

Daniel Keyes
Deborah Buszard

} *That the following senators be appointed to committees of Senate as set out below until 31 March 2015 and thereafter until replaced:*

*Admission & Awards Committee
Tolulope Daramola, to replace Natalie Wong
Dhiren Kandanmal*

*Appeals of Standing & Discipline
Dhiren Kandanmal*

*Learning & Research Committee
Natalie Wong*

Approved

Report from the Deputy Vice-Chancellor

RESEARCH STRATEGY

Senator Buszard introduced the discussion. She advised that the thinking represented came from a broad group of persons from the Okanagan as well as Helen Burt, Associate Vice-President Research, from Vancouver.

Senator Binsted advised that these discussions would also be brought to faculty councils. He suggested that self-awareness of where we were and are now would help us decide where we want to go. He further noted that research funding was increasing each year, but so were the number of faculty members, and that NSERC engage grants were disproportionately high for the Okanagan campus. Finally, he listed what he viewed as 5 emerging research clusters at UBC: Health Assessment and Promotion, Biodiversity, Community and Culture, Regional & Socio-economic Development, and Materials and Manufacturing.

Senator Lalonde noted that one of the barriers to success was lack of research mentorship due to competing priorities; he suggested that unit administrative support was more useful than central administrative support as set out.

Senator Stites Mor asked if there would be a venue for interdisciplinary groups to comment in addition to just faculties.

Senator Tettey noted that comparing the campuses was difficult given that there were not comparable faculties on each campus.

Senator Binsted confirmed that they removed the obvious examples such as Law or Medicine from the data.

Senator Yannacopoulos said that we should not undermine the importance of Engage grants. He said that engineering has 90% of them and the impact on local industry and the local community has been tremendous. He further noted that the other important thing with these grants was to give opportunities to students to work on real life projects; hundreds of students were working on projects, largely submitted by local industries.

Senator Binsted agreed that Engage grants were an important metric, but expressed a caution as if and when NSERC decided that it did not view Engage as useful this could cause us to lose track of other important metrics. Secondly, we need to ensure that people take the next step after Engage grants to Engage Plus and CRCs.

Senator Sadiq suggested that new hires, mostly being younger faculties, should be normalized in the data. He added that most of our newer faculty are not yet tenured, and non-tenured and younger faculty are not yet ready to take larger risks. There are certain things on this campus that gives us an advantage or a disadvantage due to our small size for interdisciplinarity.

Senator Corbett noted that the Tri-Council grants were named funding source, but asked what this meant for the future given our vision and fiscal reality, and asked if we could have statistics on how Tri-Council grants compare to other sources.

MOTION TO FIX THE TIME TO ADJOURN

Miriam Grant } *That the time to adjourn be extended to 5:50 pm.*
Peter Arthur

Approved

Report from the Provost

VANTAGE COLLEGE AT UBC'S OKANAGAN CAMPUS

Senator Mathieson introduced Mr James Ridge, Principal, and Dr Joanne Fox, Academic Director, from Vantage College.

Mr Ridge presented on the four-part mandate of Vantage College (Grow international student numbers, provide an exceptional 1st year experience, be a centre for innovation and excellence, and diversity the international student body), expressing that the 3rd part of his mandate was the most exciting. Many universities did not care about integration with international students but UBC did not find this appropriate or interesting.

He went on to describe Vantage College as a 1st Year program where Arts students completed 36 credits and Science student completed 41. If students complete the 11 ½ month program, they progress into Arts & Science Year 2. Academically, these students are as strong as typical UBC

students in all areas except for English, where they are not quite as strong. We have UBC courses taught by UBC faculty and under the UBC (V and increasingly O) students.

Mr Ridge advised that fees are \$6000 more than typical international students, and this is to cover the additional supports. He noted that this arrangement was actually more economical for many students as they don't need pre-university English tutoring.

Mr Ridge then went on to describe Vantage's proposal for growth to the Okanagan campus in Engineering and Management, with Engineering being a split program channeling students into both the BAsC and BASC-O programs. In both cases, students would spend 2 terms in Vancouver and then 1, the summer, in the Okanagan.

Senator Arthur asked what the relationship would be between Vantage and the English Foundations Program, and asked when the proposals would go through committees.

Mr Ridge said that we have been working with EFP for 2 years now, and we now have processes in place to direct students to the program best for them. We will evaluate this regularly. We will be bringing proposals to committee next month.

Senator Kundanmal said that in his experience, university was not just an academic experience; it was the community who shaped who you are. He expressed a concern with international students only interacting with other international students.

Mr Ridge agreed, noting Vantage's efforts to integrate students in residences and other activities.

Senator Kadish asked about summer use of campus, noting the current lack of facilities.

Mr Ridge replied that Vantage was aware of those concerns, and that with increased summer use of the campus there would be further impetus to develop and operate facilities for and in the summer.

In response to a question from Senator Wong, Mr Ridge advised that around half of Vantage students applied directly to the program, and the other half were referred to Vantage due to Arts or Science applications that would not be successful due to deficiencies in English.

The President noted that this matter would be coming back to Senate for formal consideration and approval in the upcoming months, and encouraged senators to provide direct feedback to Mr Ridge or the Provost.

Other Business

HONORARY DEGREES

Senator Arthur reminded senators that a call had been issued for nominations for honorary degrees for the end of February. Normally, these are done for September; however, as part of a

special call related to the University's centennial celebrations in the spring of 2016, the Committee would be working earlier and was hoping for high-profile nominations to bring to Senate in April.

Adjournment

There being no further business, the meeting was adjourned at 5:50 pm.

Appendix A: Curriculum Report

FACULTY OF ARTS & SCIENCES

New Courses:

POLI 223 (3) Introduction to Philosophy, Politics and Economics (PPE)

POLI 352 (3) Comparative Politics of Public Policy

SUST 491 (3) Special Topics in Sustainability

Revised Course:

PHIL 437 (3) Philosophy and the Global Order

Revised Program:

Philosophy, Politics and Economics Major



a place of mind
THE UNIVERSITY OF BRITISH COLUMBIA

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February 13, 2015

To: Okanagan Senate

From: Curriculum Committee and Admissions and Awards Committee

Subject: Joint Report Curriculum and Admissions Proposal (approval)
– Medical Physics graduate program

The Curriculum Committee and the Admissions & Awards Committee have reviewed the material forwarded to it by the Faculty of Arts and Sciences and encloses those proposals it deems ready for approval.

As such, the following is recommended to Senate:

Motion: *That Senate approve the new Medical Physics graduate program (M.Sc., Ph.D.) brought forward from the Faculty of Arts and Sciences.*

a. New Courses

- i. PHYS 534 (3) Radiotherapy Physics I
- ii. PHYS 535 (3) Radiotherapy Physics II
- iii. PHYS 539 (3) Radiation Dosimetry
- iv. PHYS 540 (3) Medical Imaging
- v. PHYS 544 (3) Radiation Biophysics
- vi. PHYS 546 (3) Clinical Shadowing
- vii. PHYS 547 (1) Anatomy and Physiology for the Medical Physicist
- viii. PHYS 549 (12) Master's Thesis
- ix. PHYS 649 (0) Doctoral dissertation

b. Program Creation

- i. Program Overview
- ii. Admissions Requirements
- iii. Program Requirements

For the Committees,

Dr. Peter Arthur
Chair, Curriculum Committee

Graduate Program in Medical Physics, University of British Columbia Okanagan

Proposal November 2014

This proposal for a graduate program in medical physics at UBC Okanagan is composed of three main sections:

1. A brief overview and contextualization of medical physics, and an executive overview of the proposed graduate program;
2. Graduate Program proposal and;
3. A list of associated and adjunct faculty, teaching coverage, research strengths, financial information, collaborative potential, and the fit of the proposed program within the UBC Okanagan Strategic Research Plan and the UBC Place ad Promise initiative.

1. Overview and Context

Medical Physics is a broad field and can be loosely defined as the application of physics to the diagnosis and treatment of disease. Representative examples of physics contributions in medicine include the development of radiation dose calculation algorithms and novel dose delivery strategies in the use of ionizing radiation for cancer treatment, the development of medical imaging technology for disease diagnosis, and the application of radioactive substances for disease identification and treatment. Regionally, nationally, and internationally,

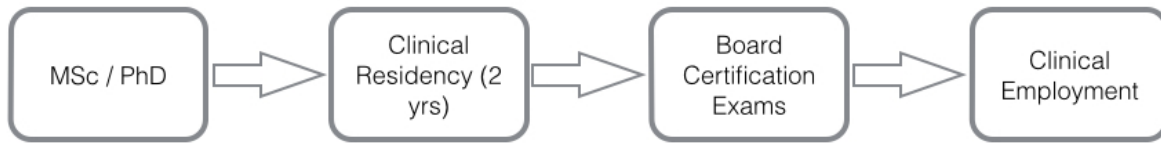


Figure 1: Typical trajectory leading to a career in clinical medical physics. The educational program (university driven) and residency program (clinic driven) must be CAMPEP certified. in rider for a candidate to sit the final board exams.

medical physicists are employed within cancer centres, diagnostic imaging facilities, government laboratories, universities, and industry.

Although they often work behind the scenes and may therefore escape the public eye, there are a relatively high number of medical physicists employed within the health and education sectors. In British Columbia, there currently exist 6 interdependent cancer centres employing a total of 48 medical physicists (~25% M.Sc., 75% Ph.D.). A further 8 (25% M.Sc., 75% Ph.D.) are employed within the provincial health authority to provide diagnostic imaging support and development, and approximately 12 more are employed within the universities of BC and related research institutes (e.g. TRIUMF).

As shown in figure 1, medical physicists (M.Sc. or Ph.D.) interested in a clinical career path in radiation oncology typically proceed to a 2-year post-degree residency program at a cancer centre. Upon completion of a residency program and board certification exams, medical physicists are licensed to practice within the cancer clinic. For the diagnostic imaging subspecialty, candidates typically sit the board exam, even though they may not formally pass through a residency program. In order for a candidate to sit a board exam, they must have

graduated from an accredited residency or educational program. Residency programs, in turn, are increasingly requiring candidates to have graduated from an accredited educational program.

Accreditation is conferred through the internationally recognized Commission on the Accreditation of Medical Physics Education Programs (CAMPEP, www.campep.org). CAMPEP is endorsed by the main Medical Physics professional organizations within North America (Canadian Organization of Medical Physicists (COMP), American Association of Physicists in Medicine (AAPM), the American College of Radiology (ACR), the American Society for Radiation Oncology (ASTRO), and the Radiological Society of North America (RSNA)), and exists to ensure that a consistent and high-quality Medical Physics program is in place at the candidate institution. Currently, the BC Cancer Agency (BCCA) operates a CAMPEP accredited residency program, and there exist 2 accredited graduate education programs within BC: one at the University of Victoria (UVic), the other at the UBC Vancouver campus.

The proposed graduate program in Medical Physics will be housed within the Physics program at the Irving K. Barber School of Arts and Science in Unit 5. This graduate program will be a joint venture between UBCO Physics, the BCCA - Centre for the Southern Interior (CSI), the Interior Health Authority (IH), and allied UBCO initiatives and programs as described within this proposal. The UBCO Graduate Program in Medical Physics will offer M.Sc. and Ph.D. degrees in medical physics. To maintain competitiveness, CAMPEP accreditation will be sought as soon as the program is in place.

A highlight of the main M.Sc. and Ph.D. degree requirements are given in table 1, and details are discussed in section 2 below.

Table 1: Overview of Graduate Program in Medical Physics requirements and standards

	MSc	PhD
Admission	Physics honours or equivalent, B+ (76%) or greater	Medical Physics M.Sc. or equivalent, B+ (76%) or greater, or M.Sc. to Ph.D. transfer in good standing
Required Degree Credits	33 credits: 21 credits in coursework and 12 credits from the M.Sc. thesis (Phys 549)	21 credits: 21 credits beyond B.Sc. and 0 credits from Ph.D. doctoral dissertation (Phys 649)
Required Courses	Core (15 credits): Phys 534 (3); Phys 539 (3); Phys 540 (3); Phys 544 (3); Phys 546 (2); Phys 547 (1). Elective: 6 credits (may include graduate courses outside physics or one advanced undergraduate courses (numbered 400 or above))	Any courses not taken in M.Sc. equivalent. Additional, if any, as determined by supervisory committee.
Committee Membership	Minimum: 3 (supervisor + 2 members, or 2 co-supervisors + 1 member)	Minimum: 3 (supervisor + 2 members, or 2 co-supervisors + 1 members).
Committee Meeting Frequency	8 months (for Sept entry: May, Dec, Aug)	1 year
Comprehensive Exam	No	Yes: oral comprehensive exam

	MSc	PhD
Thesis Proposal Exam	No	Yes: research proposal + oral
Final Defence	Yes: thesis + oral	Yes: doctoral dissertation + oral
Time to Completion	2 years post B.Sc.	M.Sc. graduates in Medical Physics: 3 years; other M.Sc. graduates: 4 years; M.Sc. to Ph.D. transfers: 4 years post B.Sc.

