THE UNIVERSITY OF BRITISH COLUMBIA
Office of the Senate
Brock Hall | 2016 - 1874 East Mall
Vancouver, BC V6T 1Z1

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Okanagan Senate

THE SECOND REGULAR MEETING OF THE OKANAGAN SENATE FOR THE 2017/2018 ACADEMIC YEAR

THURSDAY, 26 OCTOBER 2017

3:30 P.M. | ASC 130

1. Call to Order – Dr Santa J. Ono (information)

2. Senate Membership – Dr Kate Ross (information)

   Senate Nominating Committee Membership

   As a result of the call for nominations issue at the last meeting, Ms Hillary Tjioe has been acclaimed as elected to the Senate Nominating Committee until 31 March 2018 and thereafter until replaced.

3. Minutes of the Meeting of 28 September 2017 – Dr Santa J. Ono (approval) (docket pages 3-15)

4. Business Arising from the Minutes – Dr Santa J. Ono

   Policy 22 – Mr Christopher Eaton (information) (docket pages 16-17)

5. Remarks from the Chair and Related Questions – Dr Santa J. Ono (information)

6. Remarks from the Deputy Vice-Chancellor and Related Questions - Dr Deborah Buszard (information)

7. Discussion on Strategic Plan – Dr Deborah Buszard

   Senators are asked to prepare for this discussion by reviewing the information available at https://president.ubc.ca/strategic-initiatives/creating-our-strategic-plan/

8. Joint Report of the Curriculum & Admissions Committee – Dr Peter Arthur
   a. Master of Data Science (approval) (docket pages 18-64)

   b. Revisions to the Interdisciplinary Graduate Studies Program (approval) (docket pages 18-19, 65-109)

9. Academic Policy Committee – Dr Jan Cioe

    a. Revisions to Policy 0-4: Governance of the College of Graduate Studies (approval) (docket pages 110-123)

    b. Revisions to the Faculty of Arts & Sciences Faculty Council Terms of Reference (approval) (docket pages 124-134)

    c. Establishment of Departments in the Faculty of Arts & Sciences (approval)(docket pages 135-137)

10. Admission & Awards Committee – Dr Marianne Legault

    Changes to Undergraduate Admissions (approval) (docket page 138-172)

11. Curriculum Committee – Dr Peter Arthur

    New Minor in Computer Science in the Bachelor of Management (approval) (docket pages 173-175)

12. Nominating Committee – Dr Jannik Eikenaar

    a. Amendments to Policy 18 (approval) (docket pages 176-177)

    b. Committee Appointments (approval) (docket pages 177-178)

13. Report from the Provost – Dr Cynthia Mathieson

    Bachelor of Arts Review (Information)

14. Other Business

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OKANAGAN SENATE

MINUTES OF 28 SEPTEMBER 2017

DRAFT

Attendance

Present: Dr D. Buszard (Vice-Chair), Mr C. Eaton (Secretary), Mr A. Aghshahi, Dr P. Barber, Ms H. Barringer, Mr M.Campbell, Dr D. Carter, Dr J. Cioe, Ms K. DesRoches, Ms T. Ebl, Dr J. Eikenaar, Dean B. Frank, Dean M. Grant, Ms M. Harper, Dr M. Hoorfar, Dr J Jakobi, Mr D. Kandie, Dr R. Lawrence, Mr K. Lee, Ms E. Lewis, Ms K. Lu, Dr J. Loeppky, Dr Y. Lucet, Ms M. Ly, Mr B. MacKenzie-Dale, Dr B. Marcolin, Dr C. Mathieson, Dr S. McNeil, Ms K. Morgan, Dr S. O'Leary, Dr F. Pena, Dr D. Roberts, Dean R. Sugden, Acting Dean E. Taylor, Dean W. Tettey, Ms H. Tjioe, Ms J. Tom, Dean B. Traister, Dr P. Wylie

Regrets: Dr P. Arthur, Dr R. Campbell, Dr J. Corbett, Mr I. Cull, Chancellor L. Gordon, Dr J. Gustar, Ms G. Hardy-Legault, Dr J. Hossain, Dr J. Johnson, Dr R. Lalonde, Dr S. Lawrence, Dr M. Legault, Dean *Pro Tem.* J. Olson, Dr M. Reekie, Dr G. Wtterstrand,

Via video: Dr S. Ono (President)

Clerk: Mr C. Eaton

Call to Order

The Vice-Chair of Senate, Dr Deborah Buszard, called the first regular meeting of the Okanagan Senate for the 2017-2018 Academic Year and the 2017-2020 triennium to order at 3:32 pm

Senate Membership

2017-2020 SENATE

The Acting Registrar introduced the 2017-2020 Okanagan Senate:

EX OFFICIO

- Chancellor (Mr. Lindsay Gordon)
- President (Prof. Santa J. Ono)
- Academic Vice-President (Prof. Deborah Buszard)
- University Librarian or Designate (Ms. Heather Berringer)
- Director of Continuing Education or Designate (Mr. Ian Cull)

ADDED TO THE SENATE UNDER SECTION 35.1(3)(J) OF THE UNIVERSITY ACT

• Dean of the College of Graduate Studies (Dr. Miriam Grant)
• Provost, Okanagan (Dr. Cynthia Mathieson)
• Vice-Principal, Research (Dr. Philip Barker)

DEANS OF FACULTIES
• Dr. James Olson (Dean *pro tem*.) Applied Science
• Dr. Wisdom Tettey, Arts and Sciences
• Dr. Bryce Traister, Creative and Critical Studies
• Dr. Blye Frank (Dean *pro tem*.), Education
• Dr. Edward Taylor (Acting Dean), Health and Social Development
• Dr. Roger Sugden, Management

REPRESENTATIVES OF THE JOINT FACULTIES
• Dr. Peter Arthur, Senior Instructor, Faculty of Education
• Dr. Diana Carter, Instructor I, Faculty of Creative and Critical Studies
• Dr. Jon Corbett, Associate Professor, Faculty of Arts and Sciences
• Dr. Jannik Eikenaar, Lecturer, School of Engineering
• Dr. Mina Hoorfar, Professor, School of Engineering
• Dr. Jahangir Hossain, Associate Professor, School of Engineering
• Dr. Jim Johnson, Associate Professor, Faculty of Arts and Sciences
• Dr. Robert Lalonde, Associate Professor, Faculty of Arts and Sciences
• Dr. Ramon Lawrence, Associate Professor, Faculty of Arts and Sciences
• Dr. Sean Lawrence, Associate Professor, Faculty of Creative and Critical Studies
• Dr. Marianne Legault, Associate Professor, Faculty of Creative and Critical Studies
• Dr. Yves Lucet, Professor, Faculty of Arts and Sciences
• Dr. W. Stephen McNeil, Associate Professor, Faculty of Arts and Sciences

•Dr. Stephen O'Leary, Associate Professor, School of Engineering
•Dr. Francisco Peña, Associate Professor, Faculty of Creative and Critical Studies
•Dr. Peter Wylie, Associate Professor, Faculty of Arts and Sciences

REPRESENTATIVES OF THE FACULTY OF APPLIED SCIENCE
•Dr. Shahria Alam, Associate Professor
•Dr. Deborah Roberts, Professor

REPRESENTATIVES OF THE FACULTY OF ARTS AND SCIENCES
•Dr. Jan Cioe, Associate Professor
•Dr. Jason Loeppky, Associate Professor

REPRESENTATIVES OF THE FACULTY OF CREATIVE AND CRITICAL STUDIES
•Mr. Myron Campbell, Instructor
•Dr. Jennifer Gustar, Associate Professor

REPRESENTATIVES OF THE FACULTY OF EDUCATION

•Dr. Robert Campbell, Associate Professor
•Dr. Greg Wetterstrand, Associate Professor

REPRESENTATIVES OF THE FACULTY OF HEALTH AND SOCIAL DEVELOPMENT
•Dr. Jennifer Jakobi, Associate Professor
•Ms. Manuela Reekie, Senior Instructor

REPRESENTATIVES OF THE FACULTY OF MANAGEMENT
•Ms. Tamara Ebl, Lecturer
•Dr. Barbara Marcolin, Associate Professor

REPRESENTATIVES OF THE CONVOCATION
•Mrs. Catherine Comben (BA, 1967)
•Vacant

REPRESENTATIVES OF THE STUDENTS AT-LARGE
•Mr. Daniel Kandie (continuing)
•Ms. Emily Lewis
•Ms. Kelly Ling Yin Lu (continuing)
•Ms. Kristen Morgan
•Ms. Janessa Tom
•Ms. Kelsey DesRoches

REPRESENTATIVE OF THE GRADUATE STUDENTS
•Ms. Megan Harper
•Ms. Brittni MacKenzie-Dale

REPRESENTATIVE OF THE STUDENTS OF THE FACULTY OF APPLIED SCIENCE
• Mr. Kyle Lee

REPRESENTATIVE OF THE STUDENTS OF THE FACULTY OF ARTS AND SCIENCES
• Ms. May Ly

REPRESENTATIVE OF THE STUDENTS OF THE FACULTY OF CREATIVE AND CRITICAL STUDIES
• Ms. Gilliane Hardy-Legault

REPRESENTATIVE OF THE STUDENTS OF THE FACULTY OF EDUCATION
• vacant

REPRESENTATIVE OF THE STUDENTS OF THE FACULTY OF HEALTH AND SOCIAL DEVELOPMENT
• Mr. Arash Aghshahi

REPRESENTATIVE OF THE STUDENTS OF THE FACULTY OF MANAGEMENT
• Ms. Hillary Tjioe

SENATE NOMINATING COMMITTEE

The Acting Registrar announced that as a result of the call for nominations issued on 15 August 2017 for five senators to serve on the Senate Nominating Committee, the following persons were elected:

Dr Peter Arthur
Dr Jan Cioe
Dr Jannik Eikenaar
Dr Jason Loeppky
Dean Wisdom Tettey.

Ms Emily Lewis was also acclaimed as elected to the Committee until 31 March 2018. A further call for nominations was made for the remaining student seat on the Committee, with nominations due 13 October 2017.

Minutes of 18 May 2017

Jan Cioe
Cynthia Mathieson } *That the Minutes of the Meeting of 18 May 2017 be adopted as corrected.*

Corrections: Punctuation and spelling error on page 4.
Definition provided for "Steps Forward" on page 5

Approved

Remarks from the President

Dr Ono noted the change in Provincial government since the Senate last convened and advised that he had met with the Premier, his Deputy Minister, and the Minister of Advanced Education. Federally, UBC has visited Ottawa in lead up to the next Federal Budget in general, and LOIs for research superclusters in particular. 13 out of 50 proposals involve UBC in some way, and we are particular interested in data sciences. UBC has also had significant interaction with the government regarding the Naylor Report. As you know, Dr Naylor made specific recommendations for increased funding for fundamental research and scholarship. Dr Ono advised that he, along with his colleagues from McGill and Toronto have published an op-ed strongly emphasizing the importance of implementing the report for Canada's research institutions. Dr Ono opined that Canada needed o have a stronger emphasis and recognition on support for new scholars. This is an area of considerable difficulty as tricouncil funding only has

a 7% success rate and much of that goes to established principal investigators, not those just starting in their fields. At the same time, we need to better support career re-entry for those scholars who take time to raise a family.

More locally, the President note that UBC was renewing our efforts for strategic planning and have entered a significant phase in its development. Drs Buszard and Mathieson are working closely with Andrew Szeri (Academic Vice-President, Vancouver) and Gayle Murphy (Vice-President, Research) in the planning process. In the spring of this year, we outlined a series of draft priorities that were based on contributions from our internal community and external partners

Dr Ono noted that over the summer he engaged with Deans and other leaders to explore these draft priorities and articulate them within an overarching framework which incorporates the wealth of feedback that we received through the earlier consultation process The emerging framework reflects the important relationship between the themes, or areas of priority focus, with the University's core mandate of teaching/learning and research and the underpinning commitments for which we are accountable The framework also recognizes the interplay between community engagement and global perspectives which Dr Ono described as a defining feature of UBC

The President advised that he was excited to meet with Deans, the Executive and the Steering Committee – which includes Paul Davies, Sheila Epp, Nicole Udzenija and PhD Student Linsday Harris from the Okanagan campus - over several days next week to get their feedback on the emerging framework. Following that, we will substantiate the plan through objectives and strategies attached to each major area. Representative working groups will be established in early fall to develop these components

Also over the fall, and working closely with Deans and the Steering Committee, Dr Ono noted that he would begin a second round of engagement with many key groups and the community at large to share and shape the framework and strategies. Consistent with our intent from the start, we will align strategy with budget to ensure that we are able to invest to support the plan. Once the plan is agreed, we will transition to implementation at which point these strategies will be translated to actions and deliverables

Dr Ono expressed his gratitude to have the opportunity to work closely with Deborah Buszard as well as Andrew Szeri, Gayle Murphey along with the rest of the community, as we enter this exciting phase.

Senator Marcolin asked about industry funding and if this would be part of our push as well.

> Dr Ono noted his work in the Cascadia corridor to encourage industry funding of research. Last year, Microsoft provided 1M for data science research. We are also looking at international partnerships with foundations. For instance, last year with Japan

we explored linkages with faculty and work with the Max Planck Society, the University of Washington, and other partners.

Senator Cioe asked how UBC would deal with the legalization of marijuana. For instance, would we allow marijuana plants in residence rooms.

Dr Ono said that most universities were in the same place and that was early in their processes. The University executive needs to discuss this at that level to provide the university community with guidance. We are working together with Universities Canada and there is some benefit to uniformity across the sector. We also need to work with student health and the health authorities. We are expecting regulations and guidelines from Government but we are expecting students to require assistance and guidance from the University.

Remarks from the Deputy Vice-Chancellor

Deputy Vice-Chancellor Deborah Buszard welcomed Dr Bryce Traister to the Okanagan campus as Dean of the Faculty of Creative and Critical Studies, and noting that this would be her final year as Provost, thanked Dr Cynthia Mathieson for her service.

Dr Buszard also commented on the new Provincial government, noting that the Minister of Advanced Education, the Honourable Melanie Mark had already visited the Okanagan campus, and the Minister of Transportation and Infraustructure, the Honourable Claire Travena has also visted the campus for the opening of the new bus loop. Federally, the visit of the Prime Minister, along with most of the Government caucus for a town hall meeting was unique opportunity for the incoming class of students to participate in a conversation on issues of importance to our community. She thanked all of the faculty and staff who worked to make that event a great success.

Dr Buszard closed by noting that this was an exciting time for UBC and its Okanagan campus with a new strategic plan under development. She committed to bringing early thinking on that process for a discussion at Senate and expressed that she was looking forward to working with the Senate on its development.

Senator Wylie raised two issues of concern. First he noted that in some faculties, staff members were placed in Canvas courses. He found this concerning and asked if Dr Buszard could report back to Senate. Secondly, Dr Wylie asked about a faculty member who had been not allowed to take on a graduate student.

Dr Buszard thanked Dr Wylie for his comments, but noted that both matters may be the subject of discussions with the Faculty Association and could not be commented on in this forum. She suggested that a concerned faculty member should take concerns regarding graduate student supervision with the College of Graduate Studies and that she would ask the Provost to look into the matter of Canvas.

From the Board of Governors

The Vice-Chair confirmed that the following items approved by the Senate had also been approved by the Board of Governors as required under the *University Act:*

30 March 2017

New Awards

Curriculum proposals from the faculties of Applied Science, Arts & Sciences, and Creative & Critical Studies.

27 April 2017:

New Awards

Curriculum proposals from the faculties of Arts & Sciences, Creative & Critical Studies, Education, & Health & Social Development

New program: Minor in Data Science in the Bachelor of Arts

18 May 2017:

Curriculum proposals from the faculties of Arts & Sciences and Creative & Critical Studies

New program: BA Minor in Theatre

Establishment of the Material and Manufacturing Research Institute

Candidates for Degrees

Miriam Grant
Wisdom Tettey

} *That the candidates for degrees as recommended by the faculties and College, be granted the degrees for which they were recommended, effective September 2017, and that a committee comprised of the Registrar, the dean of the relevant faculty, and the Chair of Senate be empowered to make any necessary adjustments.*

Approved

Academic Policy Committee

Dean Miriam Grant, Chair of the Senate Academic Policy Committee, presented.

REFERRAL OF MOTION FROM SENATE WYLIE

Dr Grant note that her committee was referred a motion from SenatorWylie regarding the status of decanal appointments in, and the possible re-organization of, the Faculty of Education.

Upon review of the submitted motion, the Committee identified the following issues. With regard to each of the issues set out below, the Committee was able to reach a consensus in their opinion, a summary of which is provided.

WHETHER THE ESTABLISHMENT OF A SENATE AD HOC COMMITTEE WOULD BE APPROPRIATE FOR THE CONSIDERATION OF THE MATTERS REFERENCED IN THE MOTION.

The Academic Policy Committee consulted its Terms of Reference, which state that it is responsible for:
• Significant matters of academic policy and general academic regulations, if such matters are not explicitly covered by the terms of reference of another committee of Senate; and
• Proposals for the organization or re-organization of academic units.
Given that the matters concerned within the motion are within the purview of the Academic Policy Committee, the Committee felt in unnecessary to convene a Senate Ad Hoc Committee for this purpose.

WHETHER PROPER PROCEDURE FOR CONSULTATION AND APPROVAL WITH SENATE AND ITS STANDING COMMITTEES HAD BEEN FOLLOWED WITH REGARD TO PLANS FOR THE POSSIBLE REORGANIZATION OF THE FACULTY OF EDUCATION.

The Senate and its Committees are not generally involved in proposals while they are still being developed at the Faculty level. The Committee understands that the details of any plans for the reorganization of the Faculty are still in development, and that a proposal will be forthcoming in the 2017/18 academic year. Therefore, at this time the Committee believes that further involvement of Senate and its Committees before the Faculty has developed a recommendation would be premature.

WHETHER ANY INFRINGEMENT OF JOINT SENATE AND BOARD POLICY *#21 – APPOINTMENT OF DEANS AND PRINCIPALS,* OR BOARD POLICIES *#22 AND #23- EXTENSION OF APPOINTMENTS OF DEANS* HAD TAKEN PLACE.

Upon review of the policies in question, the Committee determined that the key issue in question is the fact that the Faculty of Education has had acting/interim Deans in place for over 24 months, whether this is incompliance with section 4.1 of Policy 23 as set out below:

> *4.1. Notwithstanding anything else in this Policy or anything in Policy #21, the President may designate in writing that an individual, including the incumbent, take on the role of Dean in a pro tem capacity where the incumbent's appointment has ended and a successor has not yet taken office; provided however, that:*
>
> *4.1.1. any such designation normally shall not be for a period of more than 12 months; and*
>
> *4.1.2. if successive designations are made, the aggregate length of the designations normally shall not exceed 24 months.*

The Committee noted that the presence of the word "normally" in both subsections 4.1.1 and 4.1.2 may allow for the length of any temporary appointment to be longer than 12 months, and for successive temporary designations to exceed 24 months, should circumstances warrant.

WHETHER THE CIRCUMSTANCES DURING THIS PERIOD WERE SUFFICIENTLY EXTRAORDINARY TO JUSTIFY DEPARTURE FROM THE USUAL PRACTICE OUTLINED IN POLICY AS PER THE ABOVE.

The Committee believes that circumstances were unusual enough to meet this test. Normal circumstances would preclude there being conversations occurring about possible reorganization of the Faculty. Furthermore, the Bachelor of Education program was undergoing significant curriculum renewal that was also taking place during the period in question. The Committee concurs with the Provost that recruiting a new Dean under such circumstances would be neither prudent nor strategic.

In summary, the Senate Academic Policy Committee has determined that the acting and *pro tem*. appointments of Deans Binsted and Frank were appropriate and did not infringe upon the policies in question. The Committee looks forward to reviewing the detailed proposal setting out plans for the future of the Faculty of Education when it is submitted in due course.

Senator Wylie asked what consideration was made, if any, of his third whereas clause: "It has had Head/Directors appointed by University administrators to look after Collective Agreement matters such as workload, tenure and promotion in the Faculty since 2014 without the administration following Policy 22 on the appointment of such Head/Directors;"

Dr Grant replied that the committee did not find any contravention of policy 22.

The Acting Registrar, Mr Eaton, replied that those persons using the title of "Director" in the Faculty of Education were not directors in the sense of "heads of academic units" as defined by Policy 22, namely because there were no academic units within the Faculty of Education. He stated that if he understood the senator's concern correctly, his issue was that directors were acting as equivalent of heads of academic units in non-departmentalized faculties and that such appointments were not governed by existing policies. If this was the case, he agreed to review that situation and provide a report back for Senate's information.

Admission & Awards Committee

REVISIONS TO ENGLISH LANGUAGE PROFICIENCY TESTS AND PROGRAMS

Catherine Comben
Jan Cioe
} *That Senate approve revisions to the Calendar entry on English Language Proficiency Tests, effective for admission to the 2017 Winter Session and thereafter.*

Approved

NEW AND REVISED AWARDS

See Appendix A: Awards Report

Catherine Comben
Miriam Grant
} *That Senate accept the awards as listed and forward them to the Board of Governors for approval; and that letters of thanks be sent to the donors.*

Dr Buszard noted the generosity of our donors and thanked them for their support to UBC and its Okanagan campus.

Approved

Nominating Committee

COMMITTEE APPOINTMENTS

Jannik Einenaar
Jan Cioe
} *That the following appointments be made to the standing committees of Senate, to the Council of Senates, to the committees of the Council of Senates, and to the senates and committees of affiliated theological colleges, effective from 20 September 2017 to 31 August 2020 and thereafter until replaced:*

Council of Senates Budget Sub-committee/Okanagan Senate Academic Building & Resources Committee

Arthur, Peter
Lalonde, Robert
Lawrence, Ramon
Marcolin, Barb
O'Leary, Stephen
Pena, Francisco

Academic Policy Committee

Cioe, Jan

Grant, Miriam
Jakobi, Jennifer
Johnson, James
McNeil, Stephen
Tettey, Wisdom

Admissions & Awards

Campbell, Myron
Ebl, Tamara
Jahangir, Hossain
Wetterstrand, Greg
Comben, Catherine

Appeals
Alam, Shahria
Campbell, Myron
Campbell, Robert
Carter, Diana
Gustar, Jennifer

Curriculum

Arthur, Peter
Eikenaar, Jannik
Lawrence, Sean
Lucet, Yves
Reekie, Manuela

Learning & Research

Corbett, Jon
Hoorfar, Mina
Loeppky, Jason
Pena, Francisco
Roberts, Deborah
Wylie, Peter
Comben, Catherine

Approved

Other Business

Noting that this would be her last meeting, the Acting Registrar and the Principal thanked Ms Maggie A. O'Neill for her service to the University, its Okanagan campus, and the Senate for the past four years. They wished her the best at the District of Lake Country and the Senate joined in a round of applause in appreciation for her work.

Adjournment

Seeing no other business, the meeting was adjourned at 4:32 pm.

Appendix A: Awards Report

New awards:

Social Justice Bursary in the School of Social Work

A $1,000 bursary is offered to a graduate student in the School of Social work in the Faculty of Health and Social Development at the University of British Columbia, Okanagan campus. Preference is given to a student who is Aboriginal, a person with disability, and demonstrates an assessed financial need. (First Award available in 2017W)

Previously approved award with changes in terms or funding source:

Vicki Green Graduate Award

A $2,500 award has been endowed by Dr. Vicki Green, a member of the Faculty of Education at the University of British Columbia, Okanagan campus. The award is offered to a full-time **or part-time** graduate student in the Faculty of Education, Okanagan campus, studying issues in social, economic, ecological, environmental and/or political sustainability. Candidates for the award are selected based on how their research will implement contemplative, transformational, imaginative, or creative interdisciplinary understandings in sustainability for children, youth, or teachers. The award is made on the recommendation of a selection committee comprised of members of the Faculty of Education.

Rationale: Donor wishes to include part-time graduate students.

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10 October 2017

To: Senate

From: Christopher Eaton, Acting Secretary to Senate

Re: Policy 22

At the previous meeting of Senate, a senator inquired regarding the applicability of Policy 22 with regards to the Faculty of Education. For the information of Senators, Policy 22 is a policy of the Board of Governors entitled Appointments and Extension of Appointments for Heads of Academic Units (its text can be found online at http://universitycounsel.ubc.ca/files/2014/04/policy22.pdf). In his motion, the Senator expressed the following concern with regards to the Faculty of Education: "It has had Head/Directors appointed by University administrators to look after Collective Agreement matters such as workload, tenure and promotion in the Faculty since 2014 without the administration following Policy 22 on the appointment of such Head/Directors".

Policy 22 defines an "academic unit" as follows: ""Academic Unit' means an academic department or school within a Dual-Campus Faculty, an UBC Okanagan Faculty, a UBC Vancouver Faculty, the College of Health Disciplines or the College for Interdisciplinary Studies." The policy further defines a "head": "Head' means the head or director of an Academic Unit" and provides the following as the general responsibilities of such offices:

> *A Head reports to his or her Dean. Responsibilities delegated by a Dean to a Head normally include: responsibility for the overall operation of the Academic Unit, including the budget; providing leadership of the administrative and intellectual life for the Academic Unit, including assigning teaching duties; continuing to advance the Academic Unit's programs and activities; making recommendations to the Dean on matters pertaining to the Academic Unit and representing the views of the Academic Unit to the Dean and the University at large; and such other duties as may be assigned by the Dean*

Additionally, the Board, Senate and President have assigned certain other powers and responsibilities to heads and their role is also reference in the collective agreement between the Board and the Faculty Association.

The crux of this issue is that the Faculty of Education is not itself an academic unit under Policy 22, nor does it have any academic units held there (Unlike, for instance, the Faculty of Health and Social Development which holds three academic units: Nursing, Social Work, and Health and Exercise Science) and as a result, no person within the Faculty is a head under Policy 22.

As I understand the senators concerns, "directors" have been appointed within the Faculty that hold (by delegation from the dean) equivalent or similar responsibilities to heads of academic units under University policy, but the mechanism for their appointments are not set out in any policy.

It is difficult to discern if positions such as those in the Faculty of Education exist at other universities as formal position descriptions are not readily available; however, UBC is unusual for a British Columbian research university in that it does not have formal policies of its Board (or in the case of the University of Victoria its Board and Senate) for appointments of faculty members to administrative positions (not as heads of academic units) one level below a dean (generally but not always titled associate deans or directors). Simon Fraser University has a policy for appointments of associate deans and program directors (https://www.sfu.ca/policies/gazette/academic/a13-03.html), UNBC for associate deans of colleges (https://www.unbc.ca/assets/policy/hr/hr_selection_procedures_for_the_associate_deans_of_the_colleges.pdf) and the University of Victoria has individual policies for each of its associate deans (https://www.uvic.ca/universitysecretary/assets/docs/policies/GV0615_1038_.pdf for example). At UBC, such appointments are made under the oversight of the Board of Governors but largely at the discretion of each dean.

Therefore, I would concur with the reasoning of the Academic Policy Committee in its judgment that Policy 22 is not applicable with regards to the Faculty of Education or administrative appointments therein and that no procedural error has been made. Should the senator wish to address this under political mechanisms I would suggest that he either contact a faculty member on the Board of Governors to see if he or she would support the development a new policy to cover academic administrative positions such as those that exist in non-departmental faculties, or amend policy 22 to cover activities equivalent to those overseen by heads of departments for non-departmentalized faculties. The Senator could also work with the Senate Nominating or Academic Policy Committee to see if they would be willing to propose to the Senate and Board of Governors that such positions are "senior academic administrators" under the *University Act* and thus in need of formal procedures for their appointments.

a place of mind
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16 October, 2017

To: Okanagan Senate

From: Curriculum Committee and Admissions and Awards Committee

Re: Joint Report Curriculum and Admissions Proposals (approval)
- Master of Data Science (new program)
- Interdisciplinary Graduate Studies (revised program)

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

Therefore, the following is recommended to Senate:

Motion: *That Senate approve the new Master of Data Science (MDS) program brought forward from the Faculty of Arts and Sciences and the revised Interdisciplinary Graduate Studies (IGS) program brought forward from the College of Graduate Studies.*

a. Curriculum Renewal: New Program
   i. Master of Data Science Degree Program (MDS)

b. Curriculum Renewal: Associated New Courses (MDS)
   i. DATA 530 (1) Computing Platforms for Data Science
   ii. DATA 531 (1) Programming for Data Science
   iii. DATA 532 (1) Algorithms and Data Structure
   iv. DATA 533 (1) Collaborative Software Development
   v. DATA 534 (1) Web and Cloud Computing
   vi. DATA 540 (1) Databases and Data Retrieval
   vii. DATA 541 (1) Scripting and Reporting
   viii. DATA 542 (1) Data Wrangling
   ix. DATA 543 (1) Data Collection

x. DATA 550 (1) Dataviz I
xi. DATA 551 (1) Dataviz II
xii. DATA 552 (1) Communication and Argumentation
xiii. DATA 553 (1) Privacy, Security and Professional Ethics
xiv. DATA 570 (1) Predictive Modelling
xv. DATA 571 (1) Resampling and Regularization
xvi. DATA 572 (1) Supervised Learning
xvii. DATA 573 (1) Unsupervised and Semi-supervised Learning
xviii. DATA 580 (1) Modelling and Simulation I
xix. DATA 581 (1) Modelling and Simulation II
xx. DATA 582 (1) Bayesian Inference
xxi. DATA 583 (1) Advanced Predictive Modelling
xxii. DATA 585 (1) Optimization
xxiii. DATA 586 (1) Advanced Machine Learning
xxiv. DATA 589 (1) Special Topic
xxv. DATA 599 (6) Capstone

c. Curriculum Renewal: Revised Program
    i. Interdisciplinary Graduate Studies (IGS)

d. Curriculum Renewal: Associated Courses (IGS)
    i. IGS 524 (1-3)d Proseminar in Interdisciplinary Studies (revised course)
    ii. IGS 630 (0) Teaching in Higher Education (discontinuation)

e. Updated IGS Calendar pages, sections:
    i. Program Overview
    ii. Admissions Requirements
    iii. Program Requirements
    iv. Eligibility of currently enrolled students to participate in the revised IGS degree program (new Calendar page)

For the Committees,

Dr. Peter Arthur
Chair, Curriculum Committee

Executive Summary for a New Degree Program Proposal
Master of Data Science[1][2]

Faculty of Arts and Sciences

University of British Columbia – Okanagan (UBCO)

Overview

The University of British Columbia is a comprehensive research-intensive university, consistently ranked among the 40 best universities in the world. It creates an exceptional learning environment that fosters global citizenship, advances a civil and sustainable society, and supports outstanding research to serve the people of British Columbia, Canada and the world. Since 1915, UBC's West Coast spirit has embraced innovation and challenged the status quo. Its entrepreneurial perspective encourages students, staff and faculty to challenge convention, lead discovery and explore new ways of learning.

The Irving K. Barber School of Arts and Sciences (Faculty of Arts & Sciences, established in 2005) is the largest faculty on UBC's Okanagan campus, offering eight graduate programs (MA, MSc, PhD) and over 30 disciplinary and interdisciplinary undergraduate programs (BA, BSc, BMS) across the humanities, natural sciences, and social sciences, which are delivered by eight academic departments. In 2015, 162 full-time faculty members offered courses to more than 4000 students.

The Faculty of Arts & Sciences, department of Computer Science, Mathematics, Physics, and Statistics, has been offering graduate degrees (M.Sc. and Ph.D. in Mathematics, M.Sc. in Computer Science, M.Sc. and Ph.D. in Medical Physics and Interdisciplinary Graduate Studies) for many years. The department now proposes to offer a professional Master of Data Science (MDS) graduate program. The program targets students who wish to deepen their knowledge and skills in Data Science and Data Analytics. The MDS program will be administered by the department of Computer Science, Mathematics, Physics, and Statistics.

Data Science and Data Analytics graduate programs have increased in demand all over the world, due to the increasing reliance of our society on quantitative information. Such programs offer training in fundamental skills in Computer Science, Mathematics, and Statistics. Researchers create new ever-more efficient algorithms to extract information from data. These algorithms are implemented in numerical libraries in various programming languages, before they are carefully selected to extract information from our ever-growing collection of data. The proposed MDS program focuses primarily on the appropriate selection and usage of existing algorithms, with a secondary goal of implementing newly created algorithms. Students interested in creating new algorithms are advised to consider our Data Science cluster in our MSc in Computer Science.

The program is the same as the professional Master of Data Science program launched by UBCV (MDSV) in September 2016, with minor changes to account for local expertise.

The proposed Master of Data Science (MDS) program will provide data science skills to students who have completed a bachelor's degree in a discipline other than Data Science or Computer Science; it will increase their marketability by

[1] An earlier proposal used the name Master of Data Analytics as mentioned in the letters of support; the learning objectives and the target population have not changed in the present version.
[2] The document *Executive Summary for a Dual-Degree Undergraduate-Master of Data Science Program* describes a dual-degree proposal for a bachelor and MDS. The present document focuses on the MDS exclusively.

training them in data science concepts, tools, and techniques. Those students will be ready to meet the ever-increasing demand in data-intensive jobs in many fields.

Credentials

Master of Data Science (MDS)

Location: The Okanagan campus of UBC.

Faculty offering program

The program will be offered in the Faculty of Arts & Sciences and administered by the Department of Computer Science, Mathematics, Physics and Statistics.

Anticipated program start date

The program will be offered starting September 2018.

Anticipated completion time:

Students who meet all the requirements will be eligible for graduation after successfully completing the 10-month full-time program.

Admission requirements:

Direct admission into the MDS program requires a bachelor's degree, with one course in each of Computer Science (programming), Mathematics (calculus), and Statistics. Typically, the undergraduate degree will be a BA, BSc, bachelor of management, bachelor of applied science (Engineering), or any similar bachelor's degree. The requirement is not on the specific degree, but that the pre-requisites in Computer Science, Mathematics, and Statistics have been met. In addition, students with a strong background in data science will not be allowed into the program since the goal is to increase student marketability by providing data science skills to students from other disciplines.

Students who have completed a Bachelor with a major in Data Science are not the target market for the MDS, nor are students with a major in either Computer Science or Statistics. Similar to UBCV MDS program, whose students will be very carefully considered to determine whether they are expected to reap enough benefit from the MDS (since they covered a significant portion of the content) to justify the time and cost of completing the MDS. Should admission not be granted on those grounds, such students will be advised to pursue their graduate studies in the Data Science cluster of our MSc program in Computer Science.

Summary of the proposed program

The MDS is a 30-credits masters program.

i. Aims, goals and/or objectives of the proposed program

The MDS is a professional program. It targets students with a strong background in quantitative sciences who wish to deepen their skills in Data Analytics and Data Science to pursue a career in industry. Typical target students are BSc major in Biology, Psychology; students with a bachelor in Management; and students with a bachelor in Applied Science /Engineering. The MDS specific goals are as follows.

- ✓ **Fast track timeline:** The MDS is a 10-month, full-time, accelerated data science master's program.
- ✓ **Project experience:** The capstone provides an outstanding opportunity for students to get project experience and apply their skills on real data.
- ✓ **Economic impact:** The MDS will increase the economic impact of our alumni. Past alumni in the Interdisciplinary Graduate Studies MSc program were international students. They remained in North America and found employment immediately after graduation in companies such as Microsoft Corp., Amazon.com Inc., and

Autodesk Inc. In addition, our Bachelor students (BA/BSc) with a major in Computer Science have also provided numerous success stories by obtaining positions at large companies such as Amazon, Google, and Microsoft. We plan to build on these successes. The new program specifically targets students who wish to work in industry, and is expected to be very attractive to domestic students as well as capturing a portion of the market for international students interested in a degree in Data Science.

ii. Anticipated contribution to the mandate and strategic plan of the institution

The program will strengthen UBC's commitment to an exceptional learning environment. Faculty members have a strong commitment to technology transfer with a proven track record of multiple industry-sponsored grants that provide excellent opportunity for capstone projects. The program will enhance UBC's support for innovation in the Interior and beyond.

The program will emphasize experiential learning through its capstone course that will use real-world data. It is also interdisciplinary in nature since it provides a strong foundation in computer science and statistics while applying newly learned techniques to another discipline like biology, engineering, management, psychology, etc.

iii. Program learning outcomes

The learning outcomes are as follow:

1. Software building: apply basic software engineering principles for productivity and quality control: computational thinking, simple design, and quality control including common-sense testing.
2. Modeling: carry out a sound statistical argument to explain results and their limitations: causality, model building, and uncertainty quantification.
3. Communication: communicate technical findings through a storyline or effective visualization to support evidence-based decisions.
4. Application domain: integrate relevant analytical methods to a specific domain and evaluate the limitations of such methods; support evidence-based decision making.
5. Data wrangling: implement the full data pipeline from acquisition through cleaning, manipulation, interpretation, validation to visualization.
6. Scientific method: follow the scientific method from hypothesis formulation through design of experiment to validation.

iv. Linkages between the learning outcomes and the curriculum design, including an indication whether a work experience/work place term is required for degree completion; and if so, a description of the purpose and role of the work experience within the program

The capstone course will provide experience with real data. No work experience/work place term is included in the program.

v. Potential areas/sectors of employment for graduates and/or opportunities for further study

In fall 2016 the Planning New Program at UBCO Campus Survey was administered to all current undergraduate students. 1,700 (22%) students answered providing a good representation of the undergraduate population. In that sample, almost 1,100 (79%) students indicated interest in a professional/Applied Master program, with 430 (33%) planning to pursue an applied or professional master's degree, and 530 (41%) considering staying at UBCO to complete their post-graduate degree with another 470 (36%) "maybe" considering staying. There were 94 (8%) students who were currently considering applying for a professional/applied master's degree in data science or deciding which data science program to apply to with an additional 340 (27%) who indicated they may be interested in such a program but would need additional information. Among those interested participants, 230 (53%) students cited they were interested in the professional/applied master's degree in data science because "there is clear demand for skilled professionals who can mine and interpret data". Data science jobs were perceived as very highly or highly in demand by 300 students (68%).

The MDS will contribute to the recognition of B.C. as a world leader in International Education. It will attract mostly domestic, but also some international students, and will help fulfill the BC Jobs Plan commitment to increase the number of international students studying in B.C.[3]. It also aligns with the BC Jobs Plan objective of expanding the number of job-ready graduates who will contribute to our emerging high-technology centres[4]. It will help grow the tech sector and the research environment and further fulfill the 2016 #BCTech strategic plan[5], by deepening the technology talent pool and offering an industry-focused program. Ultimately, it will contribute to B.C. economic growth by creating educated people with the skills to unlock productivity potential in all sectors of the economy.

There is currently a high demand for data scientists,[6] and the job was titled both the "sexiest job of the 21st century"[7] and the "hardest job for employers to fill in in 2016"[8]. The current shortage of data scientists is problematic for some sectors of the economy and it is expected to continue[9]. We are gathering ever-increasing amounts of data (global volume of industry data doubles every year and 90% of all data in existence was created in the last 2 years) so we need to train people to make sense of it. In particular, Dataviz (short for Data Visualization) is quickly becoming a required skill in an increasing number of companies. Analyzing, interpreting, and applying the findings from large data sets has created value across all sectors of the industry[10]. Businesses want deeper insight leading to better business decisions since "the use of big data has become a key basis of competition and growth for individual firms"[10]. The 2015 Information and Communications Technology Council Bid Data & the Intelligent Economy report[11] predicts a 33% increase in data analytics specialists jobs and mentions the combined growth of cloud computing, analytics and advanced data science as the primary source of skill shortages, which is compounded by relatively few post-secondary offerings; it further recommends that post-secondary institutions develop data analytics programs.

In addition to demand, the data-related jobs are attractive. The best jobs of 2015 list (http://www.careercast.com/jobs-rated/best-jobs-2015) includes #6 Data Scientist ($124K/yr) ahead of #8 Software Engineer ($83K/yr) and #10 Computer System Analyst ($81K/yr).

The Closing Canada's Big Data Talent Gap report[12] estimates "Canada's Big Data Talent Gap of 10,500 to 19,000 professionals with deep data and analytical skills (e.g. to fill Data Scientist positions) while the gap for professionals with solid data and analytical literacy to make better decision is estimated at 150,000". It predicts a growing lack of talented professionals with data skills and calls for an expansion of academic curriculum at all levels. The present program aims to answer such a demand.

Most graduates of the MDS are expected to enter industry. The program will provide a solid foundation in logic, critical thinking, visualization and problem solving complemented with technical skills in programming, modeling, and statistical analysis. It is a professional program and each graduate school will determine if it meets their requirements for admission into their PhD program; we expect that some graduate schools, with very applied programs, would allow it while others, with more theoretical graduate programs, will not.

vi. Delivery methods

The MDS program requires 30 credits delivered through 24 one-credit courses and a 6-credit capstone project course.

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[3] http://engage.gov.bc.ca/bcjobsplan/files/2014/09/BCJP_3Year_Progress_Report.pdf page 19
[4] http://engage.gov.bc.ca/bcjobsplan/files/2014/09/BCJP_3Year_Progress_Report.pdf page 26
[5] http://bctechstrategy.gov.bc.ca/
[6] http://fortune.com/2015/05/21/data-science-white-hot/
[7] https://hbr.org/2012/10/data-scientist-the-sexiest-job-of-the-21st-century/
[8] http://www.workopolis.com/content/advice/article/the-hardest-jobs-for-employers-to-fill-in-2016/
[9] http://fortune.com/2015/01/22/salesforce-ceo-marc-benioff-on-where-big-tech-is-headed/
[10] http://www.mckinsey.com/insights/business_technology/big_data_the_next_frontier_for_innovation
[11] http://www.ictc-ctic.ca/wp-content/uploads/2015/12/BIG-DATA-2015.pdf
[12] Closing Canada's Big Data Talent Gap, Canada's Big Data Consortium, Oct 2015, http://www.ryerson.ca/provost/partnerships/talentgap/WhitePaper.html

While the main course delivery method will be traditional lectures, complemented with laboratory assignments, some courses will use flexible learning techniques. The department has experience with industry-sponsored grants, provided by MITACS (Accelerate program) or NSERC (Engage and Collaborative Research and Development programs); it will draw from that experience to deliver state-of-the-art techniques illustrated by real data.

vii. Program strengths

The strength of our program relies on providing in-demand data-science skills to bachelor graduates. The accelerated program delivery makes it attractive to international students by training them in 10 months.

The opportunity to follow up with a paid internship to create a relationship with a company that needs data analytics skills will be provided to some students who choose to further boost their job experience.

viii. An overview of the level of support and recognition from other post-secondary institutions, (including plans for admissions and transfer within the British Columbia post-secondary education system) and relevant regulatory or professional bodies, where applicable

The MDS may be accepted as a pre-requisite for PhD programs in North America that target interdisciplinary students or students with solid technical skills interested in contributing to the growing field of Data Science/Analytics. Courses in the program will follow standard articulation rules to ease transferability. Note that the MDS is a course-based program whose main focus is on industry positions; hence some Ph.D. programs may give preference to thesis-based masters. Exceptional students in that situation should consider articulating their MDS courses with a thesis-based master program like our M.Sc. in Computer Science to complete their thesis before applying to a Ph.D. program.

ix. Related programs in the institution or other British Columbia post-secondary institutions. Indicate rationale for duplication, if any.

Graduate programs

- UBC Vancouver departments of Computer Science and Statistics launched a professional Master of Data Science in fall 2016. The proposed MDS is the same program with minor variations in the content. Our research expertise is different, which is reflected in the courses offered. The geographical distance and expertise justify having the MDS program on our campus.
- SFU offers a professional Master in Big Data[13], which has a different focus. It targets students with some programming experience (likely students in mathematics, statistics, or computer science) who wish to deepen and specialize in data analytics. These students will typically implement data science algorithms. Quite differently, the MDS primarily focuses on students from outside these three disciplines (e.g. biology or psychology) who wish to learn basic programming, a solid foundation in statistics, and become users of existing data science tools to help decision makers make evidence-based decisions. While there is some overlap, the difference in focus, the geographical distance, and the different research expertise contributing to each program justify having the MDS program on our campus.
- SFU (School of Interactive Technology) also delivers a certificate in Visual Analytics[14]. It is an interdisciplinary program at the Masters-level that has different learning objectives (e.g. developing new technologies in addition to applying them). It is only offered to students enrolled in a graduate degree and requires the completion of five courses from cognitive processes, visual analytics technology and social systems. The overlap with the MDS is minimal.

Post-certificate

[13] http://www.sfu.ca/computing/current-students/graduate-students/academic-programs/bigdata.html
[14] https://www.sfu.ca/siat/grad/degree/va.html

- UFV offers a 10-month data analysis post-degree certificate[15] whose entrance requirements are a bachelor's degree and a single programming course. It requires 10 courses for a total of 31 credits. The MDS is much more intensive, has higher pre-requisites that allows us to provide deeper content by research experts; it also includes a mandatory capstone project that provides much-needed experience on real-world data.

Undergraduate programs

- UBC Okanagan offers a B.Sc. minor in Data Science that focuses on the same target population as the MDS program; students who complete the minor may follow up with the MDS to become job-ready.
- UBC Okanagan is also offering a B.Sc. Major in Data Science that focuses on students interested by both Computer Science and Statistics. The target market and the degrees are completely different and justifies preventing those students with a B.Sc. Major in Data Science to enter the MDS; they should instead consider the M.Sc. in Computer science, Data Science cluster.
- SFU (Beedie School of Business) offers a certificate in Business Analytics and Decision Making[16], which consists of 9 courses at the undergraduate level (including a capstone course). The MDS target is a much more intensive program with a different target.

Continuing education programs

- SFU (Continuing Education) is offering a Visual Analytics program[17] that provides a practical foundation in visual analytics tools and techniques; the program started in spring 2016. It is a part-time, online program that targets professionals who support, produce or consume business intelligence. It consists of 5 courses with a lab component. The MDS is a much more intensive program that covers a wider-range of topics in more depth.
- UVic (Continuing Studies) offers a certificate in population health data analysis that is much more specialized to a single discipline (health) than the MDS, and consists of four courses delivered remotely.

Benefits

Benefits for potential students and parents:

- Students follow their passion and enhance their future career opportunities
- Time-efficient, with a shorter duration translating into accommodation cost-savings
- An intensive program for elite performers: students join a diverse group of high-performing individuals who undertake this challenging, intensive master's

Benefits for UBC:

- Provides a means of better utilizing existing resources to meet student needs and student desires for management education (summer study will utilize otherwise unused classrooms and residences on campus).
- Current programs, tuition and delivery costs provide a viable basis for growth
- Significant growing market in data science
- Opportunity to consolidate the department's program delivery of data science after the launch of a BSc Major and Minor in Data Science, and an MSc in Computer Science.
- Improve employability and speed of entry into meaningful employment of UBC graduates
- Demonstrates value to government by producing "work-ready" graduates
- Leverage visiting professors' expertise, while providing an additional funding mechanism to extend their stay and increase collaboration

[15] https://www.ufv.ca/math/data-analysis/
[16] http://beedie.sfu.ca/BADM/
[17] https://www.sfu.ca/continuing-studies/programs-and-courses/area-of-study/business-management/visual-analytics.html

Benefits for UBC faculty members

- Will help attract a broad pool of top-quality students
- Positive impact on revenues for UBC Faculty members
- More students will have access to the Faculty of Arts & Sciences services

The name, title, phone number and email address of the institutional contact person in case more information is required.

Dr. Yves Lucet, Professor, Computer Science,
I. K. Barber School of Arts & Sciences, Department of Computer Science, Mathematics, Physics and Statistics
UBC Okanagan
ASC 350, 3187 University Way, UBC Okanagan BC V1V 1V7
yves.lucet@ubc.ca 250.807.9505

Appendices

Appendix A: Letters of support
Appendix B: Example of job positions that match skills provided by the Master of Data Science
Appendix C: Alumni Employment
Appendix D: Growth in Computer Science programs

Program Overview of Master of Data Science (MDS)

Faculty of Arts and Sciences
University of British Columbia – Okanagan (UBCO)

Students who wish to become more productive users and extract more information relevant to their discipline from large data sets can complete the MDS program. The program follows a format at a speed of about 1 credit per week. The main objective of the MDS is to prepare students to soundly manipulate and extract information from large data sets. This 30-credit master program consists of 24 one-credit courses focusing on computer science (data manipulation and cleaning) and statistics (modeling and understanding), and a 6-credit capstone course. The pre-requisite to enter the program is a bachelor's degree and 3 undergraduate courses: one programming course, one calculus course, and one statistics course.

The program targets students who majored in an Arts or Science discipline (e.g., Biology, Economics, Management, Psychology, Linguistic, or History) and wish to gain a competitive advantage in the job market, or become more productive while handling data information.

The MDS is the same program as the Master of Data Science (MDSV) at the UBC Vancouver campus, except that the content was split slightly differently to reflect the expertise of faculty members at UBCO, while keeping the same learning objectives.

Faculty members supporting the program

The following faculty members with experience in graduate supervision will support the program.

Name	Rank	Cluster	Recent Funding	Research Expertise
Jeffrey Andrews	Assistant Professor	Data Science	DG	Mixture modeling
Heinz Bauschke	Professor	Optimization	DG	Optimization, Operator theory
John Braun	Professor	Data Science	DG, CANSSI	Computational Statistics, statistical education
Yong Gao	Professor	Computer science, Optimization,	DG	Artificial Intelligence, Network Science, Algorithms
Paramjit Gill	Associate Professor	Data Science		Spatial statistics; sports statistics; statistical stylometry; and social networks models
Warren Hare	Associate Professor	Optimization	DG, CRD, Engage, Accelerate	Optimization, nonconvex analysis
Bowen Hui	Instructor[1]	Computer Science	SSHRC	Computer Science education, intelligent interfaces, probabilistic reasoning, computational linguistics
Ramon Lawrence	Associate Professor	Computer science	DG	Databases, algorithms, innovative teaching systems
Yves Lucet	Professor	Optimization, Computer science	DG, CRD, Engage, Accelerate	Optimization, convex analysis, algorithms, computer science education
Jason Loeppky	Associate Professor	Data Science	DG, CRD, Engage	Design and analysis of experiments for physical processes and computer-based simulations

[1] CoGS approved Bowen's involvement in graduate programs by email on April 23, 2015.

Shawn Wang	Professor	Optimization	DG, Engage	Optimization, Nonsmooth analysis

Abbreviations: DG (NSERC Discovery Grant), CRD (NSERC Collaborative Research and Development grant), Engage (NSERC Engage grant), Accelerate (MITACS Accelerate grant), CANSSI (Canadian Statistical Sciences Institute). Note that the MDS will also invite world experts to deliver courses in a 2-week intensive format while they visit our campus. The short course duration will make that invitation attractive, and further strengthen the program.

Admission Requirements

General admission requirements stipulated by the College of Graduate Studies (CoGS) must be satisfied when entering the MDS. The pre-requisites to enter the program are three, 3-credit undergraduate courses: one programming course, one calculus course, and one statistics course.

Completion Requirements

To complete the program, students must successfully pass (as per CoGS minimum grade requirements) 30 credits (24 one-credit courses and a 6-credit capstone course). Students who fail one or more courses will have to consult with the program advisor; in most circumstances the students will have to complete the required course the following year.

Course Selection

The initial offering of the MDS will include the following courses; all courses must be taken to achieve the 30 credits.

Table 1: DATA courses for the MDS.

DATA	Credits	Title	Type
530	1	Computing Platforms for Data Science	Software building
531	1	Programming for Data Science	Software building
532	1	Algorithms and Data Structures	Software building
533	1	Collaborative Software Development	Software building
534	1	Web and Cloud Computing	Software building
540	1	Databases and Data Retrieval	Data manipulation
541	1	Scripting and reporting	Data manipulation
542	1	Data Wrangling	Data manipulation
543	1	Data Collection	Data manipulation
550	1	Dataviz I	Communication
551	1	Dataviz II	Communication
552	1	Communication and Argumentation	Communication
553	1	Privacy/ethics/security	Communication
570	1	Predictive Modeling	Modeling
571	1	Resampling and Regularization	Modeling
572	1	Supervised learning	Modeling
573	1	Unsupervised and semi-supervised learning	Modeling
580	1	Modeling and simulation I	Modeling
581	1	Modeling and simulation II	Modeling
582	1	Bayesian Inference	Modeling
583	1	Advanced Predictive Modeling	Modeling
585	1	Optimization	Modeling
586	1	Advanced Machine Learning	Modeling
589	1	Special Topic	Modeling
599	6	Capstone	Application

Table 1 list the MDS courses, while Table 2 below shows a detailed analysis of the percentage of similarity between the proposed MDS program for UBCO and the MDS program currently offered at UBCV. Similarity is understood as having the same content in the program, not necessarily in that specific course. Overall, the programs are the same: same learning objectives, more than 80% of the same content, same structure of one-course credits plus capstone. The choice of offering DATA 585 Optimization is based on our internationally recognized expertise in Optimization, while DATA 589 Special Topics provides flexibility in offering a wide range of applications.

Table 2: MDS and MDSV similarity. DATA 301 content is in green while DATA 311 content is in purple.