2. Graduate Program Proposal

Program Objectives

- To provide comprehensive, high quality, CAMPEP-accredited post-graduate degrees in medical physics leading to M.Sc. or Ph.D. qualifications.
- To foster creative and vibrant interdisciplinary research between UBCO physics, BC Cancer Agency, Interior health, and allied UBCO departments and initiatives (Engineering, Chemistry, Math, Computer Science, Statistics, Biology, and the proposed Centre for Biomedical Research). Research will have regional and international significance.
- To train the next generation of medical physics professionals for subsequent employment within health, education, and industrial sectors.
- To collaborate with UVic and UBC Vancouver's accredited medical physics programs, and BCCA's accredited residency program to provide a united provincial vision for medical physics education and research, leading to regional and international impact.

Admission Requirements

General admission requirements by the College of Graduate Studies must be satisfied.

M.Sc.: Applicants are normally required to hold an honours degree in physics, or equivalent, with a minimum grade average of B+ (76%).

Ph.D.: Two admission streams into the Ph.D. program are available: 1) Completion of an M.Sc. in medical physics or closely related discipline. Applicants will have completed an M.Sc. in medical physics or closely related discipline, with an average of B+ (76%) or higher. Students applying from outside institutions will have their M.Sc. coursework evaluated for equivalency with the UBCO M.Sc. course requirements. Any outstanding coursework will require completion within the first year of the applicant's Ph.D. program. 2) M.Sc. to Ph.D. transfer. During the first year of M.Sc. study, exceptional students may opt to request a transfer to the Ph.D. program. Applicants are required to have completed 12 course credits within the first year of M.Sc. study, with a minimum of 9 credits at the 500-level and a 12-credit average of at least 80% (A-). Clear evidence of research potential and ability must be shown, as determined by the student's supervisory committee and approved by the graduate program coordinator.

Course Requirements

M.Sc.: A total of 21 course credits beyond the B.Sc. are required for an M.Sc. degree. Required courses include:

- Phys 534 (3 credits): Radiotherapy Physics I
- Phys 539 (3 credits): Radiation Dosimetry
- Phys 540 (3 credits): Medical Imaging

- Phys 544 (3 credits): Radiation Biophysics
- Phys 546 (2 credits): Clinical Shadowing
- Phys 547 (1 credit): Anatomy and Physiology for the Medical Physicist

Optional courses include

- Phys 535 (3 credits): Radiotherapy Physics II
- Suitable 400-, or 500-level courses as determined by the supervisory committee

Optional courses can be tailored to the student's research interests. Students within the radiation oncology theme are expected take Phys 535, whereas students within imaging or biophysics related themes could opt for other courses to satisfy the requirement. A course schedule for a typical academic year is outlined in table 2.

Table 2: Course scheduling for graduate Medical Physics courses.

Fall	Spring	Summer
Phys 534	Phys 535 or elective	Phys 547
Phys 540	Phys 539	Phys 546
Elective	Phys 544	

Ph.D.: A total of 21 course credits beyond the B.Sc. are required for a Ph.D. degree. UBCO M.Sc. (or UBCO equivalent) medical physics courses can be considered towards the 21 credits total. The final course portfolio must contain, at a minimum, the M.Sc. course requirements outlined above.

Program Requirements

M.Sc.: Requirements for the completion of an M.Sc. degree in medical physics include:

- 21 course credits beyond the B.Sc., as outlined above. A minimum average of B+ (76%) must be maintained across all course work, with no grade below B (72%). A grade below a B in any course will necessitate a supervisory committee meeting to discuss the outcome. The student may be asked to repeat the course. Failure to maintain a 74% or higher average in the repeated course will necessitate the student being asked to withdraw from the program.
- 12 thesis credits (Phys 549).
- Submission of a written research thesis, along with a final oral defence of the research and thesis.

Ph.D.: Requirements for the completion of a Ph.D. degree in medical physics include:

- 21 course credits beyond the B.Sc., as outlined above. Students who do not already have credit for the required master's degree courses for their program or the equivalent graduate level courses from another university (approved by Graduate Chair) must take these courses

in the Ph.D. program. Note: coursework that was completed for a master's degree may be counted and credited for the Ph.D. coursework requirement. A minimum average of B+ (76%) must be maintained across all course work, with no grade below B (72%). A grade below a B in any course will necessitate a supervisory committee meeting to discuss the outcome. The student may be asked to repeat the course. Failure to maintain a 74% or higher average in the repeated course will necessitate the student being asked to withdraw from the program.

- 0 doctoral dissertation credits (Phys 649).
- Successful completion of a comprehensive exam, no later than 18 months after initial enrolment into the Ph.D. program (or no later than 6 months after transfer from the M.Sc. program). A failed comprehensive exam may, with the support of the supervisory committee, be retaken once no sooner than 3 months and no later than 6 months from the original exam date. Failure to pass a second comprehensive exam will necessitate the student being withdrawn from the program. See below for details of comprehensive exam format.
- Successful completion of the dissertation proposal exam within the first three years of the program (two years if the candidate is undertaking the M.Sc. to Ph.D. transfer). See below for details of the exam format.
- Submission of a written research dissertation, along with a final oral defence of the research and doctoral dissertation.

Examinations and Thesis / Dissertation

M.Sc.: Required examinations at the M.Sc. level include:

- Any exams within required and elective coursework.
- Final public oral thesis defence.

The thesis may be submitted at any time of the year, but candidates are advised to allow ample time for revision and examination. As the thesis is being written, the candidate will be in regular communication with the supervisory committee. When a draft is completed that the supervisory committee recommends for examination, the student may formally request an examination. Arrangements for the final oral examination are then made. The examining committee will include the members of the student's supervisory committee, one university examiner who is from UBC (Okanagan or Vancouver) campus, and a committee chair from outside physics. As a result of the final oral examination, corrections may be necessary to produce a revised final version of the thesis. Full standards for the M.Sc. thesis defence can be found at <http://gradstudies.ok.ubc.ca/current-students.html>.

Ph.D.: Required examinations at the Ph.D. level include:

- Any exams within required and elective coursework.
- Successful completion of an oral comprehensive exam. The comprehensive exam must be held within 18 months of initial registration into the Ph.D. program (6 months if the candidate is undertaking the M.Sc. to Ph.D. transfer). Failure to meet these timelines may result in the student's progress to be deemed unsatisfactory, and the student being asked to withdraw from the program. The comprehensive exam is based on the material covered

in the core courses that composed the M.Sc. degree and additional material provided by the Graduate Program Coordinator.

- Successful completion of the dissertation proposal exam within the first 18 months of the program (12 months if the candidate is undertaking the M.Sc. to Ph.D. transfer). The exam is detailed as follows:
 - The student writes a 20 - 30 page research proposal outlining the proposed project, to include sufficient background and theory for the given project, proposed methods, results to date, and timeline to completion. The report is to be distributed to the committee no later than 2 weeks prior to the comprehensive exam date.
 - Thesis Proposal Exam: The exam is composed of two components: 1. A written (20 - 30 page) research proposal and 2. An *in camera* oral exam testing a) the candidate's knowledge of the research proposal and area, b) suitability of the research proposal, and c) fundamental material oriented towards the proposed research area. The oral exam committee will be composed of the supervisory committee and an exam chair (normally a member of the graduate program committee outside physics). The student will give a short (20 min) synopsis of the research proposal. The supervisory committee will ask rounds of questions probing for the suitability of the student's background knowledge in the chosen field, and the suitability of the proposed research project.
 - The outcome of the Dissertation Proposal Exam falls into one of three categories:
 - Pass: The Dean of the College of Graduate Studies approves the request for advancement to candidacy.

- Conditional: The committee has identified weak areas within the candidate's background knowledge and/or the proposed research project. The student may be asked to undertake a re-examination, additional coursework, a re-evaluation of the research proposal, or a combination of the above.
- Fail: The student fails the exam. A second exam may be requested and undertaken no sooner than 3 months and no later than 6 months from the original exam date. A student who fails to obtain a pass will be asked to withdraw from the program.
- Final public oral defence.

The doctoral dissertation may be submitted at any time of the year, but candidates are advised to allow ample time for revision and examination. It is understood that, as the doctoral dissertation being written, the candidate will be in regular communication with the supervisory committee. Once the supervisory committee recommends the completed draft for examination, the student may formally request an examination. All doctoral dissertation must be assessed by the supervisory committee, a university examiner, and by an examiner external to the University. The external examiner is chosen by the College of Graduate Studies in consultation with the student's supervisor. The external examiner's written report must be received before the final examination of the dissertation can take place. A chair from outside the home academic unit, but from within the College of Graduate Studies, presides over the oral defence. Arrangements for the final oral defence are made by the College of Graduate Studies. Even if the oral defence passes, it is understood that as a result of the final oral defence corrections may be necessary to produce a revised final draft of the doctoral

dissertation. Full standards for the PhD dissertation defence can be found at <http://gradstudies.ok.ubc.ca/current-students.html>.

Program Administration

Physics Graduate Program Committee

This committee generally advises on matters pertaining to the program but specifically recommends to the Graduate Program Coordinator which student applicants should be accepted into the program and what credit may be given for previously taken courses. Any changes to the graduate program must be reviewed and approved by this committee. Faculty members appointed to Unit 5 as (Assistant, Associate or Full) Professors of Physics are members of the Physics Graduate Program Committee. Adjunct or visiting professors may be appointed as non-voting members of the Physics Graduate Program Committee for a term of up to three years, or up to the length of their appointment as an adjunct professor, whichever is less. These individuals must have a Ph.D. or equivalent, and their appointment must be approved by a 2/3-majority vote of the Physics Graduate Program Committee.

Graduate Program Coordinator

The graduate program in medical physics will be administered primarily by the Graduate Program Coordinator (GPC). This individual must be a member of the Physics Graduate Program Committee and is appointed to this position by the Head of the unit that contains the physics program. If the Head of the unit is not a member of the physics program then the appointment must be made in consultation with the Physics Graduate Program

Committee. The GPC chairs the Physics Graduate Program Committee and acts as liaison with the College of Graduate Studies. The GPC's duties also include:

- Arranging the review of applications to the program.
- Approving the composition of student's supervisory committees in conjunction with the College of Graduate Studies.
- Ensuring that student's supervisory committees conduct annual reviews and send the reports to the College of Graduate Studies.
- Making arrangements for Ph.D. Oral Comprehensive Exams as needed.
- Contacting the College of Graduate Studies to make arrangements for the oral examination of submitted doctoral dissertation.
- Ensuring that program standards are maintained.

Student Supervisory Committee

M.Sc.: An M.Sc. medical physics student's advisory committee consists of a minimum of three members from the Graduate Program Committee, one of whom is the student's thesis supervisor or co-supervisor. Either the supervisor, or at least one co-supervisor must be a member of the Physics Graduate Program Committee.

Ph.D.: A Ph.D. medical physics student's advisory committee consists of a minimum of three members from the Graduate Program Committee, one of whom is the student's dissertation

supervisor or co-supervisor. Either the supervisor, or at least one co-supervisor must be a member of the Physics Graduate Program Committee.

M.Sc. and Ph.D.: The composition of a committee is determined by the student's thesis / dissertation supervisor and approved by the Graduate Program Coordinator. The Graduate Program Coordinator will endeavour to ensure that at least one of the members of each M.Sc. supervisory committee has successfully supervised a student through the completion of a M.Sc. or Ph.D. degree. Similarly, the Graduate Program Coordinator will arrange, when possible, that at least one of the members of each Ph.D. supervisory committee has successfully supervised a student through the completion of a Ph.D. degree. Although primary supervision of a student rests with the student's dissertation supervisor, the supervisory committee must conduct an annual (Ph.D.) review of the student's progress and file a report with the Graduate Program Coordinator. The report may include recommendations such as, transfer of the student to the Ph.D. program, or require that the student take additional courses above and beyond the program requirements, or request the withdrawal of a student from the program in the case of unsatisfactory progress. The supervisory committee will also form the core of a student's Thesis Proposal Exam and Final Oral Defence committee in accordance with the College of Graduate Studies guidelines.

Comprehensive Examination Committee

The oral comprehensive exam committee will be composed of three members of the Physics Graduate Program Committee selected by the Graduate Program Coordinator, and an exam chair (normally a member of the Graduate Program Committee outside physics). The chair

does not vote on the outcome of the examination unless the outcome of the examination is tied then the chair has the deciding vote.

Oral Examination Committee

M.Sc.: The final oral exam committee consists of the members of the student's supervisory committee, one university examiner, and an exam chair. The university examiner may be i) a faculty member from UBCO but not within the home academic unit (Physics), or ii) a faculty member external to UBC but of academic credentials suitable to undertake the examination of the student.

Ph.D.: The oral exam committee consists of the student's supervisor and two additional members of the student's supervisory committee, one university examiner, one external examiner, and an exam chair. The external examiner must be external to UBC and the graduate program committee.

M.Sc. and Ph.D.: University and external examiners will be chosen by the College of Graduate Studies in consultation with the student's supervisor. The chair of the examination committee should be external to the program and will be assigned by the College of Graduate Studies. The choice of external reviewers and committee chair will be subject to the regulations for appointment in the College of Graduate Studies.

3. Faculty, Collaborative Initiatives, and Integration with UBC Okanagan Strategic Plan

Faculty and Resourcing

Medical physics courses at UBCV and UVic are predominantly team-taught by core university and adjunct BCCA faculty. It is a provincial mandate of the BCCA medical physics faculty to minimize the duplication of course content across separate institutions. Hence, medical physics programs in Vancouver and Victoria share, via BCCA video link, a set of core radiation oncology graduate courses (Phys 534, Phys 535, and Phys 539). These courses are offered on an annual basis and are taught by BCCA faculty (adjunct) in Vancouver, Victoria, Kelowna, and Fraser Valley.