UBCV DSCI	DSCI Title	UBCO DATA	DATA Title	Similarity
521	Computing Platforms for Data Science	530	Computing Platforms for Data Science	60%
511	Programming for Data Science	531	Programming for Data Science	90%
512	Algorithms and Data Structures	532	Algorithms and Data Structures	100%
524	Collaborative Software Development	533	Collaborative Software Development	100%
525	Web and Cloud Computing	534	Web and Cloud Computing	90%
513	Databases and Data Retrieval	540	Databases and Data Retrieval	90%
522	Data Science Workflows	541	Scripting and reporting	70%
523	Data Wrangling	542	Data Wrangling	70%
554	Experimentation and Causal Inference	543	Data Collection	40%
563	Unsupervised Learning	573	Unsupervised and semi-supervised learning	90%
531	Data Visualization I	550	Dataviz I	60%
532	Data Visualization II	551	Dataviz II	80%
542	Communication and Argumentation	552	Communication and Argumentation	100%
541	Privacy/Ethics/Security	553	Privacy/ethics/security	100%
551	Exploratory Data Analysis			40%
561	Regression I	570	Predictive Modeling	100%
573	Feature and Model Selection	571	Resampling and Regularization	90%
571	Supervised Learning I	572	Supervised learning	100%
572	Supervised Learning II			70%
574	Spatial and Temporal Modeling	580	Modeling and simulation I	40%
552	Statistical Inference and Computation I	581	Modeling and simulation II	50%
553	Statistical Inference and Computation II	582	Bayesian Inference	100%
562	Regression II	583	Advanced Predictive Modeling	80%
		585	Optimization	20%
575	Advanced Machine Learning	586	Advanced Machine Learning	100%
		589	Special Topic	0%
591	Capstone Project	599	Capstone	100%
			Weighted similarity	**84%**

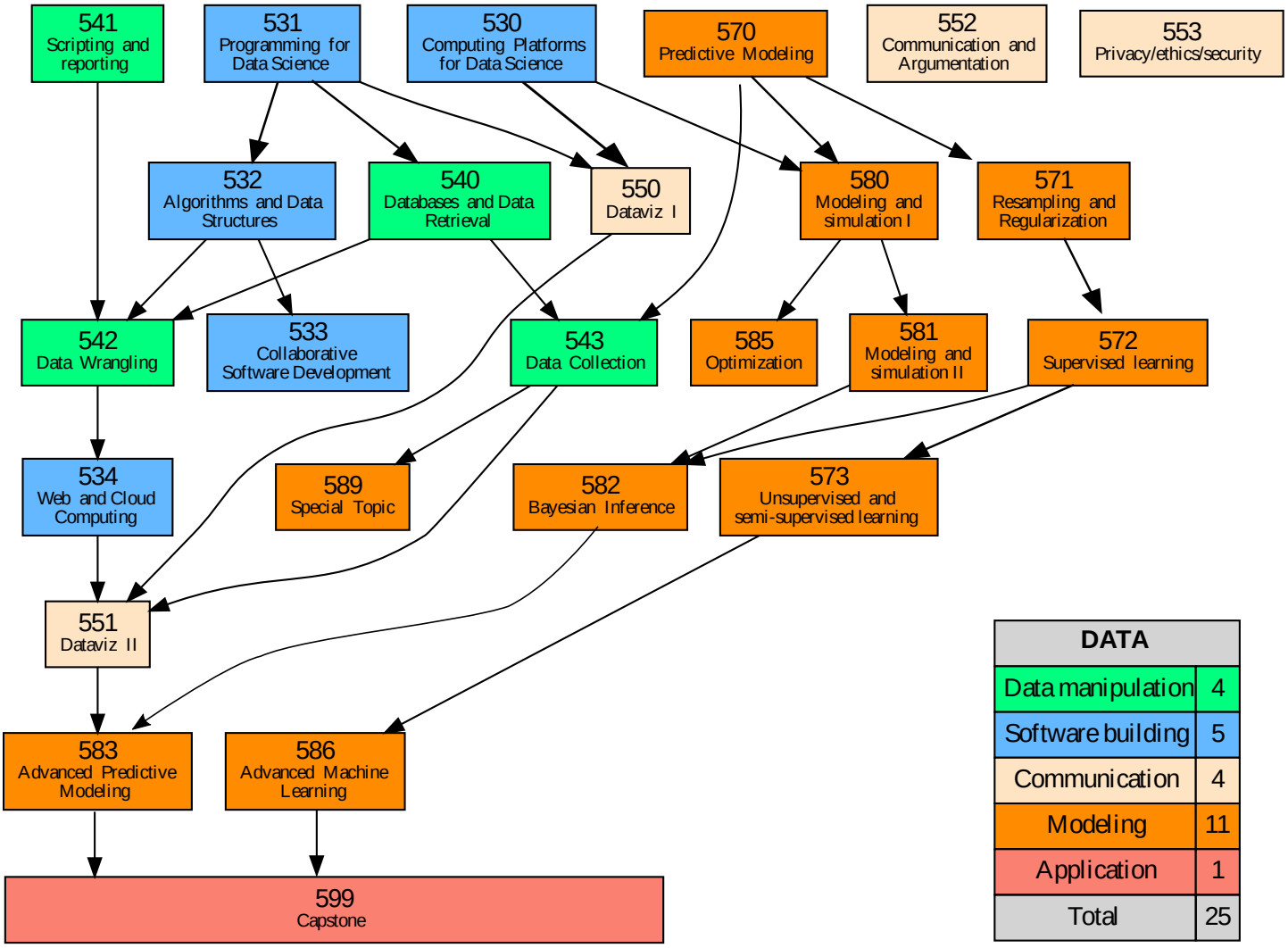

Figure 1: Pre-requisite Diagram for MDS. Courses are classified as Data manipulation, software building, communication, modeling, application for a total of 25 courses and 30 credits (DATA 599 Capstone is worth 6 credits)

Appendix A: Scheduling

All 25 courses will be offered each year. All one-credit courses will be offered in pairs over 2 weeks (i.e. students will complete two credits every two weeks with the only exception being DATA 599, which is a 6-credit course done over 8 weeks).

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

Category**: 1**	
Faculty/School: IKBSAS **Dept./Unit:** Department of Computer Science, Mathematics, Physics and Statistics **Faculty/School Approval Date:** 20161207 **Effective Session:** 2018W	**Date:** June 21, 2016 **Contact Person:** Dr. Yves Lucet **Phone:** 250.807.9505 **Email:** yves.lucet@ubc.ca
Type of Action: New Program	
Rationale: New MDS program. See Executive summary and program introduction.	
Proposed Academic Calendar Entry:	**Draft Academic Calendar URL:** http://www.calendar.ubc.ca/okanagan/proof/edit/index.cfm?tree=18,285,0,0 **Present Academic Calendar Entry:** **Homepage (draft) Faculties, Schools, and Colleges College of Graduate Studies**

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Mathematics	Mathematics
Medical Physics	Medical Physics
Nursing	Nursing
Psychology	Psychology
Social Work	Social Work

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THE UNIVERSITY OF BRITISH COLUMBIA

Curriculum Proposal Form
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Type of Action: New Program	
Rationale: New MDS. See Executive summary and program introduction	
Proposed Academic Calendar Entry: Homepage-Faculties, Schools, Colleges-College of Graduate Studies **Data Science** **Contents** Program Overview Admission Requirements Program Requirements Contact Information	**Present Academic Calendar Entry:** **N/A**

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THE UNIVERSITY OF BRITISH COLUMBIA

Curriculum Proposal Form
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Type of Action: New Program	
Rationale: New MDS program. See Executive summary and program introduction.	

Proposed Academic Calendar Entry:

Program Overview

Degrees offered: M.D.S.

The Master of Data Science program offers a sound foundation in data science techniques. It is a non-thesis professional degree program consisting of 30 credits. The program focuses on modeling, data extraction, data cleaning, data analysis, and communicating results to support evidence-based decisions. Students entering the program typically have a bachelor's degree in any discipline that relies increasingly on data such as Biology, Chemistry, Economics, Engineering, Geography, Management, or Psychology, but also Digital Media, Earth and Environmental Sciences, Education, Health Care, History, Physics, Sociology, etc.

This program is not intended for students with an undergraduate degree in Computer Science, or Statistics, and is restricted to students who have not declared a Major or Minor in Data Science and have not taken a significant number of data science courses (see admission requirements).

Students should be aware that due to the very intensive nature of the program, any absence might result in missing critical content. While UBC is committed to student success, ensuring that its standards are upheld may require completing the remaining part of the program the following year.

Present Academic Calendar Entry:

N/A

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

Category**: 1**	
Faculty/School: IKBSAS **Dept./Unit:** Department of Computer Science, Mathematics, Physics and Statistics **Faculty/School Approval Date:** 20161207 **Effective Session:** 2018W	**Date:** June 21, 2016 **Contact Person:** Dr. Yves Lucet **Phone:** 250.807.9505 **Email:** yves.lucet@ubc.ca
Type of Action: New Program	
Rationale: New MDS program. See Executive summary and program introduction.	
Proposed Academic Calendar Entry: **Program Requirements** **Master of Data Science (M.D.S.)** In addition to the general academic regulations for graduate students set out by the College of Graduate Studies, students in the M.D.S. must complete 30 credits as follow: • 24 credits of DATA 530, 531, 532, 533, 534, 540, 541, 542, 543, 550, 551, 552, 553, 570, 571, 572, 573, 580, 581, 582, 583, 585, 586, 589; • 6 credits of DATA 599	**Present Academic Calendar Entry:** **N/A**

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

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Faculty/School: IKBSAS **Dept./Unit:** Computer Science, Mathematics, Physics and Statistics **Faculty/School Approval Date:** 20161207 **Effective Session:** 2018W	**Date:** June 21, 2016 **Contact Person:** Dr. Yves Lucet **Phone:** 250.807.9505 **Email:** yves.lucet@ubc.ca
Type of Action: New Program	
Rationale: New MDS program. See Executive summary and program introduction. The minimum requirements to be considered are the minimum requirements for a Master at CoGS (currently a bachelor's degree with B+ (i.e., 76% from a Canadian/American institution or international equivalent); exact rules are detailed in the link provided), and 3 courses in programming, statistics, and calculus. The program admission committee will apply the same process as the one currently used by the Department of Computer Science, Mathematics, Physics and Statistics for IGS students (i.e., meeting the minimum requirement does not guarantee admission). The rationale is to estimate the quantity and quality of applications manually in the first years instead of imposing a bar without knowing the consequences on the admission pool, which is why a résumé and motivation letter are requested.	
Proposed Academic Calendar Entry: **Admission Requirements** **Master of Data Science (M.D.S.)** **The M.D.S. program is governed by the regulations of the College of Graduate Studies, including its standards for admission of students.** **Students entering the M.D.S. program will normally have an honours or a bachelor's degree.** **This program is intended for students who do not have an undergraduate degree in Computer Science or Statistics; however, all applicants may be considered upon review by the graduate program.**	**Present Academic Calendar Entry:** **N/A**

Commented [UO1]: http://www.calendar.ubc.ca/okanagan/proof/edit/index.cfm?tree=18,285,984,1167

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Applicants must provide proof of successful completion of: • **one 3-credit course in programming (e.g., UBC COSC 111, CPSC 110, APSC 177 or equivalent);** • **one 3-credit course in probability and/or statistics (e.g., UBC STAT 230, STAT 200, STAT 241, STAT 251, STAT 302, BIOL 202, PSYO 373, APSC 254, or equivalent); and,** • **one 3-credit course in calculus (e.g., UBC MATH 100, APSC 172, or equivalent) or one 3-credit course in linear algebra (e.g., UBC MATH 221, APSC 179 or equivalent). Completion of a 3-credit course in each of calculus and linear algebra is recommended.** **Applicants from a university outside Canada, at which English is not the primary language of instruction, should see the English Language Proficiency Requirement for the minimum English language proficiency test scores required.** **The individual program's requirements mentioned in the required documentation are the following:** • **A statement of interest describing the applicant's academic background, future career goals and their interest in data science.** • **A résumé, including links to any relevant software or data science/analytics projects.**	

Commented [UO2]: http://www.calendar.ubc.ca/okanagan/index.cfm?tree=18,285,998,1196#13868

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Upon admission, applicants will be required to provide a non-refundable deposit *(pending Board of Governors approval)* that will be applied to their first tuition instalment.	

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Type of Action: New Program	
Rationale: New MDS program. See Executive summary and program introduction.	
Proposed Academic Calendar Entry: **Contact Information** Complete details regarding the Master of Data Science program are available on the Data Science website or by contacting the Graduate Program Coordinator.	**Present Academic Calendar Entry:** **N/A**

Commented [UO1]: http://data.ok.ubc.ca/graduate.html

Commented [UO2]: mailto:mds.coordinator@ubc.ca

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New/Change to Course/Program – Okanagan campus

Category**: 1**	
Faculty/School: Arts & Sciences **Dept./Unit:** Department of Computer Science, Mathematics, Physics and Statistics **Faculty/School Approval Date:** 20161207 **Effective Session:** 2018W	**Date:** 20160624 **Contact Person:** Dr. Yves Lucet **Phone:** 250.807.9505 **Email:** yves.lucet@ubc.ca
Type of Action: New Course	
Rationale: This course is one of the modules for the new professional Master of Data Science. Introduction to tools and environments necessary to perform Data Science. Basic usage, data analysis and visualization. Tool comparisons.	
Proposed Academic Calendar Entry: **DATA 530 (1) Computing Platforms for Data Science** **Introduction to software and tools for Data Science. Setup process. Credit will be granted for only one of DATA 301 or DATA 530. Restricted to students in the MDS program.**	**Draft Academic Calendar URL:** **N/A**

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Type of Action: New Course	
Rationale: This course is one of the modules for the new professional Master of Data Science. Data analysts need to custom code for ad-hoc manipulation of data. They also need to use built-in libraries for common tasks as well as using appropriate data structures to ensure efficient data manipulations.	
Proposed Academic Calendar Entry: **DATA 531 (1) Programming for Data Science** **Programming including decisions, loops, functions, and using data structures and libraries. Credit will be granted for only one of DATA 301 or DATA 531. Restricted to students in the MDS program.**	**Draft Academic Calendar URL:** **N/A**

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Type of Action: New Course	
Rationale: This course is one of the modules for the new professional Master of Data Science. Data analysts need to use appropriate data structures to ensure efficient data manipulations.	
Proposed Academic Calendar Entry: **DATA 532 (1) Algorithms and Data Structure** **Data structures including lists, queues, stacks, hash tables, trees and graphs. Recursion. Searching and sorting. Asymptotic complexity. Restricted to students in the MDS program.** ***Prerequisite*: DATA 531**	**Draft Academic Calendar URL:** **N/A**

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Type of Action: New Course	
Rationale: This course is one of the modules for the new professional Master of Data Science. Building software requires additional skills beyond programming. This course addresses the additional skills required and the tools that support building code beyond throw-away prototyping.	
Proposed Academic Calendar Entry: **DATA 533 (1) Collaborative Software Development** **Software life cycle. Licensing. Packaging. Testing and quality control. Version control. Collaborative environments. Restricted to students in the MDS program.** ***Prerequisite*: DATA 532.**	**Draft Academic Calendar URL:** **N/A**

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Type of Action: New Course	
Rationale: This course is one of the modules for the new professional Master of Data Science. Manipulating large data sets requires advanced resources currently only available through parallel and cloud computing, and is a must-have for anyone working in the Data Science field.	
Proposed Academic Calendar Entry: **DATA 534 (1) Web and Cloud Computing** **Parallel and cloud computing architectures and program deployment. Restricted to students in the MDS program. *Prerequisite*: DATA 542.**	**Draft Academic Calendar URL:** **N/A**

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Type of Action: New Course	
Rationale: This course is one of the modules for the new professional Master of Data Science. While data may be structured or unstructured, it is critical data analysts know how to store it, query it, convert it, etc. Traditionally it involves databases in SQL or noSQL, or standard file formats like JSON.	
Proposed Academic Calendar Entry: **DATA 540 (1) Databases and Data Retrieval** **Using and querying relational and NoSQL databases for analysis. Experience with SQL, JSON, and programs that use databases. Restricted to students in the MDS program.** ***Prerequisite*: DATA 531.**	**Draft Academic Calendar URL:** **N/A**

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Type of Action: New Course	
Rationale: This course is one of the modules for the new professional Master of Data Science. Data science involves in part writing throw-away scripts, building reports, and automating data manipulation. A scripting language is more efficient for some of these tasks.	
Proposed Academic Calendar Entry: **DATA 541 (1) Scripting and Reporting** **Scripting engines for data science. Reporting tools. Automation. Restricted to students in the MDS program.**	**Draft Academic Calendar URL:** **N/A**

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Type of Action: New Course	
Rationale: This course is one of the modules for the new professional Master of Data Science. The core of data science involves manipulating data using software either specialized programs, custom codes, or scripts. Then data cleaning, conversion, storage, and extraction, before following up with modeling, and visualization.	
Proposed Academic Calendar Entry: **DATA 542 (1) Data Wrangling** **Manipulation of data using software tools. Data conversion, filtering, sorting, grouping, cleaning, parsing. Automation. Restricted to students in the MDS program.** ***Pre-requisite*: DATA 532, 540, 541.**	**Draft Academic Calendar URL:** **N/A**

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Type of Action: New Course	
Rationale: This course is one of the modules for the new professional Master of Data Science. Before any information can be extracted, data needs to be collected. The quality of the data critically affects the conclusions that can be drawn. Hence, a principle of data collection course is mandatory in the MDS.	
Proposed Academic Calendar Entry: **DATA 543 (1) Data Collection** **Fundamental techniques in the collection of data. Focus will be devoted to understanding the effects of randomization, restrictions on randomization, repeated measures and blocking on the model fitting. Restricted to students in the MDS program. *Pre-requisite*: DATA 540, 570.**	**Draft Academic Calendar URL:** **N/A**

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Type of Action: New Course	
Rationale: This course is one of the modules for the new professional Master of Data Science. After modeling and extracting information from data, it needs to be communicated to convinced decision makers to act on the data-supported evidence. Complex models and multidimensional data requires well-thought visualization.	
Proposed Academic Calendar Entry: **DATA 550 (1) Dataviz I** **Data visualization to produce graphs and images. Advanced data analysis on spreadsheets. Credit will be granted for only one of DATA 301 or DATA 550. Restricted to students in the MDS program.** ***Prerequisite*: DATA 530, 531.**	**Draft Academic Calendar URL:** **N/A**

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Type of Action: New Course	
Rationale: This course is one of the modules for the new professional Master of Data Science. Advanced data visualization involving multi-platforms and interactive graphs is required for the most complex data.	
Proposed Academic Calendar Entry: **DATA 551 (1) Dataviz II** **Data visualization using business intelligence and data analysis software. Interactive visualization. Production of visualizations for mobile and web. Restricted to students in the MDS program. *Prerequisite*: DATA 534, 543, 550.**	**Draft Academic Calendar URL:** **N/A**

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Type of Action: New Course	
Rationale: This course is one of the modules for the new professional Master of Data Science. After modeling, information extraction from data, reporting, and visualization; the ultimate goal is to take evidence-based decisions without over-interpreting the results.	
Proposed Academic Calendar Entry: **DATA 552 (1) Communication and Argumentation** **Interpretation of data. Argumentation: hypothesis, claim, evidence and inference. Model limitations: bias, validity, reliability, sensitive analysis. Communication of recommendations to decision-makers. Restricted to students in the MDS program.**	**Draft Academic Calendar URL:** **N/A**

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Type of Action: New Course	
Rationale: This course is one of the modules for the new professional Master of Data Science. Data contains lots of information that can be used in an unwanted way. It is important to be sensitive to the unwelcome consequences of a data breach. Data analysts by their very nature have access to sensitive information and need to be aware of the risks.	
Proposed Academic Calendar Entry: **DATA 553 (1) Privacy, Security and Professional Ethics** **Data privacy laws and expectations. Freedom of information. Ethics board. Licensing. Data security. Restricted to students in the MDS program.**	**Draft Academic Calendar URL:** **N/A**

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Type of Action: New Course	
Rationale: This course is one of the modules for the new professional Master of Data Science. To extract understanding, trends, or patterns, data needs to be modelled. Models are critical to simplify the complex real-world reality, and be able to understand the evidence in order to take data-supported decisions.	
Proposed Academic Calendar Entry: **DATA 570 (1) Predictive Modelling** **Introduction to regression for Data Science. Simple linear regression, multiple linear regression, interactions, mixed variable types, model assessment, simple variable selection, k-nearest-neighbours regression. Credit will be granted for only one of DATA 311 or DATA 570. Restricted to students in the MDS program.**	**Draft Academic Calendar URL:** **N/A**

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Type of Action: New Course	
Rationale: This course is one of the modules for the new professional Master of Data Science. Raw data may need to go through several computations to extract the information it contains. Resampling may be required, or regularization techniques may be appropriate to minimize the noise contained in the data.	
Proposed Academic Calendar Entry: **DATA 571 (1) Resampling and Regularization** **Resampling techniques and regularization for linear models. Bootstrap, jackknife, cross-validation, ridge regression, lasso, discussion of tuning parameters. Credit will be granted for only one of DATA 311 or DATA 571. Restricted to students in the MDS program. *Pre-requisite*: DATA 570.**	**Draft Academic Calendar URL:** **N/A**

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Type of Action: New Course	
Rationale: This course is one of the modules for the new professional Master of Data Science. Supervised learning is one of the basic techniques in machine learning, and a major tool in the data analyst toolbox.	
Proposed Academic Calendar Entry: **DATA 572 (1) Supervised Learning** **Analysis of data with categorical responses. Logistic regression, k-nearest-neighbours classification, discriminant analysis, decision trees and random forests. Credit will be granted for only one of DATA 311 or DATA 572. Restricted to students in the MDS program.** ***Pre-requisite*: DATA 571.**	**Draft Academic Calendar URL:** **N/A**

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Type of Action: New Course	
Rationale: This course is one of the modules for the new professional Master of Data Science. Going beyond supervised learning, unsupervised learning and semi-supervised learning are the next tools to complement a data analyst toolbox.	
Proposed Academic Calendar Entry: **DATA 573 (1) Unsupervised and Semi-supervised Learning** **Analyses for data with unknown responses. Distance measures, hierarchical clustering, k-means, mixture models. Restricted to students in the MDS program.** ***Pre-requisite*: DATA 572.**	**Draft Academic Calendar URL:** **N/A**

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Type of Action: New Course	
Rationale: This course is one of the modules for the new professional Master of Data Science. Some questions require data to be generated specifically to answer the question. It then becomes critical to understand how to model the reality soundly, and to setup an appropriate simulation before any data can be collected.	
Proposed Academic Calendar Entry: **DATA 580 (1) Modelling and Simulation I** **Pseudorandom number generation, testing and transformation to other discrete and continuous data types. Introduction to Poisson processes and the simulation of data from predictive models, as well as temporal and spatial models. Credit will be granted for only one of DATA 405 or DATA 583. Restricted to students in the MDS program. *Prerequisite*: STAT 230 and DATA 301, or DATA 570 and DATA 530.**	**Draft Academic Calendar URL:** **N/A**

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Type of Action: New Course	
Rationale: This course is one of the modules for the new professional Master of Data Science. Some questions require data to be generated specifically to answer the question. It then becomes critical to understand how to model the reality soundly, and to setup an appropriate simulation before any data can be collected. Building from DATA 580, this course explored more advanced modelling and simulations. For example, queueing theory is critical in some application domains like health care or the service industry.	
Proposed Academic Calendar Entry: **DATA 581 (1) Modelling and Simulation II** **Markov chains and their applications, for example, queueing and Markov Chain Monte Carlo. Credit will be granted for only one of DATA 405 or DATA 581. Restricted to students in the MDS program.** ***Prerequisite*: DATA 580.**	**Draft Academic Calendar URL:** **N/A**

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Type of Action: New Course	
Rationale: This course is one of the modules for the new professional Master of Data Science. Data requires a sound understanding of statistics to differentiate between random noise and the phenomenon that is under study, which requires a sound basis on Bayesian inference.	
Proposed Academic Calendar Entry: **DATA 582 (1) Bayesian Inference** **Introduction to Bayesian paradigm and tools for Data Science. Topics include Bayes' theorem, prior, likelihood and posterior. A detailed analysis of the cases of binomial, normal samples, normal linear regression models. A significant focus will be on computational aspects of Bayesian problems using software packages. Restricted to students in the MDS program.** ***Pre-requisite*: DATA 572, DATA 581.**	**Draft Academic Calendar URL:** **N/A**

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Type of Action: New Course	
Rationale: This course is one of the modules for the new professional Master of Data Science. Exploration of advanced predictive models beyond linear regression.	
Proposed Academic Calendar Entry: **DATA 583 (1) Advanced Predictive Modelling** **Multiple linear regressions. Splines. Smoothing. Generalized additive models. Restricted to students in the MDS program. *Pre-requisite*: DATA 572, DATA 581.**	**Draft Academic Calendar URL:** **N/A**

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Type of Action: New Course	
Rationale: This course is one of the modules for the new professional Master of Data Science. Fundamental optimization algorithms need to be understood to avoid overstating the result of a simulation. The focus is on using optimization algorithms appropriately, and understanding the limitations of those algorithms.	
Proposed Academic Calendar Entry: **DATA 585 (1) Optimization** **Modeling using mathematical programming. Fundamental continuous and discrete optimization algorithms. Optimization software for small to medium scale problems. Optimization algorithms for data science. Restricted to students in the MDS program.** ***Pre-requisite*: DATA 580.**	**Draft Academic Calendar URL:** **N/A**

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Type of Action: New Course	
Rationale: This course is one of the modules for the new professional Master of Data Science. Exploration of cutting-edge machine learning algorithms. The goal is to educate students in state-of-the-art machine learning techniques so that they can tackle the most challenging data modeling tasks.	
Proposed Academic Calendar Entry: **DATA 586 (1) Advanced Machine Learning Neural networks, backpropagation, deep learning. Restricted to students in the MDS program.** ***Pre-requisite*: DATA 580.**	**Draft Academic Calendar URL:** **N/A**

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

Category**: 1**	
Faculty/School: Arts & Sciences **Dept./Unit:** Department of Computer Science, Mathematics, Physics and Statistics **Faculty/School Approval Date:** 20161207 **Effective Session:** 2018W	**Date:** 20160624 **Contact Person:** Dr. Yves Lucet **Phone:** 250.807.9505 **Email:** yves.lucet@ubc.ca
Type of Action: New Course	
Rationale: This course is one of the modules for the new professional Master of Data Science. To keep educating students in cutting-edge techniques, the MDS will invite world-class researchers to teach the latest techniques. DATA 589 introduces flexibility into the program and allows the MDS to take advantage of visiting professors to learn very advanced data science techniques that have just been validated, but have not yet become widely disseminated.	
Proposed Academic Calendar Entry: **DATA 589 (1) Special Topic** **Advanced or specialized topic in Data Science with applications to specific data sets. Restricted to students in the MDS program.** ***Pre-requisite*: DATA 543.**	**Draft Academic Calendar URL:** **N/A**

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

Category**: 1**	
Faculty/School: Arts & Sciences **Dept./Unit:** Department of Computer Science, Mathematics, Physics and Statistics **Faculty/School Approval Date:** 20161207 **Effective Session:** 2018W	**Date:** 20160624 **Contact Person:** Dr. Yves Lucet **Phone:** 250.807.9505 **Email:** yves.lucet@ubc.ca
Type of Action: New Course	
Rationale: This course is one of the modules for the new professional Master of Data Science. The capstone course is a cornerstone of the MDS. It provides students with experience in performing data science on a complex multidisciplinary projects, and allows them to build a portfolio, and provides a natural application of the concepts introduced in other courses. It will always be scheduled as the last course in the MDS.	
Proposed Academic Calendar Entry: **DATA 599 (6) Capstone** **A capstone design project designed to give students experience in performing data science on a complex multidisciplinary project. Restricted to students in the MDS program.** ***Pre-requisite*: DATA 583 and DATA 586.**	**Draft Academic Calendar URL:** **N/A**

Executive Summary

Master of Arts in Interdisciplinary Graduate Studies
Master of Science in Interdisciplinary Graduate Studies
Ph.D. In Interdisciplinary Graduate Studies
College of Graduate Studies
University of British Columbia

IGS Overview

The Interdisciplinary Graduate Studies (IGS) program is the largest graduate program on the UBC Okanagan campus, with approximately 200 students enrolled in the MA, MSc, and PhD programs at any given time, and with the involvement of six of the seven Faculties or Schools that offer programs on the campus. IGS students represent roughly 1/3 of all graduate students enrolled in thesis-based programs. The program is housed in the College of Graduate Studies, which, according to Senate Policy 0-4, "shall administer the Interdisciplinary Graduate Program on behalf of those faculties participating as if it were a faculty." Students learn from a wide disciplinary range of faculty and benefit from taking part in world-class research occurring on campus.

An October 2014 – April 2017 review and re-visioning of the Interdisciplinary Graduate Studies program identified a number of ways in which the program could improve its offerings and take better advantage of the unique profile of the UBC Okanagan campus. The proposal outlined in this document and its associated materials reflects the recommendations of that review, the task force deliberations, campus-wide consultations that took place during the review and during the re-visioning process that followed it, and a final round of consultations and revisions.

Proposed credentials to be awarded

Master of Arts in Interdisciplinary Graduate Studies

Master of Science in Interdisciplinary Graduate Studies

Ph.D. In Interdisciplinary Graduate Studies

Location

University of British Columbia, Okanagan campus.

Faculty offering the proposed revised degree program

Faculty of Arts and Sciences (Irving K. Barber School)

Faculty of Creative and Critical Studies

Faculty of Management

Faculty of Health and Social Development

Faculty of Applied Science

Faculty of Education

Anticipated program start date

The revised program will be offered starting in the 2018W1 academic year.

Anticipated completion time

The anticipated time for completion of the MA and MSc programs is two calendar years of full-time academic study. A work experience term is not required for degree completion.

The anticipated time for completion of the PhD program is four years of full-time academic study. A work experience term is not required for degree completion.

Degree Credits

The MA and MSc degrees will require 30-credit hours of work, which will be divided into course and thesis credits. The minimum number of course credits for the MA and MSc will be 12. In the Ph.D. program, the number of course credits will vary according to the disciplines that the student engages, but it is generally anticipated that PhD students in the program will enroll in several courses in preparation for their comprehensive examinations and for their interdisciplinary dissertation research project. The precise nature of each plan of study will be determined by the supervisory committee of each particular student.

Program summary

The MA, MSc, and PhD programs in IGS will no longer be directly housed in the College of Graduate Studies as Senate Policy 0-4 articulates in regard to the operations of the Interdisciplinary Graduate Studies program. Responsibility for the IGS program will now be devolved in large part into the Faculties. A governing committee for the program, made up of representatives from each participating Faculty and chaired by the Dean or Associate Dean of the College of Graduate Studies will provide the pan-University oversight and direction that the College of Graduate Studies provided under the former governance arrangement. The program is highly collaborative within and amongst the six faculties that will participate; a closer, direct Faculty involvement in the governance structure is a necessary element of properly resourcing and adequately sustaining that collaboration. Inter- and intra-Faculty Themes will be the modality through which all programming in IGS is delivered. Each Theme in the program will be established for a minimum of five-year periods by a formal resourcing agreement amongst the various decanal and departmental constituencies that participate in the Theme.

The UBC Okanagan Interdisciplinary Graduate Studies program is intended to provide exemplary training and education in interdisciplinary graduate research. As its underlying principle, it fosters problem-oriented research and learning that requires collaboration from multiple fields of knowledge to achieve its goals. The program includes knowledge and learning that is based on a variety of traditional scholarly and laboratory approaches, and on new forms of investigation such as community-based research. The kind of research and teaching envisioned in this program demands that all participants explicitly pay attention to how different approaches bring with them epistemologies that do not easily merge and how these epistemologies can be used and blended in particular projects, in efforts at theorization, or in efforts to address complex problems.

Objectives

The primary objectives of the proposed program are:

1. To provide comprehensive, high quality, graduate degrees in interdisciplinary graduate studies leading to MA, MSc, or PhD qualifications.
2. To foster creative and vibrant interdisciplinary teaching and research among and between UBCO faculty and programs and between these UBCO programs and programs at other institutions provincially and regionally.
3. To train and educate graduate students at the MA, MSc, and PhD levels for subsequent employment within, education, governmental, non-governmental, and industrial sectors.
4. To prepare students to go on to further study.

Anticipated contribution to the mandate of the institution

UBC Place and Promise

Create an Exceptional Learning Environment: The multidisciplinary and multi-institutional teaching structure within the proposed revised program is a unique learning environment that capitalizes on a diverse group of scholars and researchers. Located in six of the Okanagan Faculties, it delivers a comprehensive and innovative interdisciplinary graduate education of exceptionally high quality that is recognized nationally and internationally.

Research Excellence & Community engagement: The (re)establishment of an Interdisciplinary Graduate Program with identified and vetted Themes as the modality for delivering graduate education will increase research capacity and —depending on the Themes that develop— likely strengthen our partnership with a variety of local, regional, and provincial entities.

Linkages between the learning outcomes and curriculum design

Graduates of the MA and MSc in Interdisciplinary Graduate Studies will:

- Have obtained a comprehensive understanding of the fundamental characteristics of interdisciplinary research and the basic questions in their thematic area of study through the completion of a core course curriculum;
- Have gained experience in the application of interdisciplinary methods and perspectives to cutting edge research through the completion of a rigorous thesis project;
- Be able to work in collaborative, cross-disciplinary and interdisciplinary research environments;
- Be able to collaborate with researchers from a variety of both cognate and unrelated disciplines; and

Graduates of the Ph.D. in Interdisciplinary Graduate Studies will:

- Have obtained a high-level, comprehensive understanding of the fundamental characteristics of interdisciplinary research and the basic questions as well as more refined questions in their thematic area of study through the completion of a core course curriculum and a comprehensive examination process;
- Have gained experience in the application of interdisciplinary methods and perspectives to cutting edge research through the completion of a rigorous dissertation project;
- Be able to work in collaborative, cross-disciplinary and interdisciplinary research environments;
- Be able to collaborate with researchers from a variety of both cognate and unrelated disciplines; and

Potential sectors of employment include:

- Teaching and research institutions
- Private-sector organizations and corporations
- Public-sector governmental and non-governmental organizations

Delivery methods

The precise methods of instructional delivery will depend upon the disciplines involved in any given theme. They can include:

- Graduate research seminars

- Graduate proseminars and colloquia
- In-house and video-linked course lectures
- Laboratories within a clinical or research environment
- Graduate studios
- Comprehensive research projects, including thesis and dissertation projects

Program strengths

- By bringing together a group of diverse, nationally and internationally recognized researchers in a variety of Faculties and disciplines, the program gives graduate students access to the expertise of these researchers in a coherent, thematic framework.
- By capitalizing on research strengths through the creation of synergies between small groups of faculty who demonstrate a keen interest in interdisciplinary research and graduate training, the program provides a unique learning opportunity to its students.

Support and recognition from other post-secondary institutions

To this point, the program has not sought such support or recognition; it does not require such to accomplish its ends. One or more faculty members who would teach in the program are currently pursuing collaboration initiatives with other universities provincially and regionally.

Related programs

Interdisciplinary graduate programs of various kinds exist on university campuses across Canada and elsewhere. The UBC Okanagan IGS program capitalizes on the unique features of the Okanagan campus —small size, entrepreneurial spirit, good relations with regional governance, non-governmental, and private sector entities, and flexible, quickly responsive university governance processes— to create a dynamic and nimble program of Theme-based interdisciplinary study that can speedily respond to new pedagogical developments and to emerging problems worthy of graduate-level study.

Contact information

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THE UNIVERSITY OF BRITISH COLUMBIA

COLLEGE OF GRADUATE STUDIES
Okanagan Campus

WORKING DOCUMENT

INTERDISCIPLINARY GRADUATE STUDIES PROGRAM REVISIONS

August 18, 2017

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Introduction

INTRODUCTION

Over the past twenty-eight months, the College of Graduate Studies led a review of the IGS program at UBC Okanagan, and then established a task force to conduct a series of consultations regarding revisions of the program in response to that review and to make recommendations for revisions to the IGS program. While these consultations and subsequent recommendations were undertaken with the best intent, two of the Faculties (IKBSAS and FCCS) most involved in the delivery of the IGS program and responsible for a majority of current IGS students recommended that the revisions proposed by CoGS in an inter-Faculty curricular consultation process in January, 2017 not be supported. The specific problems and challenges that key stakeholders and decision makers in both Faculties (including the Deans, relevant Associate Deans, and Faculty level committees with responsibility in the Graduate Studies space) identified regarding the proposed changes are detailed in the Faculty consultation documents that FCCS and IKBSAS returned to CoGS on February 3, 2017 and February 9, 2017 respectively.

This document offers-some changes to the model for IGS in addition to those recommended in the proposal CoGS submitted to all the Faculties on January 19, 2017 as the mandatory first step in the Senate approval process for revisions to program curricula and requirements. The model outlined in the present document seeks to preserve what has been achieved in IGS to date and to set a framework for a sustainable, rigorous, and institutionally appropriate IGS program into the future. It has been collaboratively developed between the Associate Dean of CoGS and the two Associate Deans in FCCS and IKBSAS responsible for graduate education, informed by feedback from relevant committees, and vetted by the Deans of CoGS, FCCS, and IKBSAS. The model builds on the work done by the IGS Review Task Force (October, 2014-June 2015) and the IGS Working Group (September, 2015-January 2017). We gratefully acknowledge the work of the many faculty, staff, and students that has thereby contributed to the substance of this document.

Principles

The UBC Okanagan Interdisciplinary Graduate program is intended to provide exemplary training and education in interdisciplinary graduate research. IGS at UBC Okanagan adopts a working definition of interdisciplinarity that is open and practical. As its underlying principle, the IGS program fosters research and learning that requires collaboration from multiple fields of knowledge to achieve its goals. Such an approach includes knowledge and learning that is community based, and it is open to any pedagogical or research undertaking that does not claim at its outset to exhaust the range of knowledge that could be brought to bear on any given problem. In such an approach, a single “take” on interdisciplinarity will not work across different circumstances. For UBC Okanagan, interdisciplinarity must therefore be a collaborative, inclusive term that respects academic-, community-, and other context-based (sometimes called “transdisciplinary") approaches to theoretical or practical problems (sometimes called "integrative interdisciplinarity"). It must include reasoned and reasonable attention to the different traditions, epistemologies, values, and moral principles that will, with equal likelihood, conflict and complement each other when brought together in this collaborative way.

In accordance with these principles, we will not “define” interdisciplinarity in a rigid manner that could easily and without purpose encourage ceaseless sectarian disputes and their accompanying skepticism. Instead, as a route to interdisciplinary research, in keeping with the student-centered focus on the research enterprise that is at the heart of IGS graduate education, and without implication of exclusivity or exhaustiveness, one could ask the following questions concerning the research undertaking of any particular IGS student:

1. What disciplines or disciplinary approaches will be included in the student’s approach to the problem they are addressing in their research?

2. How do these approaches complement, contradict, oppose, or support each other in the research? And how do these approaches relate to other, often disciplinary, research traditions?

On its Okanagan campus, UBC will, therefore, continue to offer interdisciplinary graduate degrees across a wide range of program options from the humanities and creative arts to social and natural and applied sciences. IGS programs will be thesis-based programs, and

be imbedded in Themes. A Theme will be defined as an articulated area of study supported by a group of faculty engaged in a common substantive area of interdisciplinary, trans-disciplinary, and/or multidisciplinary research. A Theme will offer a specific, articulated group of graduate courses to advance the education and expertise of students in that area, and its faculty members will be available to assist and/or supervise students in their Theme-based program of master's or doctoral studies. IGS Themes will be developed according to the criteria and processes laid out in this document.

WHY THEMES, AND WHY INTERDISCIPLINARITY?

An IGS program centered in Themes provides several benefits for faculty and students at UBC's Okanagan campus. First, it takes best advantage of the unique profile of the campus. The small size of the institution has been touted since its beginning as fostering an intimate learning environment for undergraduates. At the graduate level, however, that quality can be offset by the inability of too-small clusters of discipline-based faculty to provide a coherent and viable program of graduate study. Enabling groups of world-class research faculty to join together around a thematic problem that can be approached from each of their disciplinary perspectives allows Themes to serve as agglomerators for cutting-edge graduate research and pedagogy.

Second, interdisciplinarity has been a long-standing alternative in research and graduate education. A Theme-based approach to graduate education formalizes this option and provides an administrative framework for mobilizing adequate resources for research and teaching. Considerable higher education research and much of the first decade of experience on this campus makes clear that faculty and administrative support for interdisciplinary graduate education notwithstanding, such an undertaking is difficult to "institutionalize" and thereby sustain in a typical university structure that is formed around disciplines. The Theme-based approach as outlined in this document aligns with recommended best practices to overcome that sustainability problem.

Third, alongside excellence in research and teaching, a Theme-based approach to graduate education supports three values held on the Okanagan campus since its beginning as a UBC campus: innovation and nimbleness coupled with flexibility. The requirement for periodic review of Themes in order for them to extend their pedagogical mandate not only ensures accountability, but also means that new Themes can come into

being as faculty identify new areas that can be addressed in graduate education through new interdisciplinary clusters of faculty peers and graduate students.

Finally, while it represents a major new effort, this emphasis on Themes in IGS is not the introduction of completely new modes and orders on this campus; it is a renewal and revitalization of the original spirit of IGS, as articulated in the first paragraph of its description in the UBC Okanagan Academic Calendar.

IGS Governance Structure

DEAN/ASSOCIATE DEAN, COLLEGE OF GRADUATE STUDIES

Roles and Responsibilities in regard to IGS[1]

1. Liaises with students and faculty on all issues related to IGS; manages student issues and other relevant matters between Themes if and as required.
2. Serves as Chair of the IGS Program and Curriculum Committee.
3. Oversees compliance with all CoGS policies and procedures by tracking the progress of students through their programs of study (e.g., admission, coursework, comprehensive exams, advancement to candidacy, thesis/dissertation defense, etc.).
4. Reviews recommendations of the Faculties (via Deans or designated Associate Deans/Directors responsible for Graduate Studies or their designate) to determine whether the following meet program requirements:
    a. Admissions;
    b. Funding of all students;
    c. Establishment of Supervisory Committees;
    d. Student progress reports.
5. Liaises with the Deans (or designated Associate Deans responsible for Graduate Studies) regarding exceptions around admissions and funding recommendations.

[1] Note that the roles detailed in items 3-5 are common to all graduate programming at UBC Okanagan, and derived from Senate Policy O-4. Note also that the changes in the revisions proposed herein effectively modify the existing devolution of CoGS responsibilities to Faculties regarding IGS programming (also part of O-4), and bring IGS into alignment with other programs. The exception to this general change in alignment is that the Dean or Associate Dean of CoGS is Chair of the IGS Program and Curriculum Committee. CoGS thereby retains a more active role in its relationship to this program than to any other UBCO graduate program. The reason for this proximity is the pan-University, cross-Faculty nature of the program, which requires that a University-wide entity have a more central coordinating (but not directing) role in the program. CoGS is the best-placed pan-University entity to play that role.

IGS PROGRAM AND CURRICULUM COMMITTEE

The IGS Program and Curriculum Committee reviews curriculum proposals and formulates guidelines and procedures for the Interdisciplinary Graduate Studies (IGS) program.

The committee meets monthly as business requires, and no less than once in each of the W1 and W2 semesters.

Terms of Reference

Membership

1) Dean/Associate Dean of CoGS — Chair (non-voting, except in case of tie votes on the Committee)
2) Faculty Members
    a) One Theme Coordinator or designate from each IGS Theme
    b) The Associate Dean/Director (or designate) responsible for graduate studies in every Faculty that is participating in the IGS program.[2]
    c) One Faculty-level IGS coordinator from each Faculty that is participating in the IGS program (note: this role is, at a minimum, responsible for overseeing the IGS program progress of students admitted under the previous guidelines and of PhD individualized option students, and for tracking all IGS students within a Faculty).
3) Student Members (2 year terms)
    a) One student (s)elected from graduate students in the IGS Master's program
    b) One student (s)elected from the graduate students in the IGS graduate doctoral program
4) One non-voting staff member of the CoGS office, appointed by the Dean of CoGS, to provide timely policy, regulatory, and technical implementation expertise regarding changes that the Committee may propose.

[2] "Participating Faculty" in the IGS program for purposes of this committee composition shall be defined as a Faculty in which three IGS students are under the primary supervision of one or more faculty members in that Faculty or as a Faculty that is hosting or co-hosting Theme.

Continuation of Membership

5) Members shall cease to be members of the Program Committee if, as applicable, they cease to be a member of the IGS constituency they represent, or they cease in their official role as either Associate Dean (or equivalent), Faculty IGS Coordinator, or Theme Coordinator, or if the constituency they represent ceases to participate (as herein defined) in the IGS program.

6) The Chair may grant members of the Committee a leave of absence for up to three consecutive ordinary meetings of the Committee. Any member who is absent without leave for more than three consecutive ordinary meetings will be considered to have withdrawn from the committee. The Chair of the committee will have the option of requesting a replacement representative from the appropriate administrator.

Responsibilities and Activities of the Program and Curriculum Committee

1. Reviews and recommends for Senate approval any curriculum proposals for the Interdisciplinary Graduate Studies (IGS) program.
2. Reviews and recommends for Senate approval:
    a. proposals for the establishment of new Themes;
    b. revisions to existing Themes;
    c. the dissolution of Themes it judges to be no longer viable.
3. Undertakes consultations with Faculties and faculty in all cases as appropriate to produce recommendations to Senate.
4. Establishes, reviews and amends as needed guidelines and procedures for the IGS program. (These items do not require approval by Graduate Council, but may be reviewed by that body for conformity to CoGS guidelines, policies, and procedures). Activities under this responsibility include:
    (1) Develop rules and regulations for the IGS program;
    (2) Review the structure of IGS and recommend changes as the Committee deems necessary;

(3) Periodically review guidelines and procedures for the IGS and recommend amendments as the Committee deems necessary.

5. Engages in SEM consultations with relevant Faculties and with the Dean of CoGS as appropriate.
6. Reviews and recommends to Graduate Council, as needed, resourcing agreements with Deans, Heads, and other pertinent administrators concerning instructional and other commitments for the operation of the IGS program.
7. Oversees arrangements for applying pre-existing rules for of students in previous IGS program.
8. Coordinates or directs review of each Theme every five (5) years.
9. Conducts meetings of the IGS Program and Curriculum Committee:
    - The schedule for regular monthly meetings is to be set by the Dean/Associate Dean of CoGS, with the schedule distributed to members and posted at the beginning of the Winter I term.
    - Extraordinary meetings may be called by the Dean/Associate Dean of CoGS provided that five (5) business days notice is given to members of the Committee.
    - The quorum for meetings of the IGS Program and Curricula Committee will be six (6) members, including the Chair.
    - The deadline for submission of agenda items will normally be ten (10) business days) prior to the scheduled meeting. The meeting agenda shall normally be circulated to members of the Program Committee a minimum of five (5) business days prior to the meeting.

Themes

INTRODUCTION

Themes are the core modality for delivering MA, MSc and PhD programming in the renewed Interdisciplinary Graduate Studies program.

An IGS Theme has several basic characteristics:

1. It advances the interdisciplinary study of a topic, theoretical inquiry, or issue/problem through the application/exploration of multiple disciplines or interdisciplinary bodies of knowledge and approaches as a means to gain understanding of a topic, theoretical inquiry, issue or problem. This approach stands in a friendly, but clear distinction to single-discipline study.
2. It requires and enables students to acquire a basic knowledge about interdisciplinarity as a wide-ranging academic approach to problems, topics, and subject areas as described above in the *Principles* section of this document.
3. To come into existence, it requires a collective of intellectual knowledge and resources on which the Theme is fashioned.
4. Theme research should be both innovative and responsive to trends in academic scholarship and to trends in undergraduate programs, from which students will be looking for further education to advance their knowledge and skills.
5. All Themes will be required to have a governance structure that is consistent with their purpose as core "delivery vehicles" for IGS graduate education.

CRITERIA FOR INITIATING NEW AND/OR TRANSITIONING EXISTING THEMES

In order for a Theme to come into existence (or to transition into the new IGS format) a proposal for a Theme must fulfill a defined set of criteria, as outlined below. These

criteria cover considerations of curriculum, faculty, purpose/educational outcomes, and resources.

The process required to bring a Theme into existence is as follows:

1. Identify a common area of interest (a Theme) around which a group of contributing faculty members can coalesce.
2. Having made such an identification, discuss the potential for an identified Theme with the appropriate administrators (Heads, Directors, Associate Deans/Deans,) in the home Departments and Faculties of the individual faculty members who would potentially contribute to the Theme have their institutional homes.
3. Making reference to the "resource model" outlined below, these administrators must then identify the resources necessary to sustain a Theme for a minimum of five years. The relevant Faculty administrators (i.e. Dean(s) or Dean's delegated Associate Dean/Director, and unit Heads responsible for workload assignment) must sign off on the resource model; that is, all relevant unit administrators must agree to the commitments embedded in the resource model document.
4. Having determined that there is significant interest and support, the following elements will be required for a formal proposal:
    a. A summary of the substantive scope of the Theme
    b. Criteria by which prospective students in the Theme will be evaluated for admission,
    c. The full CVs of the faculty members who propose to be involved in the Theme
    d. Proposed curriculum, including a list of potential Theme seminar instructors.
    e. The associated resource model.

f. Identification of a faculty member willing and able to serve as the Theme coordinator. The Theme Coordinator will be appointed for a fixed term by the relevant Dean(s).
g. Identification of at least three (3) nominated Theme members who have scholarly backgrounds/records that demonstrate potential to be instructors of the core Theme seminar (described below) and who explicitly state a willingness to perform this role.

5. A proposal containing these listed elements must be completed and submitted to the appropriate committee of the proposed host Faculty for the Theme (please note: these guidelines always assume the possibility that more than one Faculty support a Theme as co-hosting Faculties).
6. Upon successful completion of the approval process of the relevant Faculty committee(s), the complete package is forwarded to the IGS Program and Curriculum Committee, which will review and make recommendations to Graduate Council in a manner consistent with the approval processes for all CoGS curriculum proposals.
7. Formal consultations, using appropriate Senate forms, are forwarded to the Senate Curriculum Committee for approval and then forwarded to Senate for final curricular approval.
8. Note: Each Theme may encompass faculty members from different UBCO Faculties, but must demonstrably engage at least two or more disciplines. The IGS program does not place formal limits on the number of Themes in which an individual faculty member may participate; the only natural limits are faculty qualifications as set out in the approved terms of reference of each Theme and the ability of faculty members to dedicate sufficient teaching and supervisory efforts to the Theme(s) in which they participate.

THEME GOVERNANCE

Every Theme is governed by a Theme Committee, which is chaired by a Theme Coordinator, who is appointed for a fixed term by the Dean of one of the hosting Faculties of the Theme. In the event of their absence from campus, Theme coordinators may designate a faculty member participating in the Theme to act as Theme Committee Chair in their place.

THEME PROGRAM COMMITTEE

Theme Committee Membership

The Theme Program Committee includes:

1) Theme Coordinator (Chair of Theme Committee)
2) Heads of Departments (or designates) involved in the Theme (defined as having at least one faculty member indicating interest in —and once the Theme is established, actually — supervising students in the Theme)
3) Faculty formally involved in the Theme, with formal involvement defined as

    i. supervising one or more students in the Theme;

    ii. regularly contributing to the Theme thorough some other avenue (e.g. teaching a core course, serving on supervisory committees of students in the Theme);

4) 1 Student participating in the Theme (elected by the students participating in the Theme, or, if an election mechanism is not available, selected by the Theme Coordinator).

Responsibilities and Activities of the Theme Committee

1) Formulates and proposes for Senate approval Theme-based curriculum proposals and curriculum revisions.
2) Advises the Theme Coordinator on - strategic direction of Theme resources and supervision/direction of students.
3) Reviews all applications for admission to the Theme and makes recommendations for admissions to the Theme Coordinator.
4) Conducts meetings of the Theme Committee:

- The schedule for regular meetings (no fewer than two per semester) is to be set by the Coordinator of the Theme, with the schedule distributed to members and posted at the beginning of the Winter I term.
- Extraordinary meetings may be called by the Coordinator, provided that five (5) business days notice is given to members of the Theme Committee.
- The quorum for meetings of any Theme Committee will be 50% of the membership (including the Chair) plus one.
- The deadline for submission of agenda items will normally be ten [10] business days prior to the scheduled meeting. The meeting agenda shall normally be circulated to members of the Theme Committee a minimum of five (5) days prior to the meeting.
- Committee membership will be determined annually and ratified by the committee.