UBCO Physics and CSI have secured course-sharing agreements from medical physics programs in Victoria and Vancouver for all core and one elective (Phys 535) graduate medical physics courses listed within the present proposal. All courses within the proposed UBCO/CSI Medical Physics program are currently offered on an annual basis. Given that the overall annual new student intake within the two current programs is relatively small (1-4 at UVic and 3-5 at UBC Vancouver), the addition of a UBCO program into the overall course matrix will help ensure healthy class size.

UBCO physics faculty and BCCA medical physicists (CSI and IH) will contribute to the proposed medical physics program through teaching, research, supervision, and graduate committee membership. The physics department anticipates two new positions at the rank of assistant

professor in medical physics or related fields as a result of a retirement and a permanent medical disability. These should be in place to supplement the graduate program committee by 2015. All CSI members listed below currently hold adjunct status at UBCO.

In addition, UBCV and UVic physics faculty and BCCA medical physicists (VIC and VC) will contribute to the proposed medical physics program through teaching.

Faculty and Program Collaborators

UBCO - Physics

- Andrew Jirasek, Assistant Professor
- Murray Neuman, Associate Professor
- Daniel Vollick, Associate Professor
- Two approved new hires, search in progress, start date July 2015 (1) and TDB (1).

BCCA - Centre for the Southern Interior, CSI, and Interior Health Authority, IH

- Cynthia Araujo, Senior Medical Physicist, CSI; Adjunct Professor, UVic & UBCO
- Alistair Baillie, Professional Practice Leader, CSI; Clinical Professor, UBC; Adjunct Professor, UBCO
- Deirdre Batchelar, Senior Medical Physicist, CSI; Adjunct Professor, UBCO
- Thor Bjarnason, Medical Physicist, Interior Health Authority; Adjunct Professor, UBCO
- Michelle Hilts, Senior Medical Physicist, CSI; Adjunct Professor, UVic & UBCO

- Derek Hyde, Senior Medical Physicist, CSI; Adjunct Professor, UBCO
- Marie-Pierre Milett, Medical Physicist, CSI; Adjunct Professor, UBCO
- Rasika Rajapakshe, Senior Medical Physicist, CSI; Adjunct Professor, UBCO
- Joseph Yang, Medical Physicist, CSI; Adjunct Professor, UBCO

BCCA - Vancouver Island Centre, VIC

- Will Ansbacher, Senior Medical Physicist, VIC; Adjunct Associate Professor, UVic
- Parminder Basran, Senior Medical Physicist, VIC; Adjunct Associate Professor, UVic
- Wayne Beckham, Professional Practice Leader, Provincial BCCA Medical Physics Program, VIC; Adjunct Professor, UVic
- Isabelle Gagne, Senior Medical Physicist, VIC; Adjunct Assistant Professor, UVic
- Ante Mestrovic, Medical Physicist, VIC; Adjunct Assistant Professor, UVic
- Derek Wells, Senior Medical Physicist, VIC; Adjunct Assistant Professor, UVic
- Sergei Zavgorodni, Senior Medical Physicist; VIC, Adjunct Professor, UVic

UBC and BCCA - Vancouver Centre, VC

- Alanah Bergman, Senior Medical Physicist, VC
- Cheryl Duzenli, Professional Practice Leader, VC; Adjunct Professor, UBC
- Ermias Gete, Senior Medical Physicist, VC

- Peter Petric, Medical Physicist, VC
- Tony Popescu, Senior Medical Physicist, VC; Adjunct Professor, UBC
- Ingrid Spadinger, Senior Medical Physicist, VC

UBC and BCCA – Fraser Valley Centre, FVC

- Steven Thomas, Senior Medical Physicists, FVC

Teaching Coverage and Expertise

The proposed courses in the UBCO Medical Physics Graduate Program are not new in the sense that they have all been offered at UVic and/or UBCV on an annual basis for a number of consecutive years. Phys 534 (UVic / BCCA Victoria / BCCA CSI), Phys 535 (UBCV / BCCA Vancouver), and Phys 539 (UBCV / BCCA Vancouver) are long-standing courses with a history of delivery dating back to the mid-late 1990's. All three courses have been video linked between the two existing programs for over 10 years. Agreement has been secured from UVic / UBCV / BCCA to enable course sharing of Phys 534, Phys 535, and Phys 539 with UBCO / BCCA CSI, with an understanding that BCCA CSI physicists will contribute to the teaching of these classes. Both Phys 540 and Phys 544, developed at UVic, were introduced into the UVic-VIC delivery stream in 2006 and 2008 respectively, and have been offered annually since their inception. The first joint teaching of Phys 540 and Phys 544 by VIC and CSI was undertaken as a pilot initiative in the Jan – Apr term of 2013. In October of 2013, CSI faculty entered into a course sharing agreement for current and any future medical physics courses delivered

either at VIC or CSI. Phys 545 is a computer based Anatomy and Physiology module course (com/inc) that is to be completed at the student's pace during the summer term. Phys 546 is a Clinical Shadowing course based on a series of shadowing modules within the radiation therapy delivery process. The course has been offered at CSI since 2011.

All courses have been CAMPEP accredited through application reviews to CAMPEP from both the UVic and UBCV Medical Physics programs. Hence, each course has met CAMPEP curriculum requirements and, furthermore, all faculty currently involved in the delivery of the courses are regarded as experts in the field and suitably qualified to teach the material. Nonetheless, as the field of Medical Physics evolves, course content changes and modifications will be required. The next such assessment will occur in early 2014. CSI and UBCO Physics will be integral contributors to this tuning discussion.

Research Expertise

To capitalize on local strengths, the UBCO/CSI Graduate Program in Medical Physics will focus on the following research fields:

- Brachytherapy: Araujo, Batchelar, Hilts, Millet
- Medical Imaging: Bjarnason, Rajapakshe, Yang
- Experimental Radiobiology: Jirasek
- 3D Radiation dosimetry: Hilts, Jirasek
- Mathematical modelling within Epidemiology: Araujo, Rajapakshe
- High-precision radiotherapy (stereotactic): Baillie, Batchelar, Hyde

Funding Opportunities

Funding opportunities exist within the medical physics research envelope. The group has experience and proven success with a number of regional and national funding agencies including:

- BC Cancer Foundation: Baillie, Hilts, Jirasek
- Breast Cancer Foundation: Araujo, Rajapakshe
- NSERC: Jirasek
- CIHR: Jirasek
- CFI: Jirasek

Further student funding opportunities exist within UBCO through Graduate Teaching Assistantships (GTA), University Graduate Fellowships (UGF), and Graduate Dean's Entrance Scholarship (GDES) and externally through national awards (NSERC, MSFHR, and CIHR).

Student Funding

The proposed UBCO Graduate Program in Medical Physics will endeavor to match the guaranteed minimum funding available for M.Sc. and Ph.D. students in the Medical Program at UBCV and UVic. Financial details will be explicitly outlined in the applicant's offer letters.

Potential Collaboration with and Relationship to Other UBCO Programs

- *Mathematics, Statistics, and Computer Science*: The research projects in mathematical modelling, image analysis, brachytherapy, high-precision radiotherapy, and radiation dosimetry are all well aligned with mathematics, statistics, and computer science interests (e.g. mathematical biology, imaging, optimization, and data science). Researchers in Mathematics, Statistics, and Computer Science at UBCO have already engaged in productive collaborations with CSI.
- *Chemistry and Biology*: The Graduate Program in Medical Physics project areas of radiation dosimetry and experimental radiobiology relate to materials development and biological processes within the radiotherapy context. Both areas involved collaborative efforts with chemistry, biology, and engineering expertise.
- *Engineering and the proposed Centre for Biomedical Engineering Research (CBER)*: Medical imaging, brachytherapy, radiation dosimetry, and experimental radiobiology all intersect with engineering interests. Preliminary discussions between UBCO Engineering, Physics, and BCCA-CSI have exposed common interests surrounding the above-mentioned research areas. Furthermore, the proposed Graduate Program in Medical Physics supports common teaching areas with the CBER, centered around medical imaging and medical physics.
- *UBC Southern Medical Program*: Natural synergies involving both training and research are likely to develop between the proposed Graduate Program in Medical Physics and the new medical program in Kelowna.

Fit with UBCO Strategic Research Plan and UBC Place and Promise

The proposed UBCO / CSI Graduate Program in Medical Physics fits well with a number of areas of the UBCO Strategic Research Plan and the wider UBC Place and Promise initiative.

UBCO Strategic Research Plan

- *Health, Culture, and Diversity:* The proposed program involves inherently interdisciplinary research and collaboration and is at the intersection of physics and medicine. Collaborative engagement will include specialty areas of Physics, Computer Science, Mathematics, Statistics, Chemistry, Biology, and Engineering.
- *Innovative Systems, Technologies and Processes:* All research areas within the proposed program support UBCO's plan to develop innovative systems, technologies, and processes to address current issues in healthcare.
- *Create Opportunities for Social Interaction and Research Exchange Collaboration:* The program will create a strong link between UBCO Science and the BCCA-CSI, with larger extension to the wider BCCA radiation oncology community through shared courses and research interests.
- *Collaborate with Communities of Interest:* The proposed program is closely allied with the BCCA-CSI, itself a major health care contributor within the Okanagan region and larger Canadian cancer care community.

UBC Place and Promise

- *Create Exceptional Learning Environment:* The multidisciplinary and multi-institutional teaching structure within the proposed program is a truly unique learning environment that capitalizes on local and provincial expertise in medical physics in order to deliver a comprehensive medical physics curriculum of exceptionally high quality recognized through international accreditation. Moreover, students in the program will have the opportunity to interact with Medical Physics students at UVic and Vancouver, and learn from Medical Physicists actively engaged within the health industry in BC.
- *Research Excellence & Community engagement:* The establishment of a Graduate Program in Medical Physics at the UBC campus in Kelowna will increase research capacity, strengthen our partnership with the provincial BC Cancer agencies, and provide training to meet the growing national and international demand for medical physicists. The research and expertise generated at our campus will impact the development of new technology for diagnosis and treatment of cancer that have the potential to improve the quality of health care services for the local and global community.



Admissions Proposal Form – Okanagan Campus

<p>Faculty/School: IKBSAS Department/Unit: Physics/Unit 5 Faculty/School Approval Date: September 4, 2014 Effective Session: 2015W</p>	<p>Date: 2014.03.01 Contact Person: Andrew Jirasek Phone: 250.807.8812 Email: andrew.jirasek@ubc.ca</p>
<p>Proposed Academic Calendar Entry:</p> <p><u>Medical Physics</u> <u>Degrees Offered: M.Sc., Ph.D.</u></p> <p><u>Program Overview</u></p> <p><u>The Graduate Program in Medical Physics offers students the degrees of Master of Science in Medical Physics and Doctor of Philosophy in Medical Physics. The research interests of the Medical Physics faculty members include radiation physics and medical/molecular imaging as relating to radiation oncology. The program is enhanced through close collaboration with the BC Cancer Agency.</u></p> <p><u>Master of Science (M.Sc.)</u></p> <p><u>Admission Requirements</u></p> <p><u>The M.Sc. program is governed by the regulations of the College of Graduate Studies, including its standards for admission of students.</u></p> <p><u>Students entering the M.Sc. program will normally have a Physics Honours</u></p>	<p>Draft Academic Calendar URL: n/a</p> <p>Present Academic Calendar Entry: n/a</p> <p>Type of Action: Create new program</p> <p>Rationale: Medical Physics is a broad field that can loosely be defined as the application of physics to the diagnosis and treatment of disease. The Graduate Program in Medical Physics will provide research skills for medical physicists and train the next generation of medical physics professionals for subsequent employment within health, education, and industrial sectors.</p> <p>Medical physics programs within Canada are often a joint collaboration between a relatively small number of faculty from a university physics department and a relatively large number of medical physicists at a cancer centre who serve as</p>



degree or equivalent, with at least a B+ (76% or higher) average.

Other Requirements

Applicants from a university outside Canada at which English is not the primary language of instruction must present evidence of competency to pursue studies in the English language prior to being extended an offer of admission. Students can demonstrate English language proficiency with a TOEFL (Test of English as a Foreign Language) minimum score of 600 (paper version) or 100 (internet version); or IELTS (International English Language Testing Service) minimum overall band score of 7.0 (with no other component score less than 6.5); or a MELAB score of at least 84.

Students are encouraged to contact the program coordinator prior to formally applying to discuss their admission.

Program Requirements

In addition to the general academic regulations for graduate students set out in the College of Graduate Studies Academic Regulations Chapter VII, the minimum requirements for the M.Sc. are 33 credits beyond the B.Sc. to include:

- **PHYS 534 (3): Radiotherapy Physics I**
- **PHYS 539 (3): Radiation Dosimetry**
- **PHYS 540 (3): Medical Imaging**
- **PHYS 544 (3): Radiation Biophysics**
- **PHYS 546 (2): Clinical Shadowing**

adjunct faculty. The graduate program in Medical Physics at the University of Victoria (UVic) was offered since 2004 with only one medical physics faculty (Dr. Andrew Jirasek – now at UBC Okanagan).

This program is a joint venture between UBCO Physics, the BC Cancer Agency Centre for the Southern Interior (CSI), and the Interior Health Authority (IHA). It is supported with two tenure-track medical physics appointment in the physics department (A. Jirasek (July 2014), and TBA – start date January 2015), and 9 adjunct faculty from CSI and IHA (C. Araujo, A. Baillie, D. Batchelar, T. Bjarnason, M. Hilts, D. Hyde, M.-P. Milett, R. Rajapakshe, and J. Yang). Additional teaching support will come from the BC Cancer Centers in Vancouver and Victoria.

The proposed course structure and content is designed to provide a comprehensive medical physics curriculum as recommended by the Commission on the Accreditation of Medical Physics Education Programs (CAMPEP - www.campep.org). Similar versions of all of the proposed courses are currently offered to students in Medical Physics programs at UBC Vancouver and the University of Victoria. These courses will be available to student at UBCO through an existing course sharing agreement between UVic, UBC, and BCCA.

The programs at UBC Vancouver and UVic are CAMPEP accredited. To maintain competitiveness, CAMPEP accreditation will be sought as soon as our program is in place. Accreditation, if approved, is reviewed every 5 years.

The medical physics program at UBC Vancouver is the original program in BC. It is currently the only program in BC to



- PHYS 547 (1): Anatomy and Physiology for the Medical Physicist
- PHYS 549 (12): Master's Thesis

A minimum of 6 elective credits, to be approved by the supervisory committee, is also required. These may include graduate courses outside physics or a maximum of 3 credits from advanced undergraduate courses at the 400-level. Students within the radiation oncology theme must take PHYS 535 as part of their elective credits, whereas students within imaging or biophysics-related themes could opt for other courses to satisfy the requirement.

Doctor of Philosophy (Ph.D.)

Admission Requirements

The Ph.D. program is governed by the regulations of the College of Graduate Studies, including its standards for admission of students. Two admission streams are available: 1) Completion of an M.Sc. in Medical Physics or closely related discipline with an average of B+ (76%) average or better in their M.Sc. coursework and thesis, with clear evidence of research ability or potential. 2) Exceptional students may request to be admitted directly to the Ph.D. program after completing 12 course credits within the first year of M.Sc. study with a minimum of 9 credits at the 500-level and a 12-credit average of at least 80% (A-). Clear evidence of research potential and ability must be shown, as determined by the student's supervisory committee and approved by the graduate program advisor.

Other Requirements

have a strong radiation therapy and medical imaging focus. The program at UVic has a unique research link between radiation oncology and cancer biology with research dedicated to improving the accuracy of dose calculation algorithms.

CSI is recognized for their innovative work in the area of brachytherapy, a combination of internationally renowned oncologists and medical physicists, and cutting edge technology. The proposed medical physics program at UBC Okanagan will capitalize on this expertise and offer research programs in brachytherapy, mathematical modeling within epidemiology, high-precision radiotherapy, medical imaging, experimental radiobiology, and 3D radiation dosimetry.



Applicants from a university outside Canada at which English is not the primary language of instruction must present evidence of competency to pursue studies in the English language prior to being extended an offer of admission. Students can demonstrate English language proficiency with a TOEFL (Test of English as a Foreign Language) minimum score of 600 (paper version) or 100 (internet version); or IELTS (International English Language Testing Service) minimum overall band score of 7.0 (with no other component score less than 6.5); or a MELAB score of at least 85.

Students are encouraged to contact the program advisor prior to formally applying to discuss their admission.

Program Requirements

In addition to the general academic regulations for graduate students set out in the College of Graduate Studies Academic Regulations Chapter VII, the minimum requirements for the Ph.D. are:

- 21 credits of coursework beyond the B.Sc.;

Students who do not already have credit for the required master's degree courses for their program or the equivalent graduate-level courses from another university (approved by Graduate Program Coordinator) must take these courses in the Ph.D. program.

Note: coursework that was completed for a master's degree may be counted and credited for the Ph.D. coursework requirement.



- A minimum average of B+ (76%) must be maintained across all course work with no grade below B (72%);
- 0 doctoral dissertation credits (PHYS 649);
- Successful completion of a comprehensive exam, no later than 18 months after initial enrolment into the Ph.D. program (or no later than six months after transfer from the M.Sc. program);
- Successful completion of a proposal defence within the first 18 months of the program (or 6 months if the candidate is undertaking the M.Sc. to Ph.D. transfer);
- Submission of a written research thesis along with an oral defence of the research and doctoral dissertation.

Additional requirements may be established by the student's supervisory committee. For more information regarding the comprehensive examination, proposal defence, and doctoral dissertation please refer to the College of Graduate Studies Academic Regulations in Chapter VII.

For more information, please contact Graduate Studies.



Curriculum Proposal Form

New/Change to Course/Program – Okanagan Campus

Category: 1

<p>Faculty/School: IKBSAS Department/Unit: Physics/Unit 5 Faculty/School Approval Date: September 4, 2014 Effective Session: 2015W Term 1</p>	<p>Date: 2014.02.17 Contact Person: Sylvie Desjardins Phone: 250.807.8767 Email: Sylvie.desjardins@ubc.ca</p>
<p>Proposed Calendar Entry:</p> <p><u>PHYS 534 (3) Radiotherapy Physics I</u></p> <p><u>Principles of dosimetry of ionizing radiation with emphasis on applications to radiotherapy and radiobiology. Covers the basics of linear accelerator design as well as design of X-ray generating apparatus; also provides the basics of electron and photon interactions with media, energy deposition in media, and radiation protection and shielding.</u></p>	<p>Draft Calendar URL: n/a</p> <p>Present Calendar Entry: n/a</p> <p>Type of Action: Add new course</p> <p>Rationale:</p> <p>This course covers the basics of radiation interactions with matter as applied to radiation therapy of cancer.</p> <p>This course forms part of a comprehensive curriculum in graduate-level medical physics. The courses in the graduate program in medical physics will provide a foundational knowledge of medical physics for students planning careers in clinical medical physics and/or academic positions within universities. They are built upon the expertise available within the local community and will provide students with real-world experience in addition to their classroom experience.</p> <p>This course currently exists in the UBC</p>



	<p>Vancouver and University of Victoria Calendar. Medical physicists at the BC Cancer Agency are involved with the design and delivery. The course will be available to student at UBCO through an existing course sharing agreement between UVic, UBC, and BCCA.</p>
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Curriculum Proposal Form

New/Change to Course/Program – Okanagan Campus

Category: 1

<p>Faculty/School: IKBSAS Department/Unit: Physics/Unit 5 Faculty/School Approval Date: September 4, 2014 Effective Session: 2015W Term 1</p>	<p>Date: 2014.02.17 Contact Person: Sylvie Desjardins Phone: 250.807.8767 Email: Sylvie.desjardins@ubc.ca</p>
<p>Proposed Calendar Entry:</p> <p><u>PHYS 535 (3) Radiotherapy Physics II</u></p> <p><u>A continuation of Physics 534. Covers the physics and applied dosimetry of current external and internal irradiation treatment techniques. Photon and electron beam radiation treatment planning. Brachytherapy and special techniques. Errors in radiation therapy. Prerequisites: PHYS 534.</u></p>	<p>Draft Calendar URL: n/a</p> <p>Present Calendar Entry: n/a</p> <p>Type of Action: Add new course</p> <p>Rationale:</p> <p>This course covers the basic principles underlying treatment planning for radiation therapy of cancer.</p> <p>This course forms part of a comprehensive curriculum in graduate-level medical physics. The courses in the graduate program in medical physics will provide a foundational knowledge of medical physics for students planning careers in clinical medical physics and/or academic positions within universities. They are built upon the expertise available within the local community and will provide students with real-world experience in addition to their classroom experience.</p>



	<p>This course currently exists in the UBC Vancouver and University of Victoria Calendar. Medical physicists at the BC Cancer Agency are involved with the design and delivery. The course will be available to student at UBCO through an existing course sharing agreement between UVic, UBC, and BCCA.</p>
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Curriculum Proposal Form

New/Change to Course/Program – Okanagan Campus

Category: 1

<p>Faculty/School: IKBSAS Department/Unit: Physics/Unit 5 Faculty/School Approval Date: Sept. 4, 2014 Effective Session: 2015W Term 1</p>	<p>Date: 2014.02.17 Contact Person: Sylvie Desjardins Phone: 250.807.8767 Email: Sylvie.desjardins@ubc.ca</p>
<p>Proposed Calendar Entry:</p> <p><u>PHYS 539 (3) Radiation Dosimetry</u></p> <p><u>The fundamentals of radiation dosimetry, ionization cavity theories, and radiation dosimetry protocols. A variety of absolute and relative dosimetry techniques are also covered, with hands-on experience provided through a series of lab exercises on medical linear accelerators. Monte Carlo simulation of radiation transport for dosimetry applications is introduced.</u></p>	<p>Draft Calendar URL: n/a</p> <p>Present Calendar Entry: n/a</p> <p>Type of Action: Add new course</p> <p>Rationale:</p> <p>This course provides an in depth understanding of radiation dosimetry theory and measurements.</p> <p>This course forms part of a comprehensive curriculum in graduate-level medical physics. The courses in the graduate program in medical physics will provide a foundational knowledge of medical physics for students planning careers in clinical medical physics and/or academic positions within universities. They are built upon the expertise available within the local community and will provide students with real-world experience in addition to their classroom experience.</p> <p>This course currently exists in the UBC Vancouver and University of Victoria</p>



	<p>Calendar. Medical physicists at the BC Cancer Agency are involved with the design and delivery. The course will be available to student at UBCO through an existing course sharing agreement between UVic, UBC, and BCCA.</p>
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Curriculum Proposal Form

New/Change to Course/Program – Okanagan Campus

Category: 1

<p>Faculty/School: IKBSAS Department/Unit: Physics/Unit 5 Faculty/School Approval Date: September 4, 2014 Effective Session: 2015W Term 1</p>	<p>Date: 2014.02.17 Contact Person: Sylvie Desjardins Phone: 250.807.8767 Email: Sylvie.desjardins@ubc.ca</p>
<p>Proposed Calendar Entry:</p> <p><u>PHYS 540 (3) Medical Imaging</u></p> <p><u>Fundamental theory and application of medical imaging, including radiology, computed tomography, magnetic resonance imaging, ultrasound, and nuclear medicine imaging. Basic principles, image formation and reconstruction, imaging instrumentation and hardware, and current trends of each imaging modality will be given.</u></p>	<p>Draft Calendar URL: n/a</p> <p>Present Calendar Entry: n/a</p> <p>Type of Action: New Program</p> <p>Rationale: This course provides an in depth understanding of the major imaging modalities used in the diagnosis of disease and injury. Students will gain hands-on experience in the operation of CT scanners, ultrasound imaging devices, and basic radiography equipment.</p> <p>This course forms part of a comprehensive curriculum in graduate-level medical physics. The courses in the graduate program in medical physics will provide a foundational knowledge of medical physics for students planning careers in clinical medical physics and/or academic positions within universities. They are built upon the expertise available within the local community and will provide students with</p>



	<p>real-world experience in addition to their classroom experience.</p> <p>Medical physicists at the BC Cancer Agency are involved with the design and delivery. The course will be available to student at UBCO through an existing course sharing agreement between UVic, UBC, and BCCA.</p>
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Curriculum Proposal Form

New/Change to Course/Program – Okanagan Campus

Category: 1

<p>Faculty/School: IKBSAS Department/Unit: Physics/Unit 5 Faculty/School Approval Date: September 4, 2014 Effective Session: 2015W Term 1</p>	<p>Date: 2014.02.17 Contact Person: Sylvie Desjardins Phone: 250.807.8767 Email: Sylvie.desjardins@ubc.ca</p>
<p>Proposed Calendar Entry:</p> <p><u>PHYS 544 (3) Radiation Biophysics</u></p> <p><u>Topics in radiation biophysics including DNA strand breaks, cell survival curves, fractionation and dose rate effects, oxygen effect, relative biological effectiveness, tumour radiobiology, radiation pathology, radiobiological modelling, stochastic and deterministic effects, and molecular techniques in radiobiology.</u></p>	<p>Draft Calendar URL: n/a</p> <p>Present Calendar Entry: n/a</p> <p>Type of Action: Add new course</p> <p>Rationale:</p> <p>This course covers the basic principles underlying treatment planning for radiation therapy of cancer.</p> <p>This course forms part of a comprehensive curriculum in graduate-level medical physics. The courses in the graduate program in medical physics will provide a foundational knowledge of medical physics for students planning careers in clinical medical physics and/or academic positions within universities. They are built upon the expertise available within the local community and will provide students with real-world experience in addition to their classroom experience.</p> <p>Medical physicists at the BC Cancer Agency are involved with the design and delivery. The course will be available to</p>



	<p>student at UBCO through an existing course sharing agreement between UVic, UBC, and BCCA.</p>
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Curriculum Proposal Form