Theme Coordinator Role and Responsibilities

The Theme Coordinator:

1. Is responsible —in consultation with the Theme Committee— for the day-to-day operation of the Theme, including:
    a. the delivery of curriculum;
    b. the monitoring of the progress and faculty supervision of students;
    c. the management of Theme-sponsored events, such as conferences, workshops, and public presentations by faculty and guest speakers.

    The Theme Coordinator must fulfill these responsibilities in a manner that recognizes that Department/Unit Chairs are responsible for making workload assignments to faculty members and for controlling teaching resources such as Teaching Assistantships, Faculty-sponsored research assistantships, and the like. The Faculties must, in turn, meet the responsibilities set out in the formal agreement concerning resources that establishes a Theme.
2. Reports in their capacity as Theme Coordinator to the Associate Dean/Director responsible for graduate education in their Faculty.

3. Oversees Theme compliance with all CoGS policies and procedures by tracking the progress of Theme students through their programs of study (e.g., admission, coursework, comprehensive exams, advancement to candidacy, thesis/dissertation defense, etc.).
4. Makes recommendations for graduate admissions to the Theme and for student support to the Associate Dean/Director of the relevant Faculty(s).

Note: Themes may delegate specific responsibilities to sub-committees.

THEME FACULTY PARTICIPATION

For practical reasons, every Theme should, ideally, have ten (10) or more faculty members identified as full participants in the activities of the Theme, that is, with appropriate research records and interest in participating in supervisions in the Theme. Nominated faculty members must have scholarly records appropriate to participation in the Theme and must indicate interest in participating in the supervision of graduate students in the Theme, so that the host and/or associated Faculties[3] can reasonably support the breadth and depth needed for an interdisciplinary Theme. While exceptions may be considered, exceptions will not be made if there are fewer than six (6) such faculty members; fewer faculty would raise logistical problems, for example, around study leaves, potential illness, and retirement/replacement. There is no upper limit to faculty membership in a Theme.

THEME RESOURCES

In order to assure long-term viability by means of secure resources, each Theme will be hosted by a Faculty or Faculties that will commit resources to support it; a formal

[3] Faculties will assign workloads as per their own processes, and this document does not presume to define or constrain those processes. Faculties will be responsible to confirm that proposed Theme members from their Faculty are in a positon to participate effectively.

agreement delineating the responsibility and commitments of the Faculties involved for an initial 5 year period will be developed for each Theme. This resource model, as discussed above, must be approved by the appropriate (i.e. resource managing) administrators. The IGS Program and Curriculum Committee will direct or conduct a review of each Theme at least once every five years.

THEME ADMISSIONS PROCESSES

Apart from the university-wide College of Graduate Studies admissions standards approved by Senate, a Theme proposal and a subsequent Theme description in the IGS program must identify what kinds of students may be attracted to the Theme, what kinds of outcomes are intended, and what kinds of criteria, alongside the general university criteria, will be used to evaluate suitability for the program. Students will apply for entrance into a specific Theme; recommendations for admission will flow from the Theme committee, through the Chair of that committee (normally the Theme coordinator), to the Associate Dean of the student's Faculty (i.e. the Faculty of the student's primary supervisor), and then to CoGS.

IGS Curriculum[4]

IGS core course requirements will consist of three mandatory courses: a Pro-Seminar course delivered by the host Faculty(ies), and materially relevant to the students in the Theme; an introductory course specific to the Theme; a methods course relevant to the Theme. The Pro-seminar need not be restricted to Theme students, but its scope must be directly relevant to those students, and include all the Theme students entering in a given year. This three-course curricular requirement is intended to provide an added benefit: give students a cohort and unify the program.

The curricular requirements for Master's students in IGS are the following.

A. IGS 524/IGS 58X/IGS 68X (3) Pro-Seminar in Interdisciplinary Studies

The substantive content of the course is determined by the Theme and generated by student-led research, enhanced by/with professional training such as workshops and mentoring that are focused on personal and professional development. This training, which is designed to enhance the graduate student experience beyond what is available in laboratories, seminars, or classroom instruction, intends to create a widely demanded cohort effect for IGS graduate students. Each Theme must either mount or (with the permission of that unit offering it) designate a Pro-Seminar. That is to say, each Theme must ensure that a Pro-Seminar for its students is appropriately resourced and is "Theme-specific," i.e., aimed at the likely interests of the students in that Theme. The delivery model for this course is flexible: it could, for example, occur in separate units of less than three credits each (totaling three credits all together), or over the course of two semesters, and so on.

B. IGS 55X/65X Theme Seminar

Each Theme will be required to provide a mandatory core course for all students enrolled in the Theme. The course will be an advanced course in interdisciplinary research that provides an introduction to the research and challenges surrounding the

[4] Please note, the following processes do not obviate Faculty level processes, or Faculty Councils in curricular approval.

topic(s) of the Theme by focusing on theoretical and methodological approaches to research problems in the Theme. Such a course can be delivered in a variety of formats at the discretion of the instructor and/or the Theme Program Committee. The course is intended to unite the Theme and cover the substantive literature and epistemological approaches framing it. One way to understand the difference between this Theme Seminar and the IGS Pro-Seminar is to see the Theme Seminar as being driven by the instructor, while the IGS Pro-Seminar is driven by the professional needs of the students.

C. **IGS 50X/60X Theme Methods**

The host Faculty(ies) will offer a mandatory methods seminar, the content of which is appropriate to the research being conducted by the students. Faculties and Themes may collaborate in offering appropriate methods courses or use existing methods courses offered by discipline-based programs.

Additional Curriculum Requirements

Alongside the IGS-wide Pro-Seminar and the Theme-based introductory course, and relevant methods course, host Faculties will also offer other courses appropriate to the Theme on an annual basis. Master's students will be permitted only three credits of "directed readings" or "directed study" toward completion of their degree requirements. Where appropriate, a maximum of six credits of undergraduate courses (numbered 300-499) may be taken by Master's level students. Other courses in fulfillment of these additional curricular requirements could, depending on the research agenda of the student, include courses such as Field Methods (6hrs) or Laboratory Methods (6 hrs), or substantive content courses

It will be at the discretion of each Theme to establish Theme-specific requirements and of each supervisory committee to ensure that the student has received the appropriate course-based training for their proposed research program.

The curricular requirements for Theme-based PhD students in IGS are the following.

(Note: students transitioning into the PhD program from the IGS Master's program need not take the three courses over again; suitable alternatives will be determined by the Theme coordinator in consultation with the student's supervisory committee).

A. **IGS 524/IGS 58X/IGS 68x (3) Pro-Seminar in Interdisciplinary Studies**
(As above). This course is the only firm requirement for PhD students in IGS. All students must take this course, whether in the Theme in which they are registered or in another Theme as appropriate to their research interests.

B. **IGS 55X/65X:Theme Seminar or other appropriate course.**

This course can be as above, the basic Theme core course in topics, theory, and methodology of the Theme, or it can be another course, chosen by the student in collaboration with their supervisory committee, that satisfies the specific research interests or needs of the student.

C. **IGS 50X/60X Theme Method or other appropriate course**

PhD students may choose to enroll in the Theme method course, or they may choose to enroll in another methods course as appropriate to their research needs and interests.

The minimum number of course credits required for Master's degrees (12 or 18 credits, depending on the program) will remain as they are in the current IGS program. The minimum number of course credits required for PhD degrees, however, will be 9 credits. PhD students, in collaboration with their supervisory committees, may choose to enroll in further courses or directed studies as needed for successful completion of their dissertation research. The maximum number of credits in course-work that Themes or supervisory committees can require toward the PhD degree is 18.

Comprehensive Exam, Thesis, and Dissertation examination/defense guidelines for IGS will remain as currently required.

Individualized Option

There are no single-discipline individualized options available in the IGS program, and applicants to the individualized option must propose a demonstrably interdisciplinary program of study and research. The individualized option is only available at the PhD level. Because of the added challenges of the individualized option, additional requirements, which include the following, accompany a student's admission to this option:

1. Only applicants with first-class standing are eligible for admission to the individualized option.
2. Applicants interested in pursuing an individualized option must have their study plan (i.e. a Statement of Intent/Statement of Purpose) endorsed by signature by the proposed supervisor of the applicant, and must include the names of at least two other faculty members who agree by signature to participate on the supervisory committee of the student. The proposed supervisory committee composition must reflect the interdisciplinary nature of the proposed program of study and research. At least, one of the additional supervisory committee members must commit to, and be capable of, taking on a co-supervisory role should circumstances warrant.
3. The proposed supervisor and the relevant Faculty(ies) of an applicant to the individualized option must demonstrate the ability and willingness to fund the applicant for a minimum of three years and a maximum of four years at a set minimum expected funding level (consistent with the funding levels of the relevant Tri-council Doctoral Fellowships). The funding commitment must be confirmed, by signature, of the proposed Supervisor, of the Head of the student's proposed home department and/or of the Associate Dean responsible for Graduate Studies in the Faculty of the Supervisor.. Admissions recommendations

concerning individualized options applicants will be made by a committee convened by the Faculty of the proposed supervisor for that purpose.

4. The proposed supervisor of an applicant must detail the internal and external scholarly supports/networks that will be in place to support the student's program of study.

All individualized option students must be enrolled in an appropriate Pro-Seminar in their first year, and they must complete a core methods course. All Individualized Option students and/or their supervisor(s) must identify at least one advanced course that can substitute in their Individualized Option for the Introductory Core Course that all Theme-based students must successfully complete.

Interim Governance and Application of Pre-Existing Regulations

All students admitted into the IGS program prior to the implementation of the new Themes-based requirements will be subject only to those IGS standards and requirements that were in place prior to that implementation. It will be the responsibility of the College of Graduate Studies and the Faculties in which students are currently enrolled under those previous requirements to ensure that these students continue to be supported in their programs of study and are given every opportunity of successful completion as they move through their programs. In collaboration with the Faculties and Schools, CoGS will continue, as before, to monitor and support these IGS students as the previous IGS program draws to a close.

Students who have expressed interest in the IGS program as constituted under the prior requirements, but who have not yet been admitted to the program, will be given adequate notice to enable them to look for other graduate programs if they so choose.

Students currently enrolled in the IGS program may, if they wish to do so, apply for admission to a Theme and complete their IGS degree under the auspices of that Theme. They must, however, complete all IGS course requirements for students enrolled in that Theme. Normally, this option is not open to IGS PhD students who have achieved candidacy. Students admitted under the new requirements and wishing to transfer from one Theme to another must, similarly, apply for admission to that new Theme and, if admitted, fulfill their IGS degree requirements under the auspices of that Theme.

APPLICATION OF PRE-EXISTING REGULATIONS AND TRANSITION GOVERNANCE AND ADMINISTRATION

The newly constituted IGS Program and Curriculum Committee, as described above, will be responsible for managing the transition into the new IGS format and for stewarding those students retained under the old IGS format. The timeline for the transition will be set out in the documents when Senate approves the new curriculum and Theme structure. The first phase of the transition will end when a group of Themes is fully articulated and operating in accordance with the procedures and governing structures described in this document. The second phase of the transition will end when all

students admitted under the former IGS program have graduated or otherwise departed the program.

We suggest the following timelines:

First Phase:

1) May/Oct 2017 – New IGS structure approved by Senate
2) Nov 2017 – May 2018 – Themes established and approved by Senate
3) Sept 2018 - May 2019 – soft launch of new Themes; additional Themes approved by Senate (recruitment efforts for hard launch)

Second Phase:

4) Sept 2019 – official launch of new IGS program structure, closure of old IGS program structure (no new students admitted under previous rules/regulations)

Indicate timeline for setting up the approval committee for Themes prior to existence of new Themes and the IGS Governance Committee

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

Category**: 2**	
Faculty/School: N/A **Dept./Unit:** College of Graduate Studies **Faculty/School Approval Date:** 20160412 **Effective Session:** 2016S	**Date:** 20160404 **Contact Person:** Dr. Thomas Heilke **Phone:** 250.807.8539 **Email:** thomas.heilke@ubc.ca
Type of Action: Revision to Calendar Description	
Rationale: Separate and apart from any of the major changes currently being considered for the IGS program, and for distinct reasons corresponding to the several themes, the current status of each of the IGS themes is somewhat varied and up in the air. Accordingly, it makes more sense that the specific status of the themes be tracked on the IGS website, and that such specific, potentially rapidly changeable details, be kept out of the calendar. The deletion of the last sentence of 14973 is recommended, since it is inconsistent with actual UBC Okanagan practice, and essentially not true.	
	Draft Academic Calendar URL: http://www.calendar.ubc.ca/okanagan/proof/edit/index.cfm?tree=18,285,898,1058 Homepage (draft) Faculties, Schools, and Colleges College of Graduate Studies Interdisciplinary Graduate Studies**Program Overview** Program Overview
Proposed Academic Calendar Entry: **[14973]** Themes for IGS programs are set from time to time by the College of Graduate Studies. Themes are areas of research and study without their own degree programs at the UBC Okanagan campus, but they are specific enough to warrant concentrated and defined areas of study.	**Present Academic Calendar Entry:** **[14973]** Themes for IGS programs are set from time to time by the College of Graduate Studies. Themes are areas of research and study without their own degree programs at the UBC Okanagan campus, but they are specific enough to warrant concentrated and defined areas of study. ~~**Upon completing an IGS degree to the satisfaction of the theme committee, the following notation is added to a student's transcript: "As part of their**~~

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	~~**Interdisciplinary Graduate Studies degree program, this student completed a theme entitled NAME OF THEME."**~~
[14974] At present, the following themes have been identified as part of the IGS program: **[14975]** • Health and Exercise Sciences • Indigenous Studies • Latin American and Iberian Studies • Optimization • Sustainability • Urban Studies (M.A. only) **More information about the themes are listed on the College of Graduate Studies website, << under Interdisciplinary Graduate Studies http://gradstudies.ok.ubc.ca/current-students/igs.html>>.**	**[14974]** At present, the following themes have been identified as part of the IGS program: **[14975]** • Health and Exercise Sciences • Indigenous Studies • Latin American and Iberian Studies • Optimization • Sustainability • Urban Studies (M.A. only)

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

Category**: 1**	
Faculty/School: College of Graduate Studies **Faculty/School Approval Date:** 2017/05/17 **Effective Session:** 2019WT1	**Date:** 2017/06/05 **Contact Person:** Dr. Thomas Heilke **Phone:** 250.807.8539 **Email:** Thomas.Heilke@ubc.ca
Type of Action: Revision to Program – **Admission Requirements**	

Rationale:

During the academic year 2014-2015, the Dean of CoGS mandated a Task Force to conduct a full review of the Interdisciplinary Graduate Studies (IGS) program. The Task force submitted a report in June, 2015 that contained numerous recommendations for refitting the IGS program at both degree levels. Of those recommendations, the changes proposed in this document specifically address the following:

1. UBC Okanagan must develop a model for IGS that embodies specified criteria of excellence and coherence.
2. Curricular and other programmatic means of achieving pedagogical cohort effects should be a primary concern in the development and delivery of IGS programming.
3. "Themes" will be a core aspect of IGS and will be the primary mode of thinking about research and teaching in IGS.
4. A successful IGS program will require widespread understanding of its occasionally atypical needs in programmatic matters of admissions, funding, curricula, etc., that may stand in some tension with the governance and management structures that currently exist from the decanal level downward to serve the student and faculty needs of disciplinary research and education.
5. Admissions procedures, theme creation, maintenance, and dissolution, and other faculty governance requirements in IGS will require formally structured faculty input.
6. The new IGS would have a specific admissions process designed to meet its unique needs, which would include an assessment for entry that is linked to a student's inclination toward interdisciplinarity. Incentives for students to apply and accept admission to such a program include: admissions selectivity; the known quality and commitment of faculty; scholarships and assistantships available in, through, or around the program; and, examples of alumni post-graduate success.

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The "Interdisciplinary Graduate Studies Program Proposed Model" attached to this proposal serves as an elucidatory appendix to this document.

	Draft Academic Calendar URL: **http://www.calendar.ubc.ca/okanagan/proof/edit/index.cfm?tree=18,285,898,1060**
Proposed Academic Calendar Entry:	**Present Academic Calendar Entry:**
Admission Requirements [12111] Admission Procedures	Admission Requirements [12111] Admission Procedures
[12112] Please refer to the College of Graduate Studies for application and admission deadlines.	**[12112]** Please refer to the College of Graduate Studies for application and admission deadlines.
Master of Arts (MA) and Master of Science (MSc).	
The Interdisciplinary Graduate Studies (IGS) program is governed by the general guidelines, policies, and procedures of the College of Graduate Studies, including its standards for admission of students. The IGS program has additional requirements for admission, which are described below.	
[16181] Applications received before the **application** deadline will be considered for admission on a competitive basis. Applications received after the deadline will be considered if resources permit. Application procedures **for IGS** are posted on the College of Graduate Studies **website**.	**[16181]** Applications received before the deadline will be considered for admission on a competitive basis. Applications received after the deadline will be considered if resources permit. Application procedures may be found at the College of Graduate Studies.

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[12114] **In addition to College of Graduate Studies requirements, completed** applications for the IGS program must include the name of the proposed supervisor, **the department or unit of the proposed supervisor,** and a proposal indicating the study and research to be **conducted** with that proposed supervisor. Applicants **to IGS** will not be **admitted** until **they have obtained** commitment from a supervisor.	**[12114]** Applicants will not be ~~**considered for admission**~~ until commitment ~~**is obtained**~~ from a supervisor. ~~**Final**~~ applications for the IGS program must include the name of the proposed supervisor, ~~**the proposed supervisor's department or unit**~~, and a proposal indicating the study and research to be ~~**done**~~ with that proposed supervisor.
[12115] The supporting supervisor must provide written confirmation of support for the **proposed plan** of study and research, the availability of facilities required to conduct the research, and the level of funding from research grants and contracts that will be made available for the support of the applicant.	**[12115]** The supporting supervisor must provide written confirmation of support for the ~~**program**~~ of study and research, the availability of facilities required to conduct the research, and the level of funding from research grants and contracts that will be made available for the support of the applicant.
[12116] Admission Criteria	[12116] Admission Criteria
[12117] Admission to this program is competitive and limited. Students who meet the minimum admission requirements may not be accepted to the program.	**[12117]** Admission to this program is competitive and limited. Students who meet the minimum admission requirements may not be accepted to the program.
[12118] Applicants will be admitted on the basis of**:** **[12119]** • **Their** record of academic and professional achievements;	**[12118]** ~~**Students**~~ will be admitted on the basis of ~~**the:**~~ **[12119]** • ~~**student's**~~ record of academic and professional achievements;

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• **Their** letters of recommendation; • **The** quality and feasibility of **their** proposed **plan of** study and research; • **The** ability **of their proposed faculty supervisor** to support the **proposed** study **plan;** • **The** availability of financial and operational support. **Doctor of Philosophy (Ph.D.)** **The Interdisciplinary Graduate Studies (IGS) program is governed by the general guidelines, policies, and procedures of the College of Graduate Studies, including its standards for admission of students. The IGS program has additional requirements for admission, which are described below.** **[XXXXX] Students admitted to the Ph.D. program are expected to have a prior master's degree, the subject matter of which is relevant to the interdisciplinary study they propose to undertake in their IGS Ph.D. program.** **[XXXXX] Applications received before the application deadline will be considered for admission on a competitive basis. Applications received after the deadline will be considered if resources permit. Application procedures for IGS are posted on**	• letters of recommendation; • quality and feasibility of ~~**the**~~ proposed study and research ~~**proposal**~~; • ~~**supervisor's**~~ ability to support the ~~**program of**~~ study • ~~**and;**~~ availability of financial and operational support.

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the College of Graduate Studies website. **[XXXXX] In addition to these College of Graduate Studies requirements, applicants to IGS will not be considered for admission until they have obtained commitment from a supervisor. Final applications for the IGS program must include the name of the proposed supervisor, the department or unit of the proposed supervisor, and a proposal indicating the study and research to be conducted with that proposed supervisor.** **[XXXXX] The supporting supervisor must provide written confirmation of support for the plan of study and research, the availability of facilities required to conduct the research, and the level of funding from research grants and contracts that will be made available for the support of the applicant.** **[XXXXX] Admission Criteria** **[XXXXX] Admission to this program is competitive and limited. Students who meet the minimum admission requirements may not be accepted to the program.** **[XXXXX] Applicants will be admitted on the basis of:**	

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[XXXXX] • **Their record of academic and professional achievements;** • **Their letters of recommendation;** • **The quality and feasibility of their proposed plan of study and research;** • **The ability of their proposed faculty supervisor to support the proposed study plan;** • **The availability of financial and operational support.** **PhD Individualized Option** **There are no single-discipline individualized options for study available in the IGS program. Applicants to the PhD Individualized Option must propose a demonstrably interdisciplinary plan of study and research. The individualized option is only available at the PhD level. Because of the added challenges of the individualized option, the following additional requirements accompany the admission of a student to this option:** 1. **Only applicants with a minimum overall average of first-class standing (80% at UBC) in all graduate courses are eligible for admission to the individualized option.** 2. **Applicants interested in**	

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pursuing an individualized option must have their study plan (i.e. a Statement of Intent/Statement of Purpose) endorsed by signature by the proposed supervisor of the applicant, and must include the names of at least two other faculty members who agree by signature to participate on the supervisory committee of the student. The proposed supervisory committee composition must reflect the interdisciplinary nature of the proposed plan of study and research. **3. At least one of the additional supervisory committee members must commit to, and be capable of, taking on a co-supervisory role should circumstances warrant.** **4. The proposed supervisor of an applicant to the individualized option must demonstrate, by signature, the ability and willingness to fund the applicant for a minimum of three years and a maximum of four years at a set minimum expected funding level (consistent with the funding levels of the relevant Tri-council Doctoral Fellowships).**	

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The ability to meet this commitment will be confirmed, by signature, by the Supervisor's Head and/or the Associate Dean responsible for Graduate Studies in the Faculty of the supervisor. **5. The proposed supervisor of an applicant must detail the internal and external scholarly supports/networks that will be in place to support the student's plan of study.**	

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

Category**: 2**

Faculty/School: N/A **Dept./Unit:** College of Graduate Studies **Faculty/School Approval Date:** 20160412 **Effective Session:** 2016S	**Date:** 20160404 **Contact Person:** Dr. Thomas Heilke **Phone:** 250.807.8539 **Email:** thomas.heilke@ubc.ca

Type of Action: Revision to Calendar Description

Rationale: The IGS Program Committee has approved Guidelines for the Comprehensive Examination Process for Doctoral Students in the Interdisciplinary Graduate Studies Program that are consistent with CoGS requirements. The present language of the Academic Calendar does not reflect that reality and is, in fact, inconsistent with CoGS requirements and with the new IGS requirements as expressed in the guidelines.

Proposed Academic Calendar Entry:

[16209] Students must successfully complete:

[16210]

- **Comprehensives as outlined in the Guidelines for the Comprehensive Examination Process for Doctoral Students in the Interdisciplinary Graduate Studies Program**; and
- IGS 699 Doctoral Thesis.

Draft Academic Calendar URL:
http://www.calendar.ubc.ca/okanagan/proof/edit/index.cfm?tree=18,285,898,1059

Homepage (draft) Faculties, Schools, and Colleges College of Graduate Studies Interdisciplinary Graduate Studies**Program Requirements**

Program Requirements

Ph.D. Degree

Comprehensives and Doctoral Dissertation

Present Academic Calendar Entry:

[16209] Students must successfully complete:

[16210]

- ~~**Comprehensives determined by the supervisor and program committee in consultation with the student; and**~~
- IGS 699 Doctoral Thesis.

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

Category**: 1**	
Faculty/School: College of Graduate Studies **Faculty/School Approval Date:** 2017/05/17 **Effective Session:** 2019WT1	**Date:** 2017/06/05 **Contact Person:** Dr. Thomas Heilke **Phone:** 250.807.8539 **Email:** Thomas.Heilke@ubc.ca
Type of Action: Addition of language to clarifiy requirements for students who entered the program prior to September 1, 2018 and on or after September 1, 2018	
Rationale: The curricular, admissions, and governance changes in the IGS program are of sufficient depth and breadth that the Academic Calendar should provide students and their faculty supervisors some guidance concerning questions they may have concerning eligibility to participate in the new program, and what affects —if any— the changes may have on the programs of students enrolled prior to the changes taking effect.	
	Draft Academic Calendar URL: http://www.calendar.ubc.ca/okanagan/proof/edit/courses.cfm?go=code&code=IGS
Proposed Academic Calendar Entry: **Eligibility of currently enrolled students to participate in the revised IGS degree program** **Students who enrolled in the IGS MA, MSc, or PhD degree program prior to September 1, 2019 may choose to remain bound by the degree requirements (<<link http://www.calendar.ubc.ca/okanagan/index.cfm?tree=3,296,0,0 >>) of the IGS program as laid out in the Academic Calendar prior to that date. Students making this choice should refer to the Academic Calendar archive of the year they began their program to find their corresponding program requirements: http://www.calendar.ubc.ca/archive/okanagan/**	**Present Academic Calendar Entry:** **n/a**

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Students who enrolled in the IGS MA or MSc program prior to September 1, 2019 may *instead* state their desire to fufill the new, revised degree requirements of the IGS program that were implemented on September 1, 2019. **Students who enrolled in the IGS Ph.D. program prior to September 1, 2019 may *instead* state their desire to fufill the new, revised degree requirements of the IGS program that were implemented on September 1, 2018. *However*, Ph.D. students who achieved candidacy prior to September 1, 2019 are not eligible for this option.**	

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

Category**: 1**	
Faculty/School: College of Graduate Studies **Faculty/School Approval Date:** 2017/05/17 **Effective Session:** 2019WT1	**Date:** 2017/06/05 **Contact Person:** Dr. Thomas Heilke **Phone:** 250.807.8539 **Email:** Thomas.Heilke@ubc.ca

Type of Action:
Revision to Course - IGS 524 (for approval), Pending new courses (for information)

Rationale:
The revised IGS 524 Proseminar in Interdisciplinary Studies, the newly developed IGS 531 Theme Core Course, and the newly developed IGS 571 Interdisciplinary Research Methods course will be will be the three core curricular components of the revised IGS Program.

The IGS 524 proposed flexible credit weight allows flexibility in delivery of the three credits.

The objective of the IGS Professional Seminar is to provide to graduate students workshops and mentoring that are focused on personal and professional development; this training, which is designed to enhance the graduate student experience beyond what is available in laboratories, seminars, or classroom instruction, intends to create a widely demanded cohort effect for IGS graduate students.

Theme courses:
Each Theme will be required to develop a Core Course and one or more Interdisciplinary Research Methods courses as appropriate to the subject matter and research directions of that Theme.

These presented course descriptions (below) represent a shell of what these courses will be as they are further developed and articulated in the context of each IGS Theme. As each Theme is approved and comes onboard the IGS program, titles and course numbers of IGS 531 and IGS 571 may be changed or expanded to suit the needs of each particular Theme.

Note: Themes may propose alternative Proseminar courses.

They are listed here for information only:

IGS 531:Theme Core Course
An advanced course in interdisciplinary research that includes the research and challenges surrounding the topic(s) of the Theme by focusing on theoretical and methodological approaches to research problems in the Theme. The course includes a treatment of the epistemological approaches framing the Theme. This course will be

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delivered in a variety of formats at the discretion of the instructor and/or Theme governing committee. Restricted to students in the IGS MA, MSc, or PhD program.
Prerequisite: None

IGS 571 Interdisciplinary Research Methods
A mandatory advanced course in interdisciplinary research methods that introduces the research methods and challenges surrounding the topic(s) of each Theme. The course focuses on qualitative, hermeneutic, and/or quantitative methods applied to Theme interdisciplinary research problems, and will be delivered in a variety of formats at the discretion of the instructor and/or Theme governing committee. Restricted to students in the IGS MA, MSc, or PhD program.
Prerequisite: None

	Draft Academic Calendar URL: http://www.calendar.ubc.ca/okanagan/proof/edit/courses.cfm?go=code&code=IGS
Proposed Academic Calendar Entry: IGS 524 **(1-3)** d Proseminar in Interdisciplinary Studies **This seminar-based course prepares graduate students to excel in their academic, professional and scholarly pursuits by engaging topics related to professionalism and scholarly communication. May be offered for 1, 2 or 3 credits; program requirements for the IGS MA, MSc and PhD programs require completion of 3 credits in total. Restricted to students in the IGS MA, MSc, or PhD program.** **Prerequisite: None**	**Present Academic Calendar Entry:** IGS 524 ~~**(3/6)**~~ d Proseminar in Interdisciplinary Studies

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

Category**: 1**	
Faculty/School: College of Graduate Studies **Faculty/School Approval Date:** 2017/05/17 **Effective Session:** 2019WT1	**Date:** 2017/06/05 **Contact Person:** Dr. Thomas Heilke **Phone:** 250.807.8539 **Email:** Thomas.Heilke@ubc.ca
Type of Action: Discontinuation of Course	
Rationale: IGS 630 is being deleted, because it is no longer being offered in the IGS program.	
	Draft Academic Calendar URL: **http://www.calendar.ubc.ca/okanagan/proof/edit/courses.cfm?go=name&code=IGS**
Proposed Academic Calendar Entry: Course Descriptions NA	**Present Academic Calendar Entry:** Course Descriptions ~~**IGS 630 (0) Teaching in Higher Education**~~ ~~**Prepares doctoral students for teaching undergraduate courses within a discipline. Enrolment is only by application to Graduate Studies. See the IGS website for the selection process and criteria for enrolment. Pass/Fail.**~~

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Office of the Senate
Brock Hall | 2016 - 1874 East Mall
Vancouver BC V6T 1Z1

Phone 604 822 5239
Fax 604 822 5945
www.senate.ubc.ca

12 October 2017

To: Okanagan Senate

From: Academic Policy Committee

Re: **Revisions to Policy O-4: *Governance of the College of Graduate Studies***

The College of Graduate Studies has submitted a proposal to revise Policy O-4 in order to reflect the proposed changes to the Interdisciplinary Graduate Program being brought forward by the Senate Awards and Admission Committee and the Senate Curriculum Committee.

The changes to the IGS Program propose that CoGS play a coordinating function, as it does for other graduate programs, as set out in section (1) of Policy O-4. Therefore, section (2) of the policy has been revised to remove redundancy and clarify that students in the Program must be registered in the faculty of their primary supervisor.

The Academic Policy Committee recommends the following:

Motion: **"***That Senate approve the revisions to Policy O-4: Governance of the College of Graduate Studies as outlined in the attached document.***"**

Respectfully submitted,

Dr. Jan Cioe, Chair
Senate Academic Policy Committee

THE UNIVERSITY OF BRITISH COLUMBIA

SENATE POLICY: O-4

OKANAGAN SENATE
c/o Enrolment Services
University Centre
UBC Okanagan Campus

Number & Title:

O-4: *Governance of the College of Graduate Studies*

Effective Date:

1 July 2010

Approval Date:

19 May 2010

Review Date:

This policy shall be reviewed five (5) years after approval and thereafter as deemed necessary by the *Responsible Committee.*

Responsible Committee:

Academic Policy

Authority:

University Act, S. 37(1)

"The academic governance of the university is vested in the senate and it has the following powers:

(i) to recommend to the board the establishment or discontinuance of any faculty, department, course of instruction, chair, fellowship, scholarship, exhibition, bursary or prize;

(p) to deal with all matters reported by the faculties, affecting their respective departments or divisions;"

S. 47(2)

"A university must, so far as and to the full extent that its resources from time to time permit, do all of the following:

(a) establish and maintain colleges, schools, institutes, faculties, departments, chairs and courses of instruction;

(f) generally, promote and carry on the work of a university in all its branches, through the cooperative effort of the board, senate and other constituent parts of the university".

Purpose and Goals:

This policy is designed to:

1) Provide direction to the *College of Graduate Studies* and the faculties on the structure and responsibilities of the *College of Graduate Studies;*
2) Set out regulations for faculty membership in the *College of Graduate Studies;* and
3) Set out the membership, structure, and responsibilities of the *Graduate Council.*

Applicability:

This policy is applicable to all graduate *courses of study* and *courses of instruction* at *UBC Okanagan*.

Exclusions:

Senate and the *Board* may, by resolution, declare the *College of Graduate Studies* to not be responsible for a graduate *course of study* and thus have all aspects of that *course of study*'s administration be the responsibility of its awarding faculty.

Definitions:

For the purposes of this policy and in all other policies in which they are not otherwise defined:

- *College of Graduate Studies* or *College* means the coordinating body for graduate education at *UBC Okanagan* established by the *Senate* and *Board*.

- *Course of instruction* means a credit course offered by the *University* at its *UBC Okanagan* campus.

- *Course of study* means an academic degree, diploma, or certificate program or other activity resulting in an academic credential from the *University* granted at its *UBC Okanagan* campus.

- *Graduate Council* means the governance body established under this policy for the government, direction and management of the *College of Graduate Studies* and its affairs and business.

Policy:

1) The *College of Graduate Studies* shall coordinate between the faculties graduate educational matters as set out in the appendix to this policy.

2) ~~The *College of Graduate Studies* shall administer the Interdisciplinary Graduate Program on behalf of those faculties participating as if it were a faculty, provided that any~~. All students registered in ~~this program~~the Interdisciplinary Graduate Program ~~shall~~ must be formally registered in the faculty of their primary supervisor.

3) Membership in the *College of Graduate Studies*

a. The *College of Graduate Studies* shall consist of the President, the Deputy Vice-Chancellor, the Provost, the Dean of the *College of Graduate Studies*, Deans of Faculties and appropriately qualified members of the faculty from *UBC Okanagan* as set out in Sub-Sections 3 (b) and (c) of this policy.

b. Members of the *College of Graduate Studies* include all tenured or tenure-track (including grant tenured or grant tenure-track) faculty members holding the rank of Assistant Professor, Associate Professor, or Professor approved by their faculty for membership in the *College.*

c. Members of the *College of Graduate Studies* may continue as members upon retirement, provided they are approved by their faculty for membership in the *College* and continue to meet the criteria established by their graduate program for membership in the *College.* Membership notwithstanding, a retired faculty member may supervise or co-supervise graduate students as provided for by their faculty.

d. The *Responsible Committee* shall establish and revise procedures under this policy for the administration of membership in the *College of Graduate Studies,* including procedures for appealing a faculty decision to not approve membership or to suspend or cancel membership in the *College*.

e. In establishing or revising a procedure under Sub-Section 3 (d) of this policy, the *Responsible Committee* shall consult with the faculties and all senior academic administrators at *UBC Okanagan*.

f. Except for as set out in Sub-Section 3 (c) and this sub-section, only members of the *College of Graduate Studies* may supervise graduate students or chair examining committees*:*

i. Other appropriately qualified individuals (e.g., clinical professors, adjunct professors, senior instructors, visiting professors, or *UBC Vancouver* faculty) who are actively engaged in research and experienced with graduate education may be approved by the Dean of the *College of Graduate Studies*, upon the recommendation of their Head, Director or Dean to supervise or co-supervise master's and doctoral students and/or serve on doctoral student supervisory committees provided they meet criteria set by the *College.* These individuals are not members of the *College.*

ii. Individuals from outside the *University* may serve on supervisory committees or as secondary co-supervisors on the recommendation of the faculty and the approval of the Dean of the *College of Graduate Studies*. These individuals are not members of the *College*.

iii. In the case of co-supervision by an individual who is not a member of the *College of Graduate Studies*, a member of the *College* must serve as the primary supervisor.

4) Teaching of graduate *courses of instruction* is the responsibility of the faculties.

5) The *Graduate Council*

a. Membership and Terms of Office

i. The *Graduate Council*'s voting membership is as follows:

1. Dean of the *College of Graduate Studies;*
2. President;
3. Deputy Vice-Chancellor;
4. University Librarian or his or her designate;
5. Provost;
6. Associate Vice-President, Learning Services;

7. Deans of Faculties or his or her designate;
8. Director of Interdisciplinary Graduate Studies;
9. Nineteen (19) Faculty members, apportioned as follows:

    a. Eight (8) from the Faculty of Arts & Sciences;
    b. Three (3) each from the faculties of Applied Science and Creative & Critical Studies;
    c. Two (2) each from the faculties of Education and Health & Social Development; and
    d. One (1) from the Faculty of Management.

10. Student members, apportioned as follows provided that no more than one student may be registered in each faculty:

    a. Two (2) doctoral students elected by and from the doctoral students; and
    b. Two (2) master's students elected by and from the master's students.

ii. The Registrar or his or her designate and the Director of Graduate Administration shall be non-voting members of the *Graduate Council.*

iii. Faculty members serving under Section 5 (a)(i)(9) shall be appointed in a manner specified and under such terms and further apportionments as decided upon by their respective faculties.

iv. The apportionment of faculty members under Section 5 (a)(i)(9) shall be reviewed by the *responsible committee* every triennium, such a review shall be in consultation with the Graduate Council and the faculties and take into consideration the distribution of graduate students and faculty members across the faculties.

v. Student members serving under Section 5 (a)(i)(10) shall be elected for two (2) year terms and thereafter until replaced provided they remain registered as graduate students.

vi. The seat of an elected or appointed member shall be declared vacant should that member fail to attend three consecutive regularly-scheduled meeting of the *Graduate Council* without leave having been granted by the *Graduate Council*.

b. Terms of Reference

i. Subject to approval by the *Senate* and to this policy, the *Graduate Council* shall be responsible for the government, direction and management of the *College of Graduate Studies* and its affairs and business.

ii. Without limiting the generality of Section 1 or Sub-Section 5 (b)(i), the *Graduate Council* shall be responsible for:

1. reviewing graduate-level *courses of instruction* and *courses of study* for academic quality and to make recommendations thereon to the appropriate committees of *Senate;*

2. assuring uniformity of practices and standards for master's and doctoral theses defense oral examinations;

3. Establishing and revising standards for graduate-level theses and comprehensive examinations;

4. Establishing and revising standards for the admission to candidacy of doctoral students;

5. Establishing and revising processes for determining admissibility to graduate *courses of study.*

6. Establishing and revising processes for determining eligibility to graduate from graduate *courses of study*.

7. Reviewing recommendations resulting from academic reviews of graduate *courses of study* and making recommendations thereon to the Dean of the *College*, the faculties, *Senate,* or others as appropriate;

8. Recommending the standards, criteria and terms of graduate scholarships and awards to the *Board* and *Senate*, and approving the granting of *College of Graduate Studies*-administered scholarships and awards to their recommended recipients; and

9. Recommending procedures under this policy to the *Responsible Committee*.

10. Establishing necessary standing and ad-hoc committees of the *Graduate Council*, setting out their compositions and terms of reference, and delegating to such committees such powers of the *Graduate Council* as the *Graduate Council* sees fit except for the power to further delegate.

c. Meetings of the *Graduate Council*

i. Regular meetings of the *Graduate Council* shall occur monthly, with the time and location for such meetings to be set by the Dean of the *College of Graduate Studies* for each year prior to the start of term 1 of each Winter Session and notice of such being given at that time to each member of the *Graduate Council*.

ii. Extraordinary meetings may be called by the Dean of the *College of Graduate Studies* provided that five (5) days notice is given to members of the *Graduate Council* and must be called by the dean upon receipt of a petition to that effect signed by a quorum of the *Graduate Council*.

iii. A quorum of the *Graduate Council* shall be ten (10) voting members.

iv. The agenda for each regular and extraordinary meetings of the *Graduate Council* shall be circulated at least two (2) days prior to the meeting.

v. The *Graduate Council* shall set such deadlines for submission of agenda items for regular and extraordinary meetings as it sees fit.

Calendar Statement:

The College of Graduate Studies works in conjunction with departments, academic units, schools, and faculties to coordinate and maintain the quality of master's and doctoral programs at UBC Okanagan. For more information on the responsibilities of the College, please see policy O-4: Governance of the College of Graduate Studies at URL.

The College of Graduate Studies is responsible for the UBC Okanagan Interdisciplinary Graduate Studies program. Details of this, as well as graduate programs which operate within affiliated faculties, are provided at College of Graduate Studies.

Consultations:

The following groups have been consulted during the development of this policy:

Dean of the College of Graduate Studies

History:

This is the third version of this policy which clarifies the role of The College of Graduate Studies in the IGS program.

~~This is t~~The second version of this policy~~. The first version of 28 April 2010~~ contained a different apportionment of faculty members on the Graduate Council specified in Section 5 (a) as compared to the 28 April 2010 version of the policy (first version).

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Related Policies:

None at this time.

Appendix:

Coordination of Responsibilities for Graduate Education Matters

GRADUATE STUDIES	**FACULTIES***
Student Recruitment	
Promote graduate studies programs for UBC Okanagan; assist general advertising initiatives	Develop promotional materials for programs Advertise and market programs
Maintain a web page for general information regarding available programs, application and admission standards, funding, etc.	
Outreach efforts to attract best students	Outreach efforts to attract best students

Admissions, Re-Admission, & Transfer	

Receive, screen, sort, and process applications (follow up with missing items; make application materials available to programs; maintain files; track progress; remind program advisors of deadlines and deliverables)	Review applications and make decisions regarding preferred candidates for admission, re-admission, & transfer
Ensure general policies and regulations are adhered to (TOEFL criteria, average	Quality assessment, prerequisite assessment, evaluation of referee letters,

calculations, transcript interpretation, assessment of credentials, fraud detection)	etc., as well as general due diligence (e.g., phone interviews of foreign candidates to check language skills)
Manage application fee payments	
Send letters of acceptance and decline to students (a copy of each letter is sent to the program coordinator and to the supervisor), send funding letters for students in collaboration with the disciplinary faculty	Confirm faculty-level funding details for funding letter
Maintain contact with admitted students and forward orientation information	Maintain contact with admitted students and forward faculty or program-specific information kits (e.g., "Surviving Grad School")
Manage and approve exception requests/extraordinary circumstances (in collaboration with the program and discipline faculty dean)	Request exceptions
Student Financial Assistance	
Endowment development	Endowment development
Develop and administer all financial aid instruments (scholarships, fellowships,) that are external or campus /university-wide, and are not employment related: 1. instruction in process 2. vetting of applications for competition 3. creating and managing the selection committees 4. notifying applicants 5. liaison function with UBC Vancouver's Faculty of Graduate Studies a. allocation of applicants for UBC Okanagan in major competitions b. monitoring UBC-wide opportunities	Manage Teaching and Research Assistant opportunities in collaboration with each Faculty's Dean's Office (maintain strict adherence to work-related guidelines and union regulations, etc.) Develop program-specific guidelines on overall financial packages for students (for competitiveness)*
Liaise and coordinate with programs regarding discipline-specific opportunities, especially as regards government requirements/limitations on scholarships	
Student Progress Within Programs	
Student Orientation (i.e. "Welcome to Grad School")	Student Orientation (Welcome to the Program and to the Department/Unit)
Workshops (communication of University processes, professional development, ethics, funding, etc.)	Workshops (Teaching Assistant training, Research protocols, Getting a Job, Professionalization)

	Develop infrastructure to support student research and learning and provide adequate office and laboratory space
Maintain files on student milestones (master checklist with supplementary forms and signatures) and appropriate sanctions Monitor compliance with Senate approved timelines	Develop mechanisms to keep track of student progress and to conduct effective advising (e.g., completion of course requirements, meeting critical timelines)*
Approve and track "leave of absence" and extension of maximum time in-program requests in collaboration with Programs	Recommend leaves of absence and extensions.
Administer withdrawal/dismissal requests	Initiate withdrawal/dismissal requests
Management of appeals (exemptions from the rules; resolution of conflicts relating to program; grades)	
Management of academic misconduct cases of students	
Maintain files on supervisors, co-supervisors, and appointments to supervisory committees On the recommendation of faculties, approve supervisors, co-supervisors, and appointments to supervisory committees as required and in accordance with Senate policies.	Approve and appoint faculty members to committees as required and in accordance with Senate policies Recommend faculty members to committees following Senate regulations*
Appoint chairs, internal (non-supervisory) members, and external members of thesis examining committees	Recommend internal (non-supervisory) members and external examiners of thesis examining committees to Graduate Studies for approval
Review and approve thesis examination results	
Final approval of thesis/abstracts for uploading to cIRcle.	
Convocation audits and recommend students to the Senate for graduation (As such, the graduate dean signs parchments)	
Foster and develop Graduate Culture & Community across faculties	Foster and develop Graduate Culture & Community within the faculty and with other faculties
Program Development	
Facilitate proposal development	Develop a comprehensive proposal including 5-year growth model and realistic budget projections, as well as Education Plan that demonstrates feasibility of graduate program

Provide interim proposal review and feedback	Coordinate with GS during program development* Consult with Faculty Dean's Office
Provide consultation to the Faculty regarding program viability	Undertake thorough "market" analysis regarding need and viability of the proposed program Secure consultation reports
	Undertake realistic assessment of faculty strengths and overall prospects for delivering a robust graduate experience for students
Review final program proposals for completeness, graduate program level and adherence to UBC Okanagan regulations and standards, and make recommendations to Senate or its committees thereon in a timely fashion.	Faculty to deliver final proposal to the Curriculum Committee of Senate
	NOTE: for new-to-UBC proposals, there is also a government (Ministry) process, which should move in parallel but NOT in advance of internal approvals.
Review course proposals for completeness, graduate program level, and adherence to UBC Okanagan regulations and standards and make recommendations to Senate or its committees thereon.	Develop new courses Course approval

Program Administration	
Propose Guidelines, Rules, and Regulations that govern graduate programs at UBC Okanagan	Propose Guidelines, Rules, and Regulations that govern graduate programs at UBC Okanagan
Develop standardized metrics to track quality and effectiveness of UBC Okanagan graduate programs including conducting student satisfaction surveys.	Develop strategies for best learning outcomes, student satisfaction, short time to completion, and retention Monitor and ensure quality outcomes for every student by performing annual assessments of student progress (in conjunction with supervisors)
Develop annual reporting requirements for programs	Monitor and track effectiveness of various elements of the program

Coordinate periodic program reviews (e.g., 5 years) in collaboration with the Faculty Deans and the Provost (should involve external review team)	
Make recommendations to Senate regarding discontinuance of programs	
Recommend to Senate requirements and expectations regarding policy and procedures for graduate studies.	
Maintain files of program procedures	
Program Delivery	
	Course assignments Develop the education plan for the program
	Develop procedures for program delivery including: expense reimbursements, etc.
External and internal relations	
Liaise with the Faculty of Graduate Studies in Vancouver and other administrative bodies (e.g., Registrar) with respect to general graduate studies policies and procedures	
Maintain external relations with national and international graduate studies bodies	
Approve all transfer credits	Recommend transfer credits
Approve external members of thesis and examination committees	Recommend external members of thesis and examination committees
Academic discipline	
Develop mechanisms and programs to support ethical and professional academic conduct	Develop policies and procedures to ensure ethical and professional academic conduct

* Faculties in these references shall be taken to include the Interdisciplinary Graduate Studies Program for the purposes of the administration of that program.

a place of mind
THE UNIVERSITY OF BRITISH COLUMBIA

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12 October 2017

To: Okanagan Senate

From: Academic Policy Committee

Re: **Amendments to Faculty of Arts and Sciences Faculty Council Terms of Reference**

The Faculty of Arts and Sciences has forwarded a proposal to add to and amend a number of sections of its Faculty Council Terms of Reference. The rationales for the amendments are detailed in the attached document.

The Academic Policy Committee recommends the following:

Motion: **"***That Senate approve the amended Terms of Reference of the Faculty of Arts and Sciences Faculty Council as outlined in the attached document.*"

Respectfully submitted,

Dr. Jan Cioe, Chair
Senate Academic Policy Committee

THE UNIVERSITY OF BRITISH COLUMBIA

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Memorandum

Date	May 5, 2017
To	Senate Secretariat
From	Wisdom Tettey, Dean
Subject	Senate Approval of Amendments to IKBSAS Faculty Council Terms of Reference

One behalf of the IKSAS Faculty Council, I am writing to seek Senate approval of amendments to our Terms of Reference. The amendments were approved by Faculty Council at its May 5, 2017 meeting. The revised document is attached.

Here is an explanation for the fonts in the document (i.e., color, strikethroughs, underlined text):

- *Black text – retained from original TOR*
- *Red text with strike-through – deleted from original TOR*
- *Red text (either underlined or not) – new*

The rationale for the amendments are as follows;

1) **Preamble**: This is new and helps to provide information about the source of Faculty Council's authority and its mandate. It sets a context for the rest of the document and gives everyone an idea of what is within Council's scope of authority, including its role in university governance. It also outlines Council's role as a deliberative forum and an advisory body to the Dean.
2) **Composition, Procedures, and Standing Committee of Faculty Council**
    a. The addition of the opening helps to provide a quick reference to the source of authority on this aspect of the TOR, thereby making clear required membership and the basis for any additional members that Council has discretionary authority to add.
    b. 1(e:) The inclusion of the Registrar or designate, just as is the case with the Chief Librarian, gives us an opportunity to get input into our deliberations from an office that is the custodian of relevant regulations and is aware of developments that should inform our plans, proposals, and decisions. Involvement by that Office helps us to avert potential problems.
    c. 1(f): The current TOR excludes 12-month lecturers, but they are explicitly included in Section 2(f) of Senate Policy O-2. The revisions also add the Professor of Teaching rank.
    d. 1(g): The addition is to ensure that the perspectives of student representatives reflect the two main constituencies of our student body, i.e., Arts and Sciences.
    e. Explicit provision for support staff and non-continuing Sessional Lecturers will give concrete expression to our commitment to inclusive governance and enables our deliberations to be informed by the views of a constituency that is very knowledgeable about the impact and implications of our decisions on students, staff, etc.

3) **Quorum**: The quorum has been re-set at a level that balances representativeness and the need to ensure that the business of Council is not unduly compromised by lack of a quorum. The changes also include information about the default quorum for committees of Faculty Council.
4) **Procedures for calling regular meetings**: The changes designate a specific location for information that is both accessible to all constituents, either directly or indirectly, and secure. It also establishes procedures for agenda items and a time frame for circulating information about meeting dates for the year. Because of the ambiguity that surrounds the definition of a week, and for the avoidance of doubt, the change replaces "week" with "business days." For flexibility in scheduling meetings, while maintaining a required minimum of two per term, section 3(a) introduces the phrase "at least."
5) **Procedures for calling special meetings**: The section is re-organized so that the purpose of special meetings is clearly stated before getting into procedures. The changes then set out clear procedures, requirements, and expectations. Because of the ambiguity that surrounds the definition of a week, and for the avoidance of doubt, the change provides for business days.
6) **Standing Committees of Faculty Council**
   i) Curriculum Review Committee
      a. The changes make clear the focus of the Curriculum Review Committee's mandate to indicate that it not only concentrates on assessing and making recommendations regarding the academic integrity of proposals, but also delves into questions of strategic priority and resourcing for Category 1 proposals.
      b. The composition of the CRC has been updated to reflect new ex-officio positions/titles and expanded representation.
      c. Introduces length of appointment for committee members and meeting schedule.
      d. To ensure clarity of the curriculum proposal and approval process, and in order not to distract from the flow of the main document, the flow chart has been revised and attached as Appendix 1.

7) Rules of conduct for in-camera meetings: The amendment introduces another opportunity for members to initiate an in-camera meeting. The current language is unclear as to how "Faculty Council may decide to hold an in camera meeting." Consequently, the only opportunity currently provided for is for in-camera meetings to take place following a motion on the floor during an ongoing meeting. The change provides a process for initiating an in-camera meeting beyond the limited opportunity provided in the current TOR.

Furthermore, the section has been re-organized to provide a context for in-camera meetings before delving into procedures for calling one.

Thanks

THE UNIVERSITY OF BRITISH COLUMBIA

COMPOSITION, PROCEDURES, AND STANDING COMMITTEES OF THE IRVING K. BARBER SCHOOL OF ARTS AND SCIENCES FACULTY COUNCIL

Preamble:
As per Senate Policy O-2 (Faculty Councils) the Irving K. Barber School of Arts and Sciences (IKBSAS) Council is hereby established as "a governance body for consideration of faculty matters under the jurisdiction or requiring the approval of the Okanagan Senate." The Council derives its mandate from Part 8 of the University Act. The relevant headings and sections state as follows:

Faculties

39 (1) The faculties of each university may be constituted by the board, on the recommendation of the senate.
(2) A dean of a faculty is the chair of the faculty of which he or she is the dean.

Power and duties of faculty:

40 A Faculty has the following powers and duties:

(a) to make rules governing its proceedings, including the determining of the quorum necessary for the transaction of business;
(b) to provide for student representation in the meetings and proceedings of the faculty;
(c) *subject to this Act and to the approval of the senate, to make rules for the government, direction and management of the faculty and its affairs and business.*
(d) *to determine, subject to the approval of the senate, the courses of instruction for the faculty;*
(e) *subject to an order of the president to the contrary, to prohibit lecturing and teaching in the faculty by persons other than appointed members of the teaching staff of the faculty and persons authorized by the faculty, and to prevent lecturing or teaching so prohibited;*
(f) *subject to the approval of the senate, to appoint for examinations in each faculty examiners, who, subject to an appeal to the senate, must conduct examinations and determine the results;*
(g) *to deal with and, subject to an appeal to the senate, to decide on all applications and memorials by students and others in connection with their respective faculties;*
(h) *generally, to deal with all matters assigned to it by the board or the senate.*

Approval of rules

41 A general rule made by a faculty is not effective or enforceable until a copy has been sent to the senate and the senate has given its approval.