New/Change to Course/Program – Okanagan Campus

Category: 1

<p>Faculty/School: IKBSAS Department/Unit: Physics/Unit 5 Faculty/School Approval Date: September 4, 2014 Effective Session: 2015W Term 1</p>	<p>Date: 2014.02.17 Contact Person: Sylvie Desjardins Phone: 250.807.8767 Email: Sylvie.desjardins@ubc.ca</p>
<p>Proposed Calendar Entry:</p> <p><u>PHYS 546 (2) Clinical Shadowing</u></p> <p><u>Shadowing course designed to give the student some insight into the clinical aspects of the medical physics profession. Under the guidance of a clinical physicist, students progress through a series of clinical areas. Modules illustrate the collaborative nature of the profession and the interaction with other medical professionals. Pass/Fail.</u></p> <p><u>Restricted to graduate students in the Medical Physics program.</u></p>	<p>Draft Calendar URL: n/a</p> <p>Present Calendar Entry: n/a</p> <p>Type of Action: Add new course</p> <p>Rationale:</p> <p>Students will shadow medical physicists through a range of clinical processes to learn expected contributions and responsibilities of the clinical medical physicist working in cancer care.</p> <p>This course forms part of a comprehensive curriculum in graduate-level medical physics. The courses in the graduate program in medical physics will provide a foundational knowledge of medical physics for students planning careers in clinical medical physics and/or academic positions within universities. They are built upon the expertise available within the local community and will provide students with real-world experience in addition to their classroom experience.</p>



	<p>Shadowing will take place at the BCCA Centre for the Southern Interior in Kelowna under the supervision of medical physicists at the BCCA.</p>
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Curriculum Proposal Form

New/Change to Course/Program – Okanagan Campus

Category: 1

Faculty/School: IKBSAS Department/Unit: Physics/Unit 5 Faculty/School Approval Date: September 4, 2014 Effective Session: 2015W Term 1	Date: 2014.02.17 Contact Person: Sylvie Desjardins Phone: 250.807.8767 Email: Sylvie.desjardins@ubc.ca
Proposed Calendar Entry: <u>PHYS 547 (1) Anatomy and Physiology for the Medical Physicist</u> <u>Self-guided computer-based course covering basics of anatomy and physiology. Aimed at students in medical physics who are interested in clinical and/or academic careers that will require interaction with radiation oncologists and other health care professionals. Pass / Fail.</u> <u>Restricted to graduate students in the Medical Physics program.</u>	Draft Calendar URL: n/a Present Calendar Entry: n/a Type of Action: Add new course Rationale: Students will gain a basic understanding of anatomy and physiology, and the associated terminology. This course forms part of a comprehensive curriculum in graduate-level medical physics. The courses in the graduate program in medical physics will provide a foundational knowledge of medical physics for students planning careers in clinical medical physics and/or academic positions within universities. They are built upon the expertise available within the local community and will provide students with real-world experience in addition to their classroom experience. Similar courses are available at U. Victoria (P545) and UBC-V (P545). Credit will not be given for P547 and P545 (UVic) or P545 (UBC-V).



Curriculum Proposal Form New/Change to Course/Program – Okanagan Campus

Category: 1	
Faculty/School: IKBSAS / UBC Okanagan Dept./Unit: Unit 5, Physics Faculty/School Approval Date: September 4, 2014 Effective Session: 2015W	Date: Dec, 12, 2014 Contact Person: Dr. Andrew Jirasek Phone: 250.807.8812 Email: andrew.jirasek@ubc.ca
Type of Action: New Course	
Rationale: Introduction of a MSc program in medical physics, requiring a 12 unit MSc thesis	
Proposed Academic Calendar Entry: <u><i>PHYS 549 (12) Master's Thesis</i></u>	Draft Academic Calendar URL: n/a Present Academic Calendar Entry: n/a



Curriculum Proposal Form New/Change to Course/Program – Okanagan Campus

Category: 1	
Faculty/School: IKBSAS / UBC Okanagan Dept./Unit: Unit 5, Physics Faculty/School Approval Date: September 4, 2014 Effective Session: 2015W	Date: Dec, 12, 2014 Contact Person: Dr. Andrew Jirasek Phone: 250.807.8812 Email: andrew.jirasek@ubc.ca
Type of Action: New Course	
Rationale: Introduction of a PhD program in medical physics.	
Proposed Academic Calendar Entry: <u>PHYS 649 (0) Doctoral Dissertation</u> <u>Pass / Fail.</u>	Draft Academic Calendar URL: n/a Present Academic Calendar Entry: n/a



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February 13, 2015

To: Okanagan Senate

From: Admissions and Awards Committee

Subject: New Awards (approval)

The Admissions and Awards Committee is pleased to recommend the following to Senate:

Motion: That Senate accept the new awards as listed and forward them to the Board of Governors for approval; and that a letter of thanks be sent to the donors.

New awards for consideration:

1. Proposed Award Title: **UBC Okanagan Visual Arts Award**

A \$1,000 award is offered to a third or fourth-year student in the Bachelor of Fine Arts program in the Faculty of Creative and Critical Studies at the University of British Columbia, Okanagan campus. Preference is given to a student who has participated, engaged and sought mentorship from a faculty-invited visiting artist, and whose final project/body of work reflects academic excellence. Students are invited to submit a letter of interest and the award is made on the recommendation of the Faculty in consultation with the Head of Creative Studies. (First award available for the 2014 Winter Session)

2. Proposed Award Title: **Golder Associates Graduate Award in Civil Engineering**

A \$1,000 award is offered by Golder Associates to a graduate student entering first or second year in the College of Graduate Studies at the University of British Columbia, Okanagan campus. Preference is given to a student who has demonstrated academic excellence in Civil Engineering, with a focus on geotechnical engineering. The award is made on the recommendation of the College of Graduate Studies in consultation with the School of Engineering. (First award available for the 2014 Winter Session)

3. Proposed Award Title: **Wilden Creativity Award**

A \$2,500 prize is offered by Wilden to either a student graduating from the Visual Arts program in the Department of Creative Studies or a graduate student enrolled in the Master of Fine Arts program in the Faculty of Creative and Critical Studies at the University of British Columbia, Okanagan campus. Preference is given to a body of work that reflects a powerful message as well as a high level of originality, passion and accomplishment. The award is made on the recommendation of the Faculty of Creative and Critical Studies. (First award available for the 2014 Winter Session)

Respectfully submitted,

Dr. Spiro Yannacopoulos
Chair, Admissions and Awards Committee



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February 13, 2015

To: Okanagan Senate

From: Admissions and Awards Committee

**Subject: Admissions Proposals (approval)(circulated):
Biology MSc and PhD programs;
Revision to ELAS for Okanagan College**

Biology MSc and PhD programs

The Biology admission standard for the TOEFL score as indicated in the Calendar was formerly different than that set by graduate studies; the Biology Department requirements should be at least as high as those dictated by the College of Graduate Studies.

CoGS current requirements: “TOEFL (Test of English as a Foreign Language): minimum score of 550 (paper version); 90 overall with a minimum score of 22 in Reading & Listening and a minimum score of 21 in Writing & Speaking (Internet version).”

The Admissions and Awards Committee is pleased to recommend the following to Senate:

Motion: That Senate approve the changes to admissions requirements of the Biology M.Sc. and Ph.D. programs of the Faculty of Arts & Sciences for entry to the 2015 Winter Session and thereafter.

Revision to English Language Admission Standard (ELAS) for Okanagan College

Okanagan College (OC) has revised its ESL programming. Completion of the program can be used to satisfy the English Language Admission Standard (ELAS) for direct admission to a UBC Okanagan degree program, or admission to a degree program through the English Foundation Program (EFP). The proposed changes will reflect OC’s revised program as approved by the province’s ESL Articulation Committee

The Admissions and Awards Committee is pleased to recommend the following to Senate:

Motion: That Senate approve the admissions proposal to revise the English Language Admission Standard (ELAS) for Okanagan College for entry to the 2015 admissions cycle and thereafter.

Respectfully submitted,

Dr. Spiro Yannacopoulos
Chair, Admissions and Awards Committee



UBC Okanagan Admissions Proposal Form

<p>Faculty/School: IKBSAS Department/Unit: 2 (Biology) Faculty/School Approval Date: September 19, 2014 Effective Session: 2015W</p>	<p>Date: 7 June 2014 Contact Person: Dr. Michael Russello Phone: 250.807.8762 Email: michael.russello@ubc.ca</p>
<p>Proposed Academic Calendar Entry:</p> <p>Admission Requirements</p> <p>[14189] Master of Science (M.Sc.)</p> <p>[14189] The Biology M.Sc. program is governed by the general graduate guidelines of the College of Graduate Studies' policies and procedures, including its standards for admission of students. Applicants to the M.Sc. program are expected to have a B.Sc. in Biology or a related field, with a B+ (76%) average or higher in their third- and fourth-year classes or at least 12 credits in third- and fourth-year classes in their intended field of study with an A- (80%) or higher average. Their background training must be sufficient for advanced work in their chosen field. For non-native speakers of English, minimum acceptable TOEFL scores are 550 (paper version) and 90 overall with a minimum score of 22 in Reading & Listening and a minimum score of 21 in Writing & Speaking (Internet version).</p> <p>[16315] No applicant will be admitted to the program until a member of the Biology Department faculty has agreed to supervise the thesis research; thus, applicants are strongly urged to identify and contact a</p>	<p>Draft Academic Calendar URL: http://www.calendar.ubc.ca/okanagan/proof/edit/index.cfm?tree=18,285,1005,1221</p> <p>Present Academic Calendar Entry: http://www.calendar.ubc.ca/okanagan/index.cfm?tree=18,285,1005,1221</p> <p>Admission Requirements</p> <p>[14189] Master of Science (M.Sc.)</p> <p>[14189] The Biology M.Sc. program is governed by the general graduate guidelines of the College of Graduate Studies' policies and procedures, including its standards for admission of students. Applicants to the M.Sc. program are expected to have a B.Sc. in Biology or a related field, with a B+ (76%) average or higher in their third- and fourth-year classes or at least 12 credits in third- and fourth-year classes in their intended field of study with an A- (80%) or higher average. Their background training must be sufficient for advanced work in their chosen field. For non-native speakers of English, minimum acceptable TOEFL scores are 570 (paper) and 86 (Internet).</p> <p>[16315] No applicant will be admitted to the program until a member of the Biology Department faculty has agreed to supervise the thesis research; thus, applicants are strongly urged to identify and contact a potential research supervisor prior to</p>



potential research supervisor prior to applying.

[14190] In exceptional cases, applicants who do not meet the requirements stated above but who have had significant formal training and relevant professional experience to offset such deficiencies may be granted admission on the recommendation of the Biology Graduate Program Committee and approval of the Dean of the College of Graduate Studies.

[14182] Doctor of Philosophy (Ph.D.)

[14183] The Biology Ph.D. program is governed by the general graduate guidelines of the UBC Okanagan campus College of Graduate Studies' policies and procedures, including its standards for admission of students. Ph.D. applicants will normally have an M.Sc. in Biology or a related field, with a B+ (76%) average or higher in their M.Sc. coursework and thesis. Their background training must be sufficient for advanced work in their chosen field. For non-native speakers of English, minimum acceptable TOEFL scores are 550 (paper version) and 90 overall with a minimum score of 22 in Reading & Listening and a minimum score of 21 in Writing & Speaking (Internet version).

[16316] No applicant will be admitted to the program until a member of the Biology Department faculty has agreed to supervise the thesis research; thus, applicants are strongly urged to identify and contact a potential research supervisor prior to applying.

[14184] In exceptional cases, applicants who do not meet the requirements stated above but who have had significant formal training and relevant professional experience to offset such deficiencies may

applying.

[14190] In exceptional cases, applicants who do not meet the requirements stated above but who have had significant formal training and relevant professional experience to offset such deficiencies may be granted admission on the recommendation of the Biology Graduate Program Committee and approval of the Dean of the College of Graduate Studies.

[14182] Doctor of Philosophy (Ph.D.)

[14183] The Biology Ph.D. program is governed by the general graduate guidelines of the UBC Okanagan campus College of Graduate Studies' policies and procedures, including its standards for admission of students. Ph.D. applicants will normally have an M.Sc. in Biology or a related field, with a B+ (76%) average or higher in their M.Sc. coursework and thesis. Their background training must be sufficient for advanced work in their chosen field. For non-native speakers of English, minimum acceptable TOEFL scores are ~~570~~ (paper) and ~~86~~ (~~Internet~~).

[16316] No applicant will be admitted to the program until a member of the Biology Department faculty has agreed to supervise the thesis research; thus, applicants are strongly urged to identify and contact a potential research supervisor prior to applying.