Advice to president

42 Any of the faculties may advise the president in any matter affecting the interests of the university, whether academic or disciplinary, but that advice does not limit the powers and authority of the president.

Amendments to IKBSAS Faculty Council Terms of Reference – Approved by Faculty Council on May 5, 2017

Subject to the primary mandate and legislative functions articulated above by the University Act, Council shall also serve as

i. a deliberative forum for the discussion of activities and initiatives that impact the Faculty's academic mission, such as research; teaching and learning; enrolment management; undergraduate and graduate programming; working and learning environment; community/alumni engagement; and overall strategic planning.
ii. an advisory body to the Dean on such matters as the Dean may request.

1. Composition

Per relevant sections of Senate Policy O-2, the composition and procedures of the IKBSAS Council are as follows:

i) Members

a. The Dean of the Faculty, who shall serve as the chair of the Faculty Council

b. The President or his or her nominee

c. The Dean of the College of Graduate Studies

d. The Chief Librarian or his or her nominee

e. The Registrar or his/her nominee (non-voting)

f. All Professors, Associate Professors, Assistant Professors, Professors of Teaching Senior Instructors, Instructors, 12-month Lecturers, Continuing Sessional Lecturers provided for in the budget of the faculty

g. Student Members:

i. At least 2 representatives from the undergraduate student body, one representing years 1 and 2, and one representing years 3 and 4. Both Arts and Science programs shall be represented.
ii. Two graduate student members, one from Science and one from Arts. IGS graduate students are eligible to represent one of the two areas provided that their supervisor is from Arts or Science.

ii) Regular Guests (non-voting)

a) All support staff of the Irving K. Barber School of Arts and Sciences
b) All non-continuing Sessional Lecturers

2. Quorum

a. The necessary quorum for transaction of business by the *Faculty Council* shall be 35 voting members.
b. The quorum for all standing committees shall be 50% of eligible members, unless otherwise indicated in their terms of reference.

~~40 voting members~~

3. Procedures for calling regular meetings

a. Dates for the regularly scheduled Faculty Council meetings are established each spring following the publication of the Senate meeting calendar and duly noted on the Faculty website. Notification regarding *Faculty Council* meeting dates shall be sent out early in the academic year.

b. At least, 4 regular meetings will be held each year, two in term 1 and two in term 2.

c. A call for agenda items will go out, via email, no later than 15 business days prior to the regularly scheduled meeting.

d. Agenda items must be received, at least, 10 business days before the meeting and shall be accompanied, where appropriate and applicable, by relevant background material, as well as notice and proposed text of any motion(s).

e. Normally, Faculty Council members will be provided with the agenda and materials ~~one week~~ 5 business days in advance of the regularly scheduled meeting. Notification is by global email. Agenda and meeting materials will also be placed on the Faculty's secure website.

f. The Dean will provide an explanation for the exclusion of any agenda items submitted by Council members.

g. Approved minutes will be posted on the Faculty's website.

4. Procedures for calling special meetings

a. Special meetings may be called only when the purpose conforms to the duties and mandate of the Faculty Council, and

i. at the request of the Dean; or

ii. if 25% ~~30%~~ of voting members present a written request to the Dean~~ a special meeting will be called and members will be notified via global email at least, two weeks 10 business days prior to the date of the special meeting. Special meetings may be called only when the purpose conforms to the duties and mandate of the Faculty Council.~~

b. The Dean shall fix the date of the Special Meeting.

c. In cases where the Dean initiates the special meeting, members will be notified via email, at least, 10 business days prior to the date of the meeting. Where the meeting is by written request of members, per Section 4a(ii) above, the meeting date shall not be more than 15 business days after the receipt of that request, and members shall be given notice, via email, no later than 10 business days before the meeting.

d. A *Notice of Special Meeting* shall specify the purpose of the meeting. Only the matter or matters specified in the notice concerning the meeting shall be considered at such a special meeting.

5. Standing Committee(s) of the *Faculty Council:*

Curriculum Review Committee

Mandate:

a. Per Appendix 1, review and evaluate fit with Faculty's Strategic Plan, consult, and make recommendations to the Faculty Council and Dean regarding

i. new undergraduate and graduate course proposals and major calendar changes (i.e.,

Category 1)
ii. major revisions to existing programs and courses (i.e., Category 1)
iii. new program proposals
iv. course outline templates and content
v. viability of existing programs

b. Per Appendix 1, approve, on delegated authority from Faculty Council, minor changes (i.e., Category 2) to course descriptions and prerequisites, or refer them to Faculty Council if it deems it necessary.
c. Facilitate and coordinate Faculty-wide, inter-Faculty, and inter-institutional curriculum and pedagogical initiatives, and make recommendations to Faculty Council and the Dean.
d. Develop, regularly review, and make recommendations to Faculty Council regarding course outline templates and content.

Composition:

- Associate Dean (Teaching, Learning, and Curriculum) – Chair (votes only to break a tie)
- Associate Dean (Research, Graduate, and Post-doctoral Studies) when graduate curriculum is being considered (voting)
- 8 faculty members, representing each department and selected by members of the department (voting)
- 5 faculty members, representing each of the departments with multiple disciplines [Community, Culture, and Global Studies; Computer Science, Mathematics, Physics, Statistics; History and Sociology; Earth, Environmental and Geographic Sciences; Economics, Philosophy, Political Science] (voting)
- Coordinators of inter-Faculty programs in which the Barber School is involved
- A representative from Enrolment Services appointed by Associate Dean (TLC) in consultation with the Deputy Registrar (non-voting)
- Manager - Curriculum and Academic Programs (non-voting Member-Secretary)

Length of Term: *2 years*
Meetings**:** Normally, once a month in the Winter Term. The Chair may call meetings at other times when necessary.

~~The Curriculum Committee in the Irving K. Barber School of Arts and Sciences will review proposed changes to existing as well as new curricula within the Faculty. All new courses and new programs, both graduate and undergraduate, will be sent to the Committee for review. All changes to existing courses or programs must also be submitted for review by the Committee.~~

~~The Committee will assess the proposals with regards to academic integrity, fit within the Faculty, and adherence to the founding principles of the Irving K. Barber School and the UBCO Academic Plan. The committee is also charged with facilitating the development of new Faculty-wide curriculum initiatives.~~

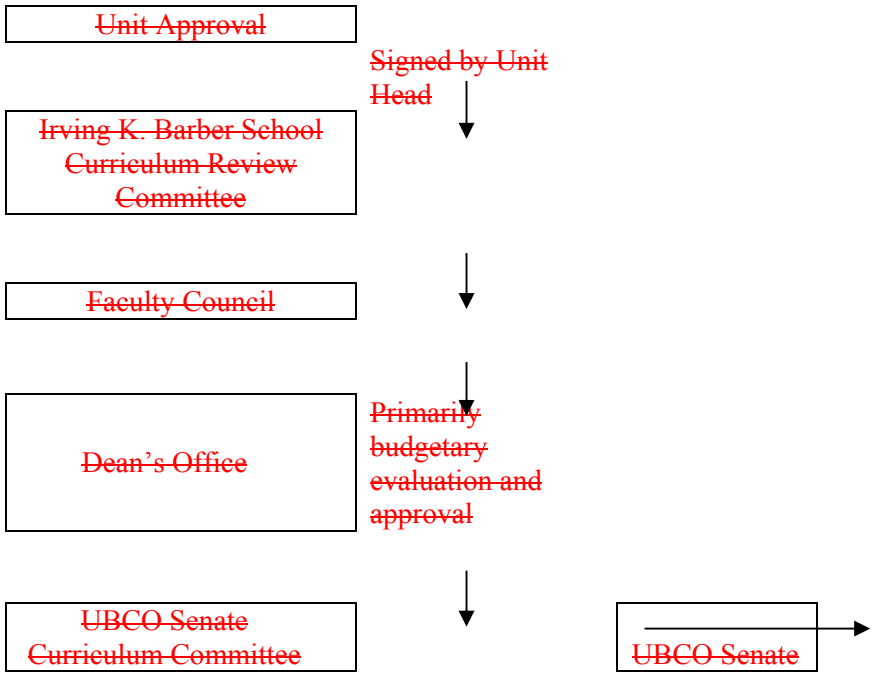
~~Details of Curriculum Guidelines can be found at the following website: http://www.senate.ubc.ca/okanagan/curriculum.cfm?go=category1~~

Amendments to IKBSAS Faculty Council Terms of Reference – Approved by Faculty Council on May 5, 2017

i. Proposals requiring Faculty Council Approval:

This includes all new program proposals (Category 1), and all curriculum changes which affect more than one faculty or school, require significant budgetary or space requirements, may be controversial or which impact the Faculty as a whole.

After its own review, the Curriculum Review Committee then submits approved program proposals to Faculty Council for approval.



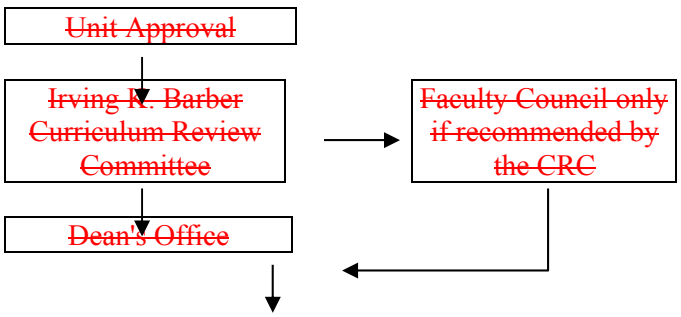
ii. Proposals which do not require Faculty Council Approval:

The Faculty Council delegates authority to the Curriculum Review Committee to approve the following types of proposals on its behalf.

a. (Category 1) New course proposals, substantive program revisions, and changes which may impact other units, but have no or limited budgetary or space impact.

b. (Category 2) Minor changes to calendar descriptions and prerequisites.

The approval process will be as follows.



Amendments to IKBSAS Faculty Council Terms of Reference – Approved by Faculty Council on May 5, 2017

~~UBCO Senate Curriculum~~

~~**iii. Composition:** 1-2 members from each unit within the Irving K. Barber School plus the Faculty Curriculum Chair. Further detailed information is available at the following website: http://web.ubc.ca/okanagan/ikbarberschool/teaching/curriculum.html~~

~~**iv. Quorum**: 8 voting members~~

~~**v. Meetings and Reporting Period:** Relevant materials will be distributed to members of the Faculty Council one week in advance of the regularly scheduled meeting. A summary report will be presented at the last Faculty Council meeting of the academic year.~~

~~Meeting dates of all curriculum committees may be found at the following website, along with meeting agendas, meeting materials and approved minutes: http://web.ubc.ca/okanagan/ikbarberschool/teaching/curriculum.html~~

6. Procedure for Faculty Approval of Graduation

Lists of candidates for graduation are submitted to the program advisors for approval in October and March. Following review by the program advisors, the Dean and Associate Deans will give final approval on behalf of the Faculty Council. List of candidates so approved for graduation with the B.A. or B.Sc. degree will be forwarded to Senate and to the Board of Governors.

7. Ad hoc Committees of the Faculty Council

Faculty Council may appoint for designated time periods such ad hoc groups (e.g., task forces, work groups, ad hoc committees, subcommittees) as may be necessary.

Should an ad hoc group be formed, the Faculty Council will approve the committee's purpose, membership, and duration of appointment. The committee is charged with submitting progress reports to the Faculty Council. If the ad hoc committee needs to continue beyond its initially designated term, the Faculty Council shall be informed and shall be advised of the committee's progress to date and the new designated time period. The Faculty Council shall receive a listing annually of all ad hoc committees.

8. Rules for the conduct of in camera meetings

An in-camera meeting of Council may be called as a stand-alone meeting for the sole purpose of discussing an urgent matter that requires confidentiality, or a portion of another meeting may be designated as such in order to ensure confidentiality. Stand-alone in-camera meeting may be so designated as part of the process for special meetings in section 4 above, or
Faculty Council may decide to ~~hold an in-camera meeting or~~ designate any portion of a meeting ~~can be designated~~ as in-camera following the passing of a motion to do so. Subject to the provisions of the *Freedom of Information and Protection of Privacy Act*, agenda items, materials for distribution, and discussions related to *in camera* meetings are

confidential and shall not be shared with anyone outside the meeting. Non-members of Faculty Council will not be present unless Faculty Council allows them to attend. The decision to record the proceedings of the in-camera session will be decided by the Faculty Council on a case-by-case basis. ~~Such in-camera sessions may be called to deal with matters requiring confidentiality. In such circumstances The following rules apply:~~

~~**i.** Non-members of Faculty Council will not be present unless Faculty Council allows them to attend.~~

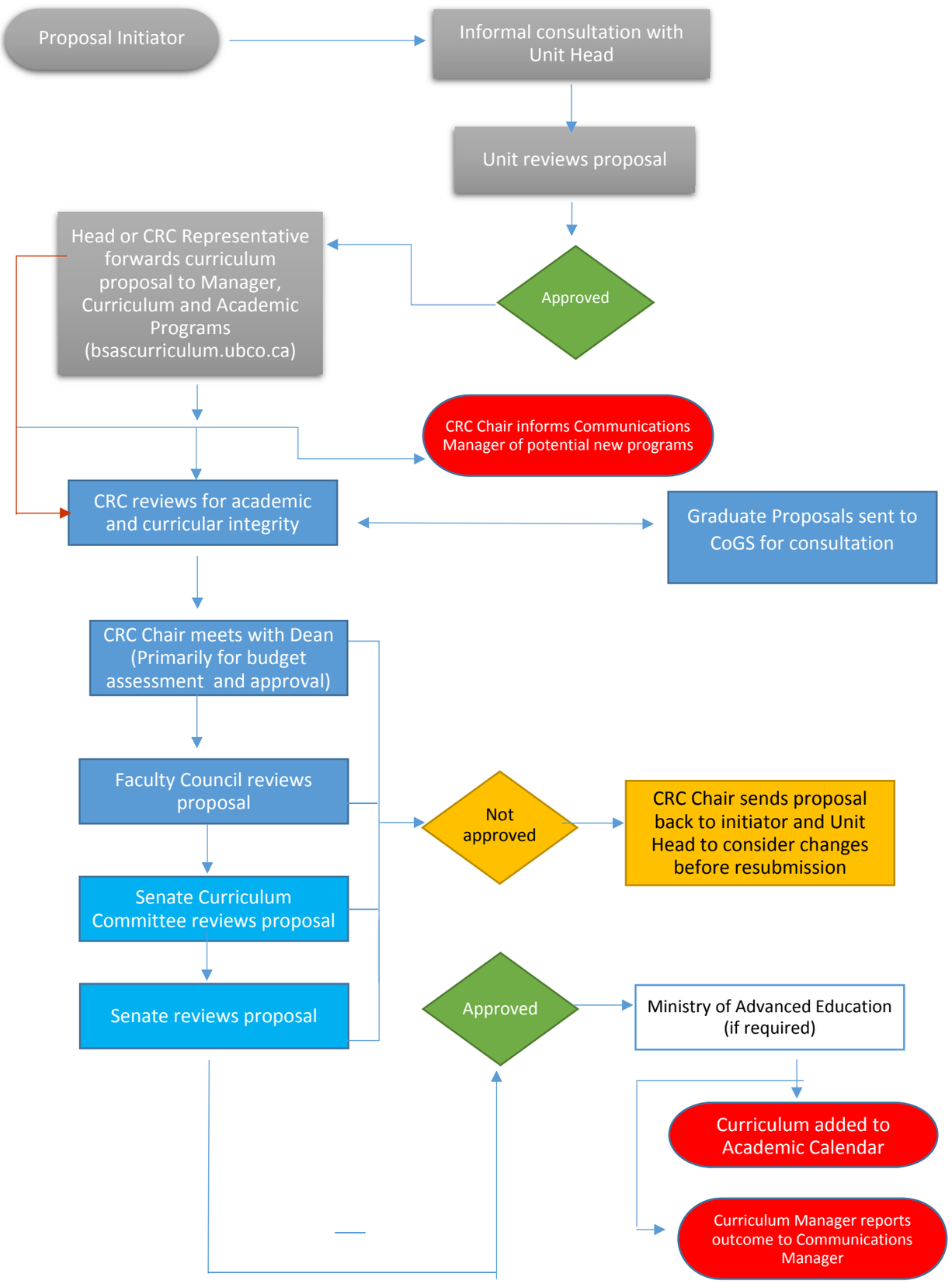
~~**ii.** The decision to record the proceedings of the in-camera session will be decided by the Faculty Council on a case-by-case basis.~~

~~**iii.** The discussion is deemed to be confidential and no one may reveal the content of the in-camera session.~~

9. Rules for Transaction of Council Business

In all matters and transactions of business, the *Faculty Council,* its standing committees and *ad hoc* committees shall be governed by the *Robert's Rules of Order Newly Revised*.

IKBSAS Curriculum Proposal and Approval Flowchart[1]



[1] For detailed submission process and documentation required, please see the IKBSAS *Faculty Curriculum Info Package.*

a place of mind
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12 October 2017

To: Okanagan Senate

From: Academic Policy Committee

Re: **Establishment of Departments within the Faculty of Arts and Sciences**

The Faculty of Arts and Sciences has forwarded a proposal to formally establish eight departments within the Faculty.

The current units have been operating like departments (for example, they host courses and programs, have appointed faculty, and have heads) and operationally will remain the same. Therefore, the proposal could be seen as a change in nomenclature. However, as the units were never formally established by the Senate and Board of Governors, this proposal seeks to formalize the organizational arrangement and officially refer to the units as departments.

Senate policy states that "the minimum size for departments…be 15 full-time faculty members." All but one of the proposed departments meet this minimum and the planned appointments over the next two years will push the one department to or above the threshold.

Therefore, the Academic Policy Committee recommends the following:

Motion: **"***That Senate approve and recommend to the Board of Governors the establishment of the following departments in the Faculty of Arts and Sciences, effective as of October 26, 2017:*
Department of Community, Culture, and Global Studies
Department of Biology
Department of Chemistry
Department of Psychology
Department of Computer Science, Mathematics, Physics, and Statistics
Department of History and Sociology
Department of Earth, Environmental, and Geographic Sciences
Department of Economics, Philosophy, and Political Science."

Respectfully submitted,

Dr. Jan Cioe, Chair
Senate Academic Policy Committee

THE UNIVERSITY OF BRITISH COLUMBIA

Office of the Dean
Irving K. Barber School of Arts and Sciences
The University of British Columbia
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Kelowna, BC Canada V1V 1V7

Phone 250 807 9527
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wisdom.tettey@ubc.ca

Memorandum

Date	May 5, 2017
To	Senate Secretariat
From	Wisdom Tettey, Dean
Subject	Senate Approval of "Department" Nomenclature to Describe Academic Entities in the IKBSAS

On behalf of Faculty Council, I am writing to seek Senate and Board of Governors approval of a recommendation for a change to the nomenclature that is used to describe academic entities that constitute the IKBSAS.

As we pursue a strategic plan to position us for the next five years, an important issue to consider is how we clearly define ourselves to various publics, both external and internal. Over the first decade of our existence, we have used the term "Units", followed by a number, to identify our departments. While that nomenclature may be understood within the particular academic units to which they refer, it is very confusing to others outside those units, even among some colleagues within the Barber School. There may be good reasons for using the term internally, within the departments, but its value does not extend beyond the particular unit. The peculiarity of the term makes it difficult for those external to UBCO to understand what it means. It does not resonate with many of our current and prospective students, supporters, partners, and colleagues in the larger academic community, including at UBCV and other Faculties at UBCO. Indeed, the BA External Review Team noted that

> Everyone—not just the Review Team but everyone we talked to at UBC-O—is confused by the Unit #s used in Barber School. Could the Dean please investigate alternative means of signifying these clusters? (p. 9)

The situation is made murkier by the fact that some academic units refer to themselves, or are referred to by others, as departments. The inconsistency of usage across the Faculty adds to the confusion.

To address this matter, the IKBSAS Faculty Council approved the following motion at its May 5, 2017, meeting:

> *"That Faculty Council approve replacement of "Unit" nomenclature in the IKBSAS with "Department" and forward, for approval, a recommendation to Senate that each relevant entity be formally referred to as a department."*

This change will bring us into alignment with what obtains in other Faculties at UBC and in the overwhelming number of institutions across the globe. It will also be consistent with what is contemplated and articulated in the Collective Agreement, which says in Article 1.02 that

> Heads report to the Deans of their Faculties. They provide intellectual and administrative leadership for the unit, and are accountable for the operation of the unit, including the budget. In addition, they represent the views of their Departments to the Deans and the University at large.

The change will also reflect Senate's unambiguous recognition that the department, operating under the authority of a Head, is the basic academic unit of the university. The following excerpt buttresses the point:

> The academic department or school (or in some cases the division) is the basic administrative unit in the university. It is the administrative "home" for almost all faculty members. The department, through the head and committees, normally makes the initial recommendations regarding appointments, promotion, tenure, salary, teaching and research prizes, etc., reviews performance, and makes administrative arrangements for most aspects of faculty academic activities (office space, secretarial assistance, supplies, etc.)." [**'Appendix C' [First Report of the Senate Ad hoc Committee on University Organization, May 1994], May 18, 1994, meeting of UBC Senate.]**

As a result of this change, all communication related to existing Units (signage, letter heads, website, etc.) will now reflect the department nomenclature. The IKBSAS is, thus, constituted by the following departments:

1) Department of Community, Culture, and Global Studies (formerly Unit 1)
2) Department of Biology (formerly Unit 2)
3) Department of Chemistry (formerly Unit 3)
4) Department of Psychology (formerly Unit 4)
5) Department of Computer Science, Mathematics, Physics, and Statistics (formerly Unit 5)
6) Department of History and Sociology (formerly Unit 6)
7) Department of Earth, Environmental and Geographic Sciences (formerly Unit 7)
8) Department of Economics, Philosophy, and Political Science (formerly Unit 8)

We will appreciate it if the Senate Secretariat can notify all relevant UBC governing bodies and offices of this change at the appropriate time.

Thanks

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16 October 2017

To: Okanagan Senate

From: Admissions and Awards Committee

Re: New Approach to Holistic Undergraduate Admission (approval)

The Senate Admissions and Awards Committee regularly reviews admission policies to ensure they continue to meet the University's goals to recruit and admit applicants who are most likely to succeed at UBC. Such reviews generally consider minimum requirements for admission to the University, competitive requirements for each direct-entry undergraduate program and non-academic characteristics used to assess an applicant's suitability for a program of study. Currently, admissibility to undergraduate programs is assessed through an admission average calculated on four Grade 12 (or equivalent) courses and the Personal Profile score. In addition to the admission average, some Faculties require course-specific minima on key discipline-related courses.

In February 2017, a cross-campus working group was struck to consider the impact of changes to the BC/Yukon secondary school curriculum on UBC admission policies. This review, while prompted by high school curricular changes, resulted in a holistic review of undergraduate admission policies. The attached report outlines a new approach to admission, one that considers the entirety of an applicant's academic record, rather than making an admission decision based only on performance in 4 Grade12 courses.

The proposal recommends that an admission decision consist of four distinct assessments (page 3 of the circulated report):

1. **Academic: Overall**. This overall assessment considers the near-entirety of a student's academic coursework at the Grade 11 and 12 levels. Calculated as the *Overall average*. The purpose is to gain a complete picture of who the student is as a learner. The assessment is constructed in the same manner for all applicants (regardless of intended program of study at UBC).
   - The overall assessment may be adjusted based upon the breadth of course work (i.e, the number of courses taken), depth of coursework (i.e., enriched courses such International Baccalaureate [IB] or Advanced Placement [AP]), and the individual context of coursework (i.e., a student who attends a secondary school in a rural community may not be able to present certain courses due to availability)

2. **Academic: Program-Specific Aptitude**. This assessment considers the entirety of a student's coursework (to most senior level of study) in disciplines relevant to the intended Faculty/Program of study at UBC. Calculated as the *Core average.* The purpose is to assess a student's potential and preparation for a specific degree program. The construction of the assessment varies based upon the applicant's intended program of study.

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- The core assessment may be adjusted based upon the breadth of course work (i.e, the number of courses taken) depth of coursework (i.e., enriched courses such International Baccalaureate [IB] or Advanced Placement [AP]), and relevancy of coursework to the intended program of study.

3. **Academic**: **Key Courses**. Minimum grade thresholds are imposed on key courses (e.g., Pre-Calculus 12 for admission to the Bachelor of Science) as determined by the Faculty.

4. **Personal: Personal characteristics**. This assessment considers personal characteristics, accomplishments, and self-reflection as evidenced on the UBC Personal Profile.

Upon approval of these recommendations, the Committee will prepare and recommend to Senate necessary Calendar revisions and updated policies on admission, as required.

The Committee recommends the following motions for approval:

That Senate receive the report entitled "New Approach to Holistic Undergraduate Admissions,

That Senate approve in principle the recommendations and assessment criteria set in that report; and

That Senate direct the Admissions and Awards Committee to propose amendments to UBC's admissions requirements and the academic calendar to implement these recommendation generally, and in particular the relationship and relative weighting of the four criteria listed.

Respectfully submitted,

Dr. Marianne Legault
Senate Admissions and Awards Committee

New Approach to Holistic Undergraduate Admissions

Introduction and Guiding Principles of Practice

This proposal suggests a new approach to the manner in which UBC assesses an undergraduate applicant's academic profile. While the approach has been sparked by the proposed changes to the BC Ministry of Education's new Graduation Program (scheduled for implementation in 2018/19), the proposed changes and benefits will affect all secondary school applicants to UBC.

The proposal represents a fundamental shift in how the university approaches undergraduate admission decisions; admission policies will be driven more by principles than by rules. Many of UBC's admissions practices originate from a time when the vast majority of our applicants presented a (relatively) small and homogenous set of secondary school courses, all of which were accompanied by standardized examinations. Today, the BC/YT graduation program that fostered our admission practices has long since changed. And our applicant pool is so diverse, presenting such a broad range of curricula, that a more flexible, more principle-based approach is required.