[14184] In exceptional cases, applicants who do not meet the requirements stated above but who have had significant formal training and relevant professional experience to offset such deficiencies may be granted admission on the recommendation of the Biology Graduate



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<p>be granted admission on the recommendation of the Biology Graduate Program Committee and approval of the Dean of the College of Graduate Studies.</p>	<p>Program Committee and approval of the Dean of the College of Graduate Studies.</p> <p>Type of Action: Increase admission standard</p> <p>Rationale: The Biology admission standard for the internet TOEFL score as indicated in the calendar was formerly higher than that set by graduate studies. That situation was reversed with recent changes instituted by the College of Graduate Studies. This may create confusion. The Biology Department requirements should be at least as high as those dictated by the College of Graduate Studies.</p> <p>CGS current requirements: “TOEFL (Test of English as a Foreign Language): minimum score of 550 (paper version); 90 overall with a minimum score of 22 in Reading & Listening and a minimum score of 21 in Writing & Speaking (Internet version).”</p>
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Admissions Proposal Form Okanagan Campus

<p>Faculty/School: N/A Dept./Unit: Enrolment Services Approval Date: N/A Effective Session: To take effect for the 2015 admission cycle and to be included in the Academic Calendar upon approval.</p>	<p>Date: January 20, 2015 Contact Person: Michelle Davis Phone: 250.807.8835 Email: michelle.davis@ubc.ca</p>
<p>Type of Action: Update the list of English language proficiency tests and programs that can be used to satisfy the English Language Admission Standard (ELAS) to reflect the changes to Okanagan College's ESL program.</p>	
<p>Rationale: Okanagan College (OC) has revised its ESL programming. Completion of the program can be used to satisfy the English Language Admission Standard (ELAS) for direct admission to a UBC Okanagan degree program, or admission to a degree program through the English Foundation Program (EFP). The proposed changes will reflect OC's revised program as approved by the province's ESL Articulation Committee (see http://bccat.ca/pubs/ESL_Articulation_guide%202014-2015_June%2030_2014_Final.pdf).</p>	
<p>Proposed Academic Calendar Entry:</p> <p>Homepage (draft) Admissions English Language Admission Standard English Language Proficiency Tests and Programs</p> <p><i>English Language Proficiency Tests and Programs</i></p> <p>This is a draft edition of the UBC Okanagan Academic Calendar. Please do not distribute this URL, and do not rely on this information for current academic requirements.</p>	<p>Draft Academic Calendar URL: http://www.calendar.ubc.ca/okanagan/proof/edit/index.cfm?tree=2,19,1040,0</p> <p>Present Academic Calendar Entry:</p> <p>Homepage (draft) Admissions English Language Admission Standard English Language Proficiency Tests and Programs</p> <p><i>English Language Proficiency Tests and Programs</i></p> <p>This is a draft edition of the UBC Okanagan Academic Calendar. Please do not distribute this URL, and do not rely on this information for current academic requirements.</p>

**[16023]**

	Test or Program	Minimum Competence Level Required for Undergraduate Admission ¹	Minimum Competence Level Required for English Foundation Program ¹	Minimum Competence Level Required for English Foundation Program ¹
			EAP 103	EAP 104

[...]

OC EA P	<u>Okanagan College English for Academic Purposes</u>	Level <u>4</u> ⁵	Level <u>3</u> ⁶	Level <u>3</u> ⁷
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[...]

⁵ Level 4 requires completion of Okanagan College EAPD 040, EAPW 040, and EAPR 040. UBC requires a grade of 70% or higher in each course to satisfy the English Language Admission Standard.

⁶ An average between 50% and 69% on all Level 3 courses is required.

⁷ A minimum average of 70% on all Level 3 courses is required.

[16023]

	Test or Program	Minimum Competence Level Required for Undergraduate Admission ¹	Minimum Competence Level Required for English Foundation Program ¹	Minimum Competence Level Required for English Foundation Program ¹
			EAP103	EAP104

[...]

O C E S L	<u>Intensive Language Development Program</u>	Level <u>6</u> ⁵	Level <u>5</u> ⁶	Level <u>5</u> ⁷
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[...]

⁵ Level 6 requires completion of Okanagan College ESLE 060, ESLR 062, and ESLW 061. UBC requires a grade of 70% or higher in each course to satisfy the English Language Admission Standard.

⁶ An average between 50% and 69% on all Level 5 courses is required.

⁷ A minimum average of 70% on all Level 5 courses is required.



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February 13, 2015

To: Okanagan Senate
From: Curriculum Committee
Subject: Curriculum Proposals (approval)

The Curriculum Committee has reviewed the material forwarded to it by the Faculties and encloses those proposals it deems ready for approval.

As such, the following is recommended to Senate:

Motion: *That Senate approve the new courses brought forward from the Faculty of Arts and Sciences and the Faculty of Health & Social Development, and that Senate approve the revised degree requirements from the Faculty of Creative and Critical Studies.*

- a. From the Faculty of Arts & Sciences
 - i. ECON 297 (3) Economics of Sports
 - ii. ECON 309 (3) Intermediate Macroeconomics II
 - iii. ECON 320 (3) Introduction of Mathematical Economics
 - iv. ECON 409 (3) Economic Growth Theory
 - v. ECON 427 (3) Econometrics
 - vi. ECON 452 (3) Urban Economics
- b. From the Faculty of Health & Social Development
 - i. HMKN 302 (3) Social and Cultural Issues of Physical Activity
- c. From the Faculty of Creative & Critical Studies
 - i. ENGL degree requirements - revision

For the Committee,

Dr. Peter Arthur
Chair, Curriculum Committee



Curriculum Proposal Form New/Change to Course/Program – Okanagan Campus

Category: 1	
Faculty/School: Arts and Sciences/ IKBSAS Dept./Unit: Economics/Unit 8 Faculty/School Approval Date: January 9, 2015 Effective Session: 2015W	Date: Sep. 5, 2014 Contact Person: Dr. Ross Hickey Phone: 250.807.8653 Email: ross.hickey@ubc.ca
Type of Action: New Course, ECON 297 Economics of Sports	
Rationale: <p>This course offers students a familiar context for learning economics. Many important topics in economics, like the behavior of firms and labor unions; government revenue raising practices; and contract negotiations, can be difficult to grasp for students as they may see those topics as irrelevant to them. This course considers these and other important topics as they can be applied to the world of sports. Studying the behavior of professional sports leagues and professional sport teams allows one to gain insight on the workings of economic theories of the firm and theories of the effects of market structure. Professional sports athletes are often unionized, but negotiate individual contracts. This provides neat examples for the application of economic theories of organized labor and collective and individual bargaining. Frequently governments support profession teams through subsidized arenas. Considering the efficiency, efficacy, and fairness of these policies is a great introduction to public finance.</p> <p>The economics of sports is a great opportunity to introduce students to research. Professional sports leagues make a lot of their data publicly available, making it easy for students to access for assignments and their own research.</p> <p>The economics of sports was offered as a special topics course (ECON391L) in the Winter of 2012 and 2013 with enrollment of, respectively, 36 and 35. It is now proposed for inclusion in the academic calendar as part of the regular rotation of courses offered by the Economics department.</p>	



<p>Proposed Academic Calendar Entry:</p> <p><u>ECON 297 (3) Economics of Sports</u> <u>Application of economic analysis to sports. Credit will not be granted for both ECON 297 and ECON 391 when the subject matter is of similar nature.</u> <u>[3-0-0]</u> <u>Prerequisites: All of ECON 101, ECON 102.</u></p>	<p>Draft Academic Calendar URL: N/A</p> <p>Present Academic Calendar Entry: N/A</p>
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Curriculum Proposal Form New/Change to Course/Program – Okanagan Campus

Category: 1	
Faculty/School: Arts and Sciences/ IKBSAS Dept./Unit: Economics/Unit 8 Faculty/School Approval Date: January 9, 2015 Effective Session: 2015W	Date: Sep. 5, 2014 Contact Person: Dr. Ross Hickey Phone: 250.807.8653 Email: ross.hickey@ubc.ca
Type of Action: New Course, ECON 309 Intermediate Macroeconomics II	
Rationale: <p>Economics is typically divided into three major fields of inquiry: microeconomics, econometrics, and macroeconomics. Our current course offerings do not provide students with the same breadth and technical contents in macroeconomics as is offered in microeconomics at the third and fourth year levels. In the microeconomics sequence for the BA Major in Economics students must take at least one “upper-level microeconomic course” of ECON 308, 386, or 401 (Intermediate Micro Economics II; Industrial Organization; Applied Microeconomic Analysis) and at least one “upper-level macroeconomics course” of ECON 345, 356 or 402 (Money and Banking; International Finance; Applied Macroeconomic Analysis). While all of microeconomic courses have calculus prerequisite, neither ECON345 nor 356 has such prerequisites. Moreover, economic growth and economic fluctuation, the major fields of macroeconomics, have not been covered in those courses.</p> <p>Adding the proposed course to the current list of upper-level macroeconomic courses will strengthen the program by providing students in the Economics Major with comprehensive coverage of modern macroeconomics with solid technical content.</p>	
Proposed Academic Calendar Entry: <u>ECON 309 (3) Intermediate Macroeconomics II</u> <u>Intermediate Macroeconomic theory and empirics. Macroeconomic fundamentals in the short and long run, monetary theory, open economy macroeconomics, financial markets, and sovereign debt.</u> <u>[3-0-0]</u> <u>Prerequisites: All of ECON 204, ECON 205</u>	Draft Academic Calendar URL: N/A Present Academic Calendar Entry: N/A



Curriculum Proposal Form New/Change to Course/Program – Okanagan Campus

Category: 1	
Faculty/School: Arts and Sciences/ IKBSAS Dept./Unit: Economics/Unit 8 Faculty/School Approval Date: January 9, 2015 Effective Session: 2015W	Date: Sep. 5, 2014 Contact Person: Dr. Ross Hickey Phone: 250.807.8653 Email: ross.hickey@ubc.ca
Type of Action: New Course, ECON320 Mathematical Economics	
Rationale: <p>This course will introduce students to the application of mathematics to economic analysis.</p> <p>Mathematics is increasingly becoming the language of economics. As such, a mathematical economics course is included in most undergraduate economics programs, including one offered by UBCV. Mastering mathematical techniques is essential for students to fully understand the mainstream of economics theory. It is part of the necessary skill set for those students pursuing graduate work in economics. This course also is an ideal introduction to a greater depth of economic analysis for students with a high mathematical aptitude and an interest in economics.</p> <p>As competition for entry into graduate programs in economics has intensified, a stronger training in quantitative methods and mathematics serves as an important signal of quality to graduate acceptance committees. Adding this course to the existing program can assist Economics majors in attaining admission to graduate programs.</p> <p>The mathematical economics was offered as a special topics course (ECON391J) in the Winter of 2011. It is now proposed for inclusion in the academic calendar as part of the regular rotation of courses offered by the Economics department.</p>	
Proposed Academic Calendar Entry: <u>ECON 320 (3) Introduction to Mathematical Economics</u> <u>Application of single and multivariable calculus to economics. Includes comparative static analysis of household and firm behaviour as well as simple dynamic models. Credit will not be granted for both ECON 320 and ECON 391 when the subject matter is of similar nature. [3-0-0]</u> <u>Prerequisites: All of ECON 101, ECON 102, and one of MATH 101, MATH 142</u>	Draft Academic Calendar URL: N/A Present Academic Calendar Entry: N/A



Curriculum Proposal Form New/Change to Course/Program – Okanagan Campus

Category: 1	
Faculty/School: Arts and Sciences/ IKBSAS Dept./Unit: Economics/Unit 8 Faculty/School Approval Date: January 9, 2015 Effective Session: 2015W	Date: October. 7, 2014 Contact Person: Dr. Kenneth I. Carlaw Phone: 250.807.9264 Email: kenneth.carlaw@ubc.ca
Type of Action: New Course, ECON 409 Economic Growth Theory	
Rationale: <p>This course offers students an opportunity to study one of the most important advanced topics (economic growth) in macroeconomics. It integrates current theories of economic growth with empirical evidence and critically evaluates their validity. This exercise is fundamental to understanding economic policies formulated by governments or actions taken by such NGOs as the United Nations and the Organization for Economic Cooperation and Development (OECD) with respect to such things as economic growth, productivity and long term employment strategies. The course will also enable students to generate interesting research questions in the field of economic growth. Such research could form the foundations of future graduate research.</p> <p>The proposed course is an important addition to the current stream of macroeconomics courses. Focusing on economic growth theory, this course introduces students to a formal approach to study and compare competing theories under the unified framework. Such exposure is beneficial for those students who wish to pursue a graduate degree.</p> <p>The economic growth theory is offered as a special topics course (ECON 491B) in Term 2 of 2014W. This course will become a key course in the planned honours program currently being developed by the economics program. As such, we propose it to be listed in the academic calendar as part the economics course offerings.</p>	



<p>Proposed Academic Calendar Entry:</p> <p><u>ECON 409 (3) Economic Growth Theory</u></p> <p><u>Advanced topics in economic growth theory and their applications to Real Business Cycle theory. Topics include exogenous and endogenous growth theory, Neoclassical and New Classical growth theory. Credits will not be granted for both ECON 409 and ECON 491 when the subject matter is of similar nature. [3-0-0]</u></p> <p><u>Prerequisites: All of ECON 204, ECON 205, one of MATH 100, MATH 116, and third-year standing.</u></p>	<p>Draft Academic Calendar URL: N/A</p> <p>Present Academic Calendar Entry: N/A</p>
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Curriculum Proposal Form New/Change to Course/Program – Okanagan Campus

Category: 1	
Faculty/School: Arts and Sciences/ IKBSAS Dept./Unit: Economics/Unit 8 Faculty/School Approval Date: January 9, 2015 Effective Session: 2015W	Date: August 27, 2014 Contact Person: Dr. Mohsen Javdani Phone: 250.807.9152 Email: mohsen.javdani@ubc.ca
Type of Action: New Course, ECON 427 Econometrics	
Rationale: <p>Econometrics is one of the three core areas of study in economics (the other two being microeconomics and macroeconomics). There are two 400-level economic theory courses, one in microeconomics (<i>i.e.</i>, ECON 401) and the other in macroeconomics (<i>i.e.</i>, ECON 402), in the economics program. But there is no advanced econometrics course. The proposed course will fill this gap.</p> <p>Currently we are offering two courses in econometrics (ECON 327: Introduction to Empirical Economics, and ECON 328: Methods of Empirical Research). There is much more to the growing field of econometrics than can be covered in two courses. Adding an advanced econometrics course satisfies the need of those students who wish to pursue a graduate degree and/or to acquire skills and knowledge of working with data.</p> <p>The advanced econometrics course has been offered as a special topics course (ECON 491B) since the 2013W. This course will become a key course in the planned honours program currently being developed by the economics program. As such, we propose it to be listed in the academic calendar as part the economics course offerings.</p>	
Proposed Academic Calendar Entry: <u>ECON 427 (3) Econometrics.</u> <u>Advanced treatment of estimation, inference, and econometric problems and techniques with focus on both theoretical and applied methods and with application to a variety of economic models. Credit will not be granted for both ECON 427 and ECON 491 when the subject matter is of similar nature.</u> <u>[3-0-0]</u> <u>Prerequisites: ECON 328, or 3 credits of ECON and 3 credits of upper-level STAT.</u>	Draft Academic Calendar URL: N/A Present Academic Calendar Entry: N/A



Curriculum Proposal Form New/Change to Course/Program – Okanagan Campus

Category: 1	
Faculty/School: Arts and Sciences/ IKBSAS Dept./Unit: Economics/Unit 8 Faculty/School Approval Date: January 9, 2015 Effective Session: 2015W	Date: Sep. 5, 2014 Contact Person: Dr. Ross Hickey Phone: 250.807.8653 Email: ross.hickey@ubc.ca
Type of Action: New Course, ECON 452 Urban Economics	
Rationale: <p>Urban Economics is an ideal field of inquiry for an advanced economics course at UBC Okanagan. While much of the Okanagan has rapidly urbanized, some communities have stagnated, or even shrunk. Also, the study of Urban Economics fits into UBC's vision of Place and Promise as urbanization is a global trend that has had an enormous effect on economic development.</p> <p>The proposed course is an important addition to the current Economics program as there is no advanced course in the program that requires both a microeconomic theory course (<i>i.e.</i>, ECON 308 and 386) and an econometrics course (<i>i.e.</i>, ECON 327 and 328) as part of the prerequisites. As a result, students have a very limited opportunity to combine their knowledge of microeconomic theories and empirical methods to learn how to conduct empirical research in a field of applied microeconomics and what challenges a researcher faces in the process. Such exposure is essential for those students who wish to pursue a graduate degree in economics. Moreover the field of Urban Economics provides students with an ideal platform to apply an economic theory to conduct empirical research in an environment where a rapid urbanization is taking place.</p> <p>Microeconomics is one of the three core areas of study in economics. This course is the only applied microeconomics course at the advanced level in the economics programs. Hence, it will become a key course in the planned honours program currently being developed by the economics program.</p>	



<p>Proposed Academic Calendar Entry:</p> <p><u>ECON 452 (3) Urban Economics</u></p> <p><u>Economic analysis of urban economies and urban problems. Agglomeration economies, public goods, taxation, local political economy, housing, and development. [3-0-0]</u></p> <p><u>Prerequisites: ECON 328 and one of ECON 308, ECON 386.</u></p>	<p>Draft Academic Calendar URL: N/A</p> <p>Present Academic Calendar Entry: N/A</p>
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Curriculum Proposal Form New Course – Okanagan Campus

Category: 1

<p>Faculty: Health and Social Development Department/Unit: School of Health and Exercise Sciences Faculty/School Approval Date: Feb 14, 2014</p>	<p>Date: Feb 2014 Contact Person: Dr. Paul van Donkelaar Phone: 250.807.8858 Email: paul.vandonkelaar@ubc.ca</p>
<p>Proposed Academic Calendar Entry:</p> <p><u>HMKN 302 (3) Social and Cultural Issues of Physical Activity</u></p> <p><u>Social-cultural issues, principles, and controversies surrounding physical activity at the individual, community and population level and across the life-span in Canada. [3-0-0]</u></p> <p><u>Prerequisite: HMKN 100, HMKN 105, HEAL 200</u></p>	<p>Draft Academic Calendar URL: http://www.calendar.ubc.ca/okanagan/proof/edit/courses.cfm?go=name&code=HMKN</p> <p>Present Academic Calendar Entry: N/A</p> <p>Type of Action: New course.</p> <p>Rationale: This course covers important topics that add to the curriculum of the B.H.K. degree. We previously offered a socio-cultural course in the first year of the program, but the complexity of the topic lends itself better to a third year course. The course is also a good fit for our degree, especially in light of eliminating some of the Health Studies courses.</p>



Curriculum Proposal Form New/Change to Course/Program – Okanagan Campus

Category: 1	
Faculty/School: FCCS Dept./Unit: Critical Studies Faculty/School Approval Date: 28 February 2014 Effective Session: 2015S	Date: October 3, 2014 Contact Person: Dr. Lisa Grekul Phone: 250.807.9282 Email: Lisa.Grekul@ubc.ca
Type of Action: Revision to Program	
Rationale: This past spring (May 2014), Senate approved a major English program revision aimed at laddering our students from 300- to 400-level courses so as to improve student experience and student success. Students move from more general 300-level to more specific and demanding 400-level courses. The changing of the language in the English Major [12513] to reflect this change was simply overlooked.	
Proposed Academic Calendar Entry: [12506] Major in English [12510] 300- and 400-Level Requirements [12513] To enrol in 300-level courses, students must have completed a 3-credit, 200-level English course, <u>and have 3rd year standing. To enrol in 400-level courses, students must have completed 9 credits of 300-level English.</u>	Draft Academic Calendar URL: http://www.calendar.ubc.ca/okanagan/pr_oof/edit/index.cfm?tree=18,283,902,1092 Present Academic Calendar Entry: [12506] Major in English [12510] 300- and 400-Level Requirements [12513] To enrol in 300- or 400-level courses, students must have completed a 3-credit, 200-level English course.



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Office of the Provost & Vice Principal

MEMORANDUM

Date: February 10, 2015
To: Okanagan Senate
From: Cynthia Mathieson, Provost and Vice Principal
Re: Report of the Okanagan Library

I am pleased to provide for information the attached report from the Okanagan Library. This report details the activities of the Okanagan Library for the 2013-2014 period.



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OKANAGAN LIBRARY REPORT TO SENATE 2013-2014

Heather Berringer
Chief Librarian
UBC Okanagan

The UBC Okanagan Library currently has five strategic directions, guided by both the UBC and UBC Library system strategic plans. These five strategic directions are:

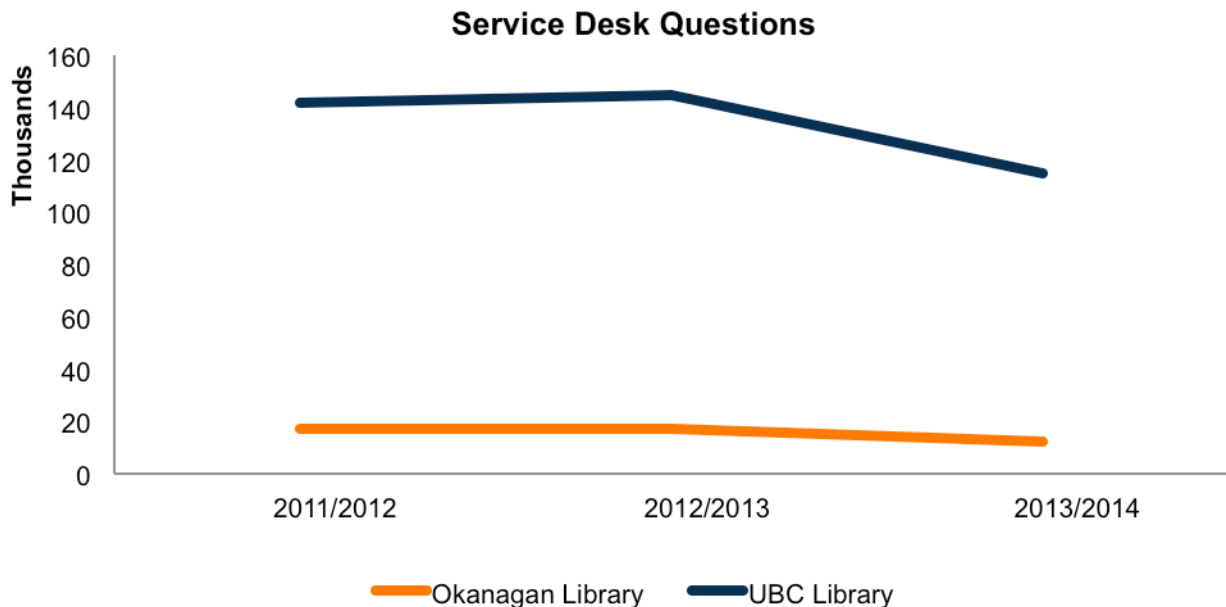
1. Strive to enable student success
2. Embrace multiple forms of scholarship and literacies
3. Participate in campus leadership and partnerships
4. Create dynamic learning and research spaces
5. Provide an exceptional workplace

What follows is an overview of the Library's progress over the past year in each of these areas.

Strive to Enable Student Success

Implementation of a revised public service model

The Okanagan Library service desk is open at all hours the Library is open¹; at this service point, Library staff handle over **12,000** questions each year. A librarian remains on-call to provide advanced research assistance between the hours of 10:00am and 5:00pm; in addition, all librarians are available by appointment, and maintain flexible arrangements to accommodate the varied student and faculty schedules that exist on our campus. In 2013-14, librarians conducted nearly 1,000 individual research consultations.



In 2012, separate circulation and reference points were merged into a single service point able to field questions about and provide access to all library services. This move to amalgamate services represented a significant change: staffing models, job responsibilities, and position

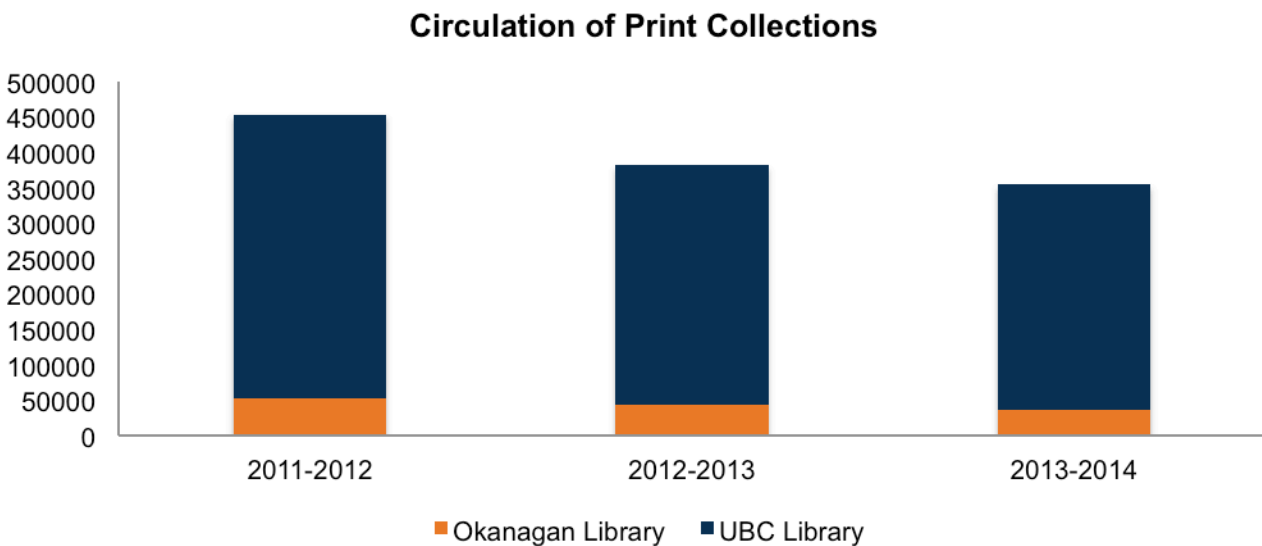
¹ The unique exception is midnight to 2:00am during extended exam study hours, during which time only the Library building remains open.

descriptions were modified for many employees. The development and delivery of a comprehensive staff training program over the past year was essential, and has been highly successful.

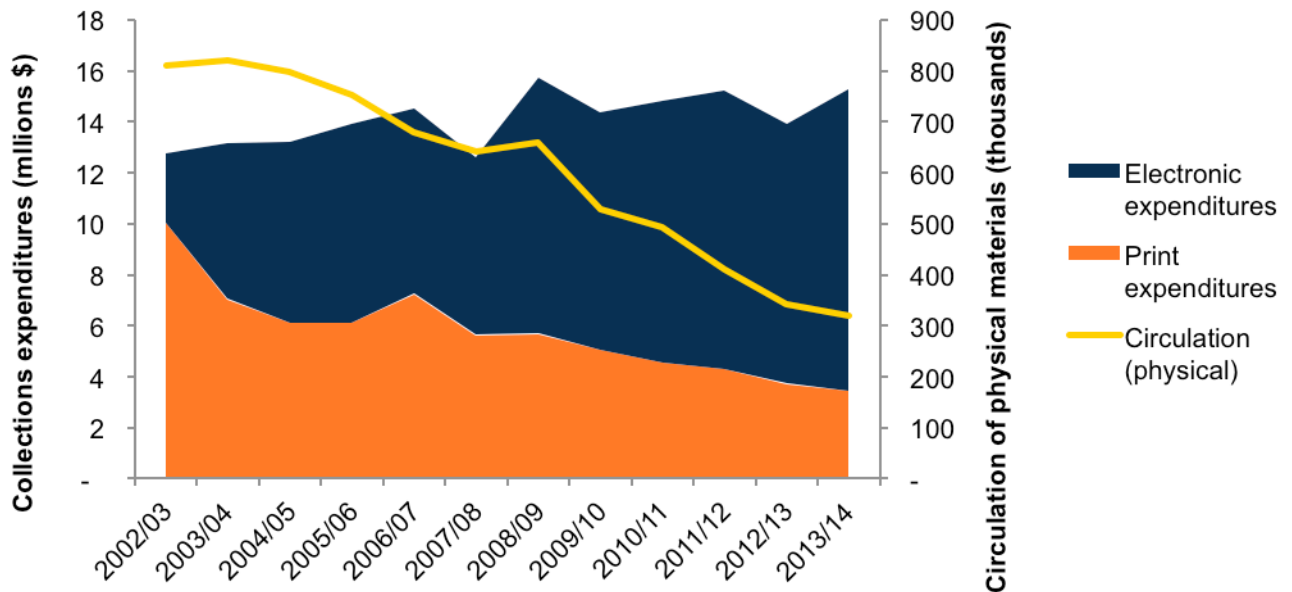
A program assessment began in mid-2013 with an internal assessment of staff competencies; in Winter 2015, the Library is planning an external assessment to determine user satisfaction with the current service model. A benchmark for user satisfaction was established in February 2013, both with the Library's triennial survey and a series of focus groups that specifically examined service provision at the newly configured desk.

Improved access to resources through "just-in-time" collections

The UBC Okanagan Library print and audio-visual collection has the third highest circulation in the UBC Library system with close to **37,000** transactions annually. In 2013-14, the Okanagan Library borrowed just over 6,550 unique items from Vancouver libraries; in turn, the Vancouver campus borrowed 5,550 from us. The UBC Okanagan Library's physical collection is a robust, active working collection of approximately 209,000 volumes, with reliance on Vancouver primarily for access to multiple copies and deep research collections. Current average turnaround time for print materials ordered from Vancouver is approximately 3-4 working days. We continue to explore ways this timeline could be improved.



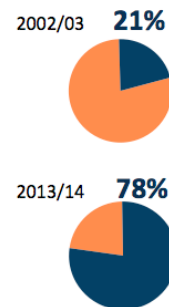
UBC Library Collections Expenditures & Circulation of Physical Items, 2003-2014



Today, 78% of UBC Library collections funds are spent on licensing or acquiring electronic resources, which reflects the importance of online learning and research. Loans of physical materials continue to decline while use of electronic content grows, underlining a shift in usage patterns that has been underway for more than a decade.

Across both campuses, UBC Library has adopted an e-preferred purchasing policy, which provides increased online access to materials to both campuses; UBC’s electronic collection contains well over two million items.

% of total expenditures for electronic resources



Embrace Multiple Forms of Scholarship and Literacies

Development of programming to support multiple literacies

This year, librarians taught over **180** instructional sessions, many of which were integrated directly into course content. There have also been successful efforts to scaffold information literacy instruction into the curriculum of cohort programs such as Engineering, Management, and the Southern Medical Program.

Ideally, we would like to find better ways of integrating information literacy into the classroom, especially in non-cohort programs. We continue to see students in later years of their programs lacking in basic research skills and hope to find effective ways to partner with faculty to improve this situation.

Creation of Writing and Research Services Unit

Recognizing that the development of effective writing skills is a critical part of conducting and disseminating research throughout a student's academic career has led to the proposed amalgamation of a suite of services within the framework of the Library to support scholarly communications.

The new Writing and Research Services unit will provide access to a collection of services physically located in the Library building, including:

- graduate and senior undergraduate student support, both peer and professional, for writing, publishing, and scholarly communication;
- undergraduate writing support, provided using a peer-support model; and
- enhanced, subject-based student research assistance and support for Copyright and cIRcle (the UBC institutional repository), provided by UBC Okanagan librarians

This unit, which is scheduled to open in September 2014, will be managed by a new Scholarly Communication Librarian and located in repurposed Library staff space to avoid impacting existing student study spaces. Its philosophy is centred on the belief that becoming a successful researcher is a process that must be supported and encouraged at all stages of development.

Identification, development, and growth of specialized and local collections

In September 2012, the UBC Okanagan Library received funding that enabled the hire of a co-op student from UBC's School of Library, Archival, and Information Studies to devote focused attention to the development of our special collections. As part of his placement, this student worked with librarians to develop a draft collections policy identifying what materials might belong in a regional *Okanagan* special collection – including determining what geographically constitutes the "Okanagan Valley".

Once this was in place, the student analyzed existing holdings in both Okanagan and Vancouver collections that met the mandate of this collection policy, and began to identify additional publications by Okanagan authors or relating to the Okanagan Valley that could be considered for acquisition. In addition, the Library consulted with colleagues from other institutions, including Okanagan College, University of Northern British Columbia, Thompson Rivers University, and Selkirk College to consider collaborative and complementary collection development for regional materials.

In conjunction with these efforts, discussions were ongoing with Vancouver colleagues in Rare Books and Special Collections about the project; they were in full agreement that the Okanagan was the appropriate place to house UBC collections related to our region. The transfer of those collections from the Vancouver campus to the Kelowna campus solidified a system-wide partnership to the benefit of our community and its research needs.

In December 2013, the Vancouver Foundation supported the special collections initiative by funding the renovation of a small reading room to create a fitting home for the regional materials. This new space is slated to open in November 2014.

In June 2014, the UBC Okanagan Library accepted its first archival collection, the Simpson Family Collection, which documents, among other things, the history of the sawmill industry in Kelowna. We hope that this collection will be described, organized, and digitized over the course of the next eighteen months so that it can be made fully available to researchers.

Participate in Campus Leadership and Partnerships

In September 2013, the UBC Okanagan Library launched its “Literally” campaign to raise awareness of library services. This campaign quickly evolved into the *#MoreLibrary* campaign, discussed further in the section of this report that addresses the creation of dynamic learning and research spaces.

Over the course of the past year, the Library welcomed many guests from the Vancouver campus in order to discuss system issues and provide opportunities for concentrated, in-person work with counterparts from Point Grey. These have been extremely successful in building cross-campus relationships and leading conversations about shared services and efficiencies.

UBC Okanagan Library partnerships within region

On October 31, 2013, an official memorandum of understanding between UBC Okanagan and Okanagan College (OC) was signed to formalize the onsite reciprocal borrowing agreement. With this agreement in force, students, faculty and staff can use an existing institutional identification card to borrow from the partner institution (i.e.: UBC students, faculty and staff can use a UBC card to borrow from OC libraries, and OC students, faculty and staff can use an OC card to borrow from UBC libraries). While borrowing between campuses has been taking place for many years, it is hoped that the “one-card” model will facilitate the process.

In February 2013, the Library’s Leader in Residence Program brought a significant Canadian library leader to our campus. Ernie Ingles, Vice-Provost and Director of University of Alberta’s School of Library and Information Studies spent several days at UBC Okanagan and participated in a wide variety of activities, including a public lecture discussing the future of academic libraries. Participants were in attendance from many partner institutions including Thompson Rivers University, Thompson-Nicola Regional District Libraries, Okanagan College, Okanagan Regional Library, Kelowna Museums, Westbank First Nations, and Penticton Public Library.

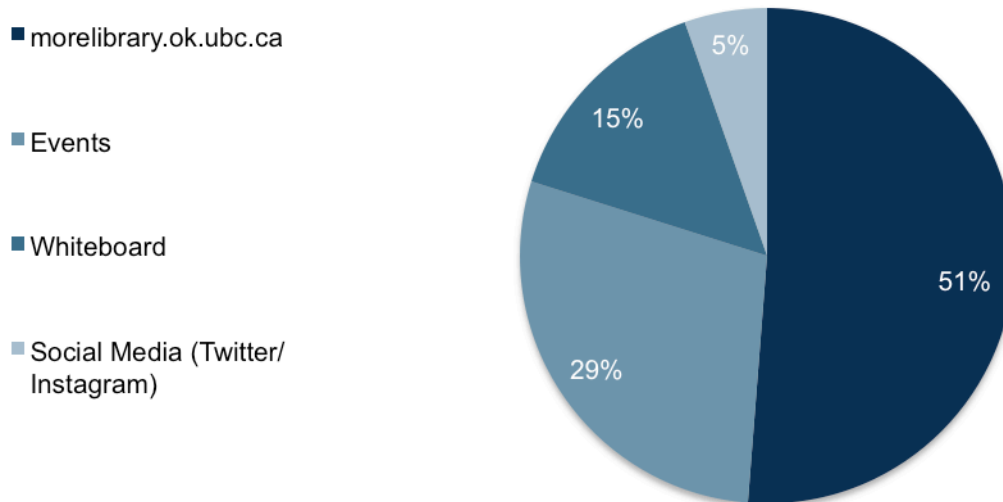
Over the past year, the Library has been working to prepare its October 2014 program, which will feature Margaret Haines, University Librarian at Carleton University. As Carleton has just completed a major library expansion, we hope that the experience she has to share will be of interest to many on our campus.

Create Dynamic Learning and Research Spaces

For many years, the UBC Okanagan Library has had limited success in realizing the “Learning Commons” concept on this campus. While the Library benefits from successful partnerships with many campus groups, the fundamental lack of space to mount programming and bring these partners into the Library has complicated delivery on a true “Learning Commons”. One of the most successful initiatives in this area was the 2013 operationalization of the Learning and Technology Assistant (LTA) program, which employs students to provide technical and Connect support to students from our main Library service point.

In 2013, the Library refocused its vision and launched the *#MORELIBRARY* campaign in an effort to learn from students, faculty, staff, and community users what more the Library could do to improve engagement with its services, collections, and spaces. As of June 2014, over 600 students had participated in *#MORELIBRARY* through the library website, events, graffiti whiteboard, and social media.

Method of participation in #MORELIBRARY



This directed consultation effort led to greater understanding of perceptions of the Library, and attempted to respond to suggestions and concerns in a proactive and timely way. Under the auspices of this campaign, and based on campus feedback, several initiatives were undertaken this year:

Research and Strategy

A Library team assembled a 26-page report on trends in learning centre and library development, available at <http://morelibrary.ok.ubc.ca>. Librarians are now developing use cases to help determine the specific kinds of spaces that would be most useful to the work of UBC Okanagan faculty and students.

Space Enhancements

An additional study room was added to the existing inventory, and the VHS video collection was relocated to increase seating on the second floor. 128 seats were added in 2013-14, representing an increase of 20%. Signage was also added, reminding users to be thoughtful about noise levels, particularly in areas designated for quiet study.

Technology Enhancements

The software on Library computers was updated to significantly reduce login times, and 15 laptops were added to the technology lending program. Improvement of electrical capacity is underway in order to provide working outlets at the majority of Library study carrels.

Furniture Enhancements

In 2013, new study carrels and chairs were added to the Library's second floor quiet study areas, and additional tables and chairs were installed in the East Reading Room to improve silent study space. In addition, new tables and chairs for group work, as well as new study carrels, were added to the Library's main floor, whiteboards were installed in all study rooms, and approximately 25 portable tables of different heights were provided for use with soft seating options.

In the absence of ideal physical spaces, the Library has undertaken a significant website redesign, providing users with a new virtual front door. The new Library website is scheduled for launch in early July 2014.

Provide an Exceptional Workplace

Over the past year, the Library has undergone a period of significant change, with the introduction of a new Chief Librarian, Deputy Chief Librarian, and several new staff members. As a result, there has been significant focus on realigning internal processes, including:

- development of a new internal communications plan;
- design of a professional development framework;
- collective restructuring of librarian portfolios; and
- creation of shared aspirational values for the organization.

Significant progress was made toward each of these goals in 2013-14.



6 February 2015

To: Senate
From: Kate Ross, Associate Vice-President Enrolment Services & Registrar
Re: 2015/2016 Academic Year

The 2015/16 Academic Year is available for your review
at: <http://www.calendar.ubc.ca/okanagan/proof/edit/academicyear.cfm?page=2015&view=all>

Key dates for the 2015/16 Winter Session are as follows:

Term 1

Tuesday, 8 September 2015	Term 1 begins
Thursday 12 November 2015	Midterm Break
Friday, 4 December 2015	Last day of Term 1 classes
Monday, 7 December 2015	First day of exams for Term 1
Tuesday, 22 December 2015	Last day of exams for Term 1

Number of Teaching Days 60

Term 2

Monday, 4 January 2016	Term 2 begins
9-12 February 2016	Midterm Break
Friday, 8 April 2016	Last day of Term 2 classes
Wednesday, 13 April 2016	First day of exams for Term 2
Wednesday, 27 April 2016	Last day of exams for Term 2

Number of Teaching Days 63

Draft term and examination dates for academic years up to and including 2020/21 may be viewed here: <http://senate.ubc.ca/okanagan/termdates>