The Senate-approved Principles of Effective Undergraduate Admissions guides UBC's enrolment management practices. The following should be considered as an appendix to those principles, operating at a more granular level, and influencing how evaluations of applicants are conducted:

- Wherever possible, UBC should be holistic in its approach to the academic assessment of an applicant. This involves evaluating as many courses as possible within the student's penultimate and ultimate year of secondary school study.
- Wherever possible, UBC's admission decision should go beyond school-based assessments of performance (i.e., grades) and also consider the composition of the student's academic record, recognizing breadth, depth, relevancy, and/or individual context of presented coursework.
- Wherever possible, the academic assessment should discretely assess a student's overall academic potential and potential for study in a particular UBC program.
- Wherever possible, UBC's admission policies should promote positive learning outcomes in secondary school (such as encouraging students to challenge themselves, pursue their intellectual curiosities, and take risks) as opposed to fostering an environment where strategic decision-making for university admission works against positive learning outcomes.

Applicability

This proposal outlines a new approach in the academic assessment used within the undergraduate admission process (for both the Vancouver and the Okanagan campuses). This document will describe procedures and detail the implications on the BC secondary school applicant pool. Nevertheless, the principles outlined herein are intended to apply to all secondary school applicants to UBC. Upon approval from Senate, the Undergraduate Admissions office will commence a systematic review of evaluation procedures to align evaluation practices for all applicant groups and curricula with the principles outlined in this new approach.

Key Curriculum Changes in the new BC Grad Program

Although this new approach has been sparked by discussions related to the upcoming changes to the BC/YT secondary school graduation program, the implications and benefits of this proposal affect secondary school applicants to UBC from all jurisdictions. Key curriculum changes in the new BC/YT Graduation program include:

Changes to Grade 11 courses that affect the UBC admission decision:

- Applied Physics 11/12 are no longer offered (the two combined can be used to meet the Science 11 requirement for the Vancouver campus)
- Biology 11 is no longer offered; Life Sciences 11 is now available
- English 11 is no longer offered (currently a pre-requisite for direct-entry into all UBC Vancouver programs). New courses include Composition 11, Creative Writing 11, Literary Studies 11, New Media 11, and Spoken Language 11.
- A new suite of Grade 11 courses is now available.

Changes to Grade 12 courses that affect the UBC admission decision:

- Biology 12* is no longer offered; new courses are Anatomy and Physiology 12 and Environmental Science 12.
- English Literature 12* is now Literary Studies 12, an optional course in the Grade 12 curriculum.
- First Nations Studies 12*, Geography 12*, and History 12* are no longer offered. New social studies 12 courses include: Comparative World Religions 12, Contemporary Indigenous Studies 12 (assumed to be similar to First Nations Studies 12), Economics 12*, Genocide Studies 12, Law Studies 12*, Philosophy 12, Physical Geography 12 (assumed to be similar to Geography 12), Social Justice 12**, and Urban Studies 12.
- English 12* no longer has a provincial exam as part of its curriculum. There is a new standardized literacy assessment that all students must complete to graduate. The assessment will be scored on a detailed numerical scale (i.e. >100) and with a qualitative assessment (i.e., “meets expectations”), although only the qualitative assessment will be transcribed and made available to the student. Students can write the Literacy Assessment in any year of secondary school and as many times as they would like.

Note: * denotes a course eligible for inclusion in the admission average for both campuses; ** denotes a course eligible for inclusion in the admission average for Okanagan campus only.

Exploring a Holistic Academic Assessment in the Undergraduate Admission Decision

Overview

The following outlines a more holistic approach to the academic assessment component of the UBC undergraduate admission decision and how it applies to the BC secondary school applicant pool. The underlying principle is that the current practice of combining an overall assessment of academic performance (i.e., the grades in a broad range of academic coursework) and program-specific aptitude (i.e., grades in courses related to the student's intended area of study at UBC) into a single numerical assessment (i.e., the current admission average) is problematic.

This new approach rests on the fundamental principle that when using secondary school coursework to predict success in post-secondary study, "more is better". This is evidenced by the fact that a BC secondary school applicant's overall admission average is always a better predictor of first-year success at UBC than any one individual course (compare individual course correlations with first-year success in Appendix 3 with overall admission average correlations in Appendix 4).

The new approach suggests an admission decision that is made on four distinct assessments:

1. **Academic: Overall**. This overall assessment considers the near-entirety of a student's academic coursework at the Grade 11 and 12 levels. Calculated as the *Overall average*. The purpose is to gain a complete picture of who the student is as a learner. The assessment is constructed in the same manner for all applicants (regardless of intended program of study at UBC).
2. **Academic: Program-Specific Aptitude**. This assessment considers the entirety of a student's coursework (to most senior level of study) in disciplines relevant to the intended Faculty/Program of study at UBC. Calculated as the *Core average.* The purpose is to assess a student's potential and preparation for a specific degree program. The construction of the assessment varies based upon the applicant's intended program of study.
3. **Academic**: **Key Courses**. Minimum grade thresholds are imposed on key courses (e.g., Pre-Calc 12 for BSc) as determined by the Faculty.
4. **Personal: Personal characteristics**. This assessment considers personal characteristics, accomplishments, and self-reflection as evidenced on the UBC Personal Profile.

The academic assessments above go beyond a mere calculation of an admission average. In many cases, a level of discretion is required to understand academic coursework in context. Both the overall and the program-specific academic assessment may be adjusted based upon the **breadth** of coursework (i.e., how many classes the student has taken) and the **depth** of coursework (i.e., does the student present enriched classes, such as Advanced Placement courses, International Baccalaureate Certificates, Calculus, or honours classes). In addition, the program-specific assessment may be adjusted based upon **relevancy** of coursework. For example, an applicant to the BASC program may benefit from taking an applied course in computer programming; while the grade cannot be used in the calculation of the overall or core averages, presenting another course relevant to their intended area of study can be seen as beneficial in a discretionary admission decision. Finally**, individual context** of coursework may be considered. For example, a student who attends a smaller secondary school in a rural community may have less opportunity to take a large courseload.

What is the purpose of this change? What problems are we trying to solve?

Alignment with other Canadian jurisdictions. The list of "approved academic courses" that BC / YT secondary school students can use for admission has its origins in a historical graduation program that included provincial examinations. As such, UBC's recognition of BC secondary school courses is much more restrictive than a) what other universities recognize from BC applicants (see Appendix 2) and b) what UBC recognizes from secondary school applicants from other Canadian jurisdictions.

Alignment among all UBC applicant types. Currently, direct-entry applicants from Canada and the United States are the only applicants to UBC where courses are selectively chosen from the transcript for evaluation. For all other secondary and post-secondary school applicants, the entire transcript is considered in the academic evaluation (see Appendix 6). This creates a significant inconsistency in how UBC makes admission decisions.

Ensures relevant courses are always considered. One of the problems with the aforementioned inconsistencies is that for North American direct-entry applicants, not all relevant courses are considered in the academic assessment. For example, a BC student's poor grade in Chemistry 12 will be ignored in the academic assessment for entry into the BSC program if the student takes additional science courses. In contrast, an IB Diploma student will have their grades in all courses considered for all UBC programs. This leads to a poorer admission decision for the BC student, as secondary school performance in a related discipline is a good predictor of first-year success.

Increase the predictive ability of the admission decision. Research shows that the mean of a group of secondary school grades is a more reliable predictor of first-year success than the grade in any one course (regardless of discipline). This suggests a "more-is-better" approach; the more academic coursework considered in the admission decision, the more reliable the decision. Furthermore, by minimizing the variation between a) the grades used to render the initial admission decision and b) the grades used to confirm the offer of admission in the summer, UBC can make better admissions (i.e., using data that better correlates to first-year performance) and potentially reduce the number of revoked offers of admission in the summer.

Partial mitigation of the inflation of the admission average. All historical data suggests that BC secondary school student admission averages will increase once the English 12 provincial exam is eliminated. This will increase the admission average required to gain admission to UBC; in other words, all applicants will have to present higher grades in order to gain admission to UBC simply because of a change in the BC/YT curriculum.

Furthermore, historical data has shown that new BC secondary school courses often present higher than average grades without a corresponding increase in first-year performance once at UBC. By broadening the number of courses considered in the admission decision, the grade-inflating influence of any one course is minimized.

Mitigates the impact of courses that are poor predictors of success. By assessing both breadth and program-specific aptitude in the same academic evaluation, strong performance in courses that are poor predictors of success often masks poor performance in courses that are good predictors of success. So, for example, for a student applying to the BSC program, a grade in Spanish 12 (a poor predictor of performance) can have as much more impact on the academic assessment as a grade in Physics 12 (a

good predictor of performance) (see Appendix 3). UBC needs an admission process where both courses can be recognized with each receiving appropriate consideration.

Allows for greater consideration of humanities, social sciences and arts courses. Many perceive that the current list of approved academic courses in BC/YT tends to favour students intending on pursuing science-based courses of study. A larger proportion of BC/YT's offerings in humanities, social sciences and visual and performing arts courses are excluded from the UBC admission process than science-based course offerings. This proposal allows for a broader range of courses to influence the admission decision, ensuring that the influence is appropriate for the intended area of academic study.

Eliminates the need for ad hoc assessment of new courses. The governance process of the university (i.e., Senate Admissions Committees) would no longer need to deliberate on whether a new BC/YT course can be included in the admission average. Decision-making would reside at the Faculty level to determine whether a new course is related to the area of study and should therefore be included in the core. This reduces administrative process along with increasing equity among all applicant groups.

Alignment with new BC Ministry Graduation Program. The new BC Graduation Program provides more course options to better align with learner interests. As UBC's admission requirements have a significant effect on course selection among secondary school students, a restrictive list of viable courses works against increased choice for students. This proposal allows students to present a broader number of courses for consideration in the admission decision while increasing the predictive value of the assessment and without increasing the mean admission average.

Additional considerations. Thought all the aforementioned have value, adoption of this new approach does not come without its challenges. Internally, the technical changes required to administer such a process are significant and must be considered in the design of a new admission system. In addition, UBC must refine its method of identifying "competitive-cut-offs", as a uni-dimensional linear scale is less feasible with three discrete ordinal assessments (Overall Academic, Program-Specific Academic, Personal Profile).

Externally, clear and proactive communication will be required to convey such a significant change in process to public. Timing is also important, as implementation must provide enough time for BC/YT secondary schools and students to understand the changes (even though these changes need not necessarily change a secondary school student's intended course of study).

Exploring Holistic Admissions

Competitive Academic Assessment: Current Practice

In the current state, a single competitive average is calculated for all applicants:

- The BC secondary school admission average is calculated on four Grade 12 courses (or equivalent). This number varies across North American jurisdictions. Courses used in the average include senior year pre-requisites and assess both program-specific competency and general academic breadth[1].
- Presenting fewer than four courses leads to automatic refusal.
- Only a select list of academic courses may be used in the calculation of the admission average.
- Final Grade 11 course grades may be used as substitutes to make timely offers of admission.
- Faculty impose individual course minima on courses deemed critical for first-year-success.
- An assessment of "depth and breadth" is made for applicants who are not initially admissible.
- UBC reserves the right to use the English 12 Provincial Exam score without course grade when a significant discrepancy exists between the two.
- Similar practice is used among all Canadian jurisdictions (with the exception of the DEC/DCS from Quebec), although the number of courses used in the average aligns with the local practice.

Competitive Academic Assessment: Proposed Practice

Two distinct competitive admission averages will be calculated for all applicants:

- The *Overall* average is designed to discretely assess academic breadth.
    - Does not vary by program.
    - All Grade 11 and 12 course grades (excludes applied design, skills and technology; physical & health education; career and personal planning).
    - Expect roughly 12 – 18 courses used in the calculation of the overall average for most applicants.
    - Minimum of six Grade 12s. Applicants presenting fewer than six Grade 12 courses will be considered on a discretionary basis.
    - Exclude the lowest Grade 11 or Grade 12 course grade.
    - Maximum of two Grade 11 and two Grade 12 (four total) on visual & performing arts classes (the courses with the highest grades will be used).
    - Consideration given for breadth and depth of coursework.
    - Applicable throughout North American jurisdictions; adapted in principle to other curricula.

- The *Core* average (*Program-Specific* assessment) is designed to assess aptitudes related to the intended area of study.
    - Varies by program.
    - Minimum of four Grade 12s. Applicants presenting fewer than four Grade 12 courses will be considered on a discretionary basis.
    - Expect roughly 4-8 courses used in the calculation of the overall average for most applicants.
    - Always includes English 12 / English First Peoples 12.

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[1] Engineering is the exception, where all four courses used in the average assess program-specific competency.

- All Grade 11 and 12 courses in subjects related to the intended area of study at UBC (excludes applied design, skills and technology ; physical & health education; career and personal planning).
- Inclusion in the core is determined by the course discipline as it relates to the intended program of study at UBC (i.e., is the course in a discipline related to an area of study within the UBC program?).
- If a course is presented at both the Gr11 and Gr12 level, use grade from highest level only.
- Consideration given for breadth, depth and relevancy of coursework, as well as individual context.
- Faculty impose individual grade minima on courses deemed critical for first-year success.
- Applicable throughout North American jurisdictions; adapted in principle to other curricula.

Rationale for Practice:

1. **Students must present a minimum of six academic Grade 12 courses.**
   Rationale: UBC wants to see that students can carry a relatively substantial course load (minimum three per semester or six per year). The minimum of six is used because the vast majority of our admitted BC students (92% in 2016 for UBC as a whole; 94% for Vancouver and 86% for the Okanagan; see Appendices 4a, 4b, 4c, and 4d) already take this many courses, so we are accommodating applicants from smaller schools while still ensuring that students are well set-up to succeed. Having fewer than six Grade 12 courses does not result in automatic refusal. Applicants with a smaller course-load will be evaluated in a discretionary manner in consultation with the Faculty/Program.

2. **At least four of the courses should be related to what the applicant intends to study at UBC. English 12 is always one of the four.**
   Rationale: We want to ensure that students are prepared for their area of study at UBC. Furthermore, we want to make sure that our admission decisions include an assessment of relevant coursework. Again, having fewer than four Grade 12 courses in the core does not result in automatic refusal. Applicants with a smaller course-load will be evaluated in a discretionary manner in consultation with the Faculty/Program.

3. **Taking two to three more courses above the minimum number (be it the overall minimum or the program-specific minimum) may improve an applicant's chances of admission, but is not required.**
   Rationale: Encouraging students to go beyond the minimum supports positive learning outcomes. UBC will message a limit ("two to three") in order to prevent students taking more and more courses simply to increase their chances of admission.

4. **Taking one or two courses at an advanced level (e.g., IB, AP, Calculus) or an overall enriched curriculum (e.g., French immersion) may improve an applicant's chances of admission, but is not required.**
   Rationale: Encouraging students to go beyond the minimum supports positive learning outcomes.

5. **UBC will calculate two academic assessments:**
   1. **An Overall assessment (*Overall Average*):** the mean of ALL academic Grade 11 (no minimum) and Grade 12 (minimum of six) course grades, with some exceptions.

2. **A Program-Specific Assessment (*Core Average*):** the mean of grades from the highest-level course in a discipline related to the intended course of study at UBC.

Rationale: Ensure discrete and accurate assessments of both overall academic ability and program-specific aptitude. The core will include all discipline-relevant Grade 11 and 12 courses (see Appendices 7A and 7B for a possible assignment from the new BC Grad Program), but will exclude Grade 11 courses that are also presented at the Grade 12 level.

	Used in Core?	Used in Overall?
Description	Program-specific	All academic **
Grade 11 grades	If Grade 12 equivalent not avail	Yes
Grade 12 grades	Yes	Yes
Lowest Gr11 or Gr12	Included if program-specific	Excluded
Non-Academic **	No, but can be considered on discretionary basis	No
Visual and Performing Arts	Only for BFA and BMUS	Max. two Grade 11 and two Grade 12

Note: ** Non-Academic courses include: applied design, skills and technology; physical & health education; career and personal planning

6. **When calculating the Overall average, UBC will drop the lowest Grade 11 or Grade 12 grade. UBC will not drop the lowest grade on the academic assessment of core courses.**
Rationale: Experimentation is encouraged-- Students should be encouraged to pursue courses outside of their area of study without worrying about it "bringing down" their average. Of course, if they do well, it helps their chances of admission. Note that the lowest course will not be dropped if it is related to the student's area of study. A student cannot "hide" a poor grade if it is related to their area of study.

7. **When calculating the Overall average, UBC will only use the two highest Grade 11 and two highest Grade 12 grades (total of four) from the visual and performing arts.**
Rationale: Students often present multiple courses in the visual and performing arts that vary slightly in theme and content. Therefore, in order to ensure that the overall assessment is not overly influenced by one particular skill-set, a modest limit is imposed upon the number of visual and performing arts courses that may be presented (see Appendix 8, Example 1 for an illustration).

8. **In order to render a timely offer of admission, select Grade 11 grades may be used when a Grade 12 grade is not yet available.**
Rationale: Despite our desire to be holistic, we cannot wait until final grades are available for all Grade 12 courses. So UBC will continue the practice of using final Grade 11 grades as substitutes when an interim grade is not available in a required course. However, when conducting the core academic assessment, the Grade 11 grade will not be used if a Grade 12 grade in the same discipline is available.

It is important to note that using Grade 11 grades as proxies for Grade 12 course grades not yet available requires an approved equivalency list. The following equivalencies are proposed:

Grade 12 Pre-Requisite	Approved Grade 11 substitute for Early Admission
English 12	Composition 11; Focused Literary Studies 11; or Creative Writing 11[2]
English First Peoples 12	English First Peoples 11
Pre-Calculus 12	Pre-Calculus 11
Anatomy & Physiology 12	Life Sciences 11
Chemistry 12	Chemistry 11
Physics 12	Physics 11

If one of the aforementioned Grade 12 pre-requisites are required for admission but is not at least 50% complete by point of evaluation, a final grade is required in the appropriate Grade 11 substitute in order to proceed with an admission decision. Otherwise, the admission decision will have to wait until an interim grade in the Grade 12 course is available before the university can render an admission decision.

9. **BC/Yukon students must present a completed Literacy Assessment in order to be considered for admission.**
   Rationale: Even though the Literary Assessment is presented in broad qualitative terms, the information can still be of some use in the admission decision. UBC will ask that all BC/YT secondary school applicants who wish to be considered for early admission present a completed Literacy Assessment at point of application (fall of the senior year). This should not be considered a hardship among students[3] as the Ministry has suggested that the Literacy Assessment can be written as often as the student would like and at any point in their secondary school career. The assessment is used to validate the English 11 or English 12, although some programs may elect to ask for a minimum score as an admission requirement. Students cannot be evaluated until the Literary Assessment has been completed.

10. **Competitive admission criteria are established in three areas: the student's overall academic assessment; the student's program-specific assessment, and; the student's personal profile assessment.**
    Rationale: Any student who meets the bare minimum (six courses, four in their area of study) and presents a strong assessment (i.e., strong grades, strong personal profile score) can be admitted. In other words, such students will not be penalized for lacking breadth and/or depth of coursework as long as they achieve the minimum requirements and have strong grades. It is estimated that 80% of UBC's admit pool will be admitted in this straightforward manner.

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[2] See Appendix 1 for a background on how the new English 11 and 12 courses can be used in the admission decision.

[3] For students who are new to Canada, who have not had as much time in an English classroom, this may be perceived as a hardship. That being said, it is important to note that a passing score on the Literary Assessment is not necessarily an admission requirement. The Literacy Assessment score is used to substantiate the English 11/12 grade. One would assume that a student who is new to Canada who struggles with the Literacy Assessment will also struggle with English 11 and/or 12. So the issue is not that a student learning English will have a poor score on the Literacy Assessment; the issue is that they will not have a strong grade in English 11 or 12.

11. **Students who present fewer than the required number of courses with strong grades will be reviewed on a case-by-case basis.**
    Rationale: If a student from a smaller community (where it is assumed that course offerings are limited) or a student with particular life circumstances presents fewer than the required number of courses with strong grades, some discretion can be offered.

12. **Students who are not competitive in each of the three areas are reviewed case by case**.
    Rationale: A holistic approach dictates that any number of criteria may be relevant in making the admission decision. Proximity to individual cut-offs, number of courses taken, and rigour and relevancy of courses taken relative to the student's background (school, personal circumstances) are all considered to admit on a discretionary basis. Estimate that 20% of the incoming class will be admitted in this fashion. Note: It is important to note that not having depth and breadth does not preclude admission. A student from a school that does not offer a large number of courses who achieves the minimum number with strong grades may still be admissible to UBC.

13. **The undergraduate application will introduce a personal statement from the student to illustrate how they chose their academic path in high school.**
    Rationale: Understanding how students make their academic choices can inform the discretionary decision. The question will prompt information related to course selection, areas of academic interest, and life circumstance that may be relevant to their academic choices (i.e., family responsibilities, financial responsibilities, commitments to areas outside of school work, etc.). So if a student took the minimum number of courses because of other substantial responsibilities, they may still be given a bump in the admissions process.

Modelling Admission Decisions

The following provides a model of admission averages calculated in both the current and proposed admissions models. The model is based upon 293 randomly-selected former BC high school students who completed their first-year at UBC during the 2016/17 academic year. The model calculates admission averages in the following manners:

Spring Avg:	Current process, Spring grades on four approved academic courses, used to admit the majority of BC high school students. For semester school students, a mix of final Grade 11 and final Grade 12 course grades. For linear school students, mostly Grade 12 interim grades.
Admit Avg:	Current process, final grades in four approved academic Grade 12 courses.
New Overall Avg:	All final Grade 11 and Grade 12 courses. Omits the lowest Grade 11 or Grade 12 course grade. Includes a maximum of two Visual Arts/Performing Arts courses at the Grade 11 level and at the Grade 12 level (maximum four courses total). Includes Grade 11 course even if similar course taken at Grade 12 level. Excludes locally developed courses.
New Core Average:	All final Grade 11 and 12 courses deemed specific to the intended program of study at UBC. Excludes Grade 11 courses where the Grade 12 course in the same discipline is present and at least 50% complete. Excludes locally developed courses.

For a draft list of new curriculum courses that may be considered core for each Faculty, please see Appendices 7A and 7B. This draft assignment mirrors what was used in this model.

Table 1a presents three data points for each of the above: the mean admission average, the standard deviation of the admission average, and the mean drop between the admission average and first-year sessional average at UBC. The data presents a number of interesting conclusions:

- Generally speaking, the new overall average and (particularly) the new core average are lower than averages used in the current process. This suggests that the new admission model would create downward pressure on the competitive admission average required to gain admission.
- The new core averages have a higher standard deviation than the current admission averages, particularly for very competitive programs such as Science, Commerce, Kinesiology, and International Economics. This suggests that the new admission averages would create increased differentiation within the applicant pool.
- The two new averages represent a smaller drop to first-year performance than the current admission average.

For a sample of what the new evaluations (overall average and core average) look like for individual applicants, please see Appendix 8.

Table 1a: Current (Spring; Final Current) and Proposed (Overall; Core) Admission Averages by Campus and Program, 2016W

			Current Admit Avgas						Proposed Admit Avg					
			Spring			Final			Overall			Core		
	(n)	UBC (x̄)	(x̄)	(stdv)	△ UBC	(x̄)	(stdv)	△ UBC	(x̄)	(stdv)	△ UBC	(x̄)	(stdv)	△ UBC
Vancouver	242	74.6	92.5	3.6	-17.8	91.8	4.0	-17.1	90.3	4.5	-15.7	89.8	4.6	-15.1
BA	61	71.1	89.7	3.5	-18.6	88.6	4.3	-17.5	86.2	4.7	-15.1	87.6	4.5	-16.5
BASC	31	74.9	94.2	2.4	-19.3	93.5	2.7	-18.6	93.5	2.8	-18.6	93.5	2.8	-18.6
BCOM	31	73.8	93.4	3.1	-19.5	92.8	2.6	-19.0	90.6	3.8	-16.8	89.2	4.7	-15.4
BDSC	1	77.3	93.0		-15.7	93.3	--	-16.0	92.4	--	-15.1	93.2	--	-15.9
BIE	2	72.4	92.5	0.7	-20.1	91.0	0.4	-18.6	89.5	3.4	-17.1	87.8	2.5	-15.4
BKIN	10	75.4	93.3	1.9	-17.9	92.0	2.4	-16.6	88.6	3.4	-13.2	86.7	4.5	-11.4
BMUS	4	82.8	90.0	5.0	-7.2	89.3	5.6	-6.5	92.6	2.5	-9.8	90.7	2.3	-7.9
BSAB	4	76.4	94.0	4.5	-17.7	93.3	3.8	-16.9	92.1	3.6	-15.8	91.8	4.0	-15.5
BSC	88	77.3	93.9	2.7	-16.6	93.5	2.7	-16.2	92.1	2.8	-14.9	90.8	3.7	-13.5
BSCW	2	64.7	87.0	1.4	-22.4	84.6	0.2	-20.0	83.7	4.9	-19.0	79.0	6.0	-14.4
BSF	1	73.4	79.0	--	-5.6	74.3	--	-0.8	79.4	--	-6.0	80.3	--	-6.9
BSFN	6	74.4	92.3	2.9	-18.0	91.7	3.2	-17.3	92.0	2.9	-17.7	90.9	3.2	-16.5
BUF	1	55.4	83.0	--	-27.6	83.3	--	-27.9	81.5	--	-26.1	78.4	--	-23.0
Okanagan	51	69.0	86.1	5.4	-17.1	85.3	5.9	-16.3	85.8	4.8	-16.8	84.9	6.1	-15.9
BA-O	15	66.9	84.8	5.1	-17.9	84.1	5.1	-17.2	82.8	4.6	-15.9	83.0	5.9	-16.1
BASC-O	6	74.9	88.3	3.0	-13.4	88.4	2.8	-13.5	89.6	2.6	-14.7	89.8	2.5	-14.8
BHK-O	5	69.1	83.0	4.9	-13.9	82.7	3.8	-13.6	85.0	3.6	-15.9	81.6	5.0	-12.5
BMGT-O	5	70.2	83.6	5.3	-13.4	81.8	7.2	-11.6	83.9	3.9	-13.6	82.4	4.6	-12.1
BSC-O	19	67.5	87.6	5.7	-20.1	86.5	6.5	-19.0	87.2	4.4	-19.7	85.9	6.4	-18.5
BSN-O	1	89.8	93.0	--	-3.2	95.5	--	-5.7	95.1	--	-5.3	95.4	--	-5.6
Total	**293**	**73.7**	**91.4**	**4.6**	**-17.7**	**90.7**	**5.0**	**-17.0**	**89.5**	**4.9**	**-15.8**	**88.9**	**5.2**	**-15.3**

Table 1b: Current (Spring; Final Current) and Proposed (Overall; Core) Admission Averages by Campus and Gender, 2016W

			Current Admit Avg		Proposed Admit Avg	
	(n)	UBC (x̄)	Spring (x̄)	Final (x̄)	Overall (x̄)	Core (x̄)
Vancouver	**242**	**74.6**	**92.5**	**91.8**	**90.3**	**89.8**
Female	117	74.9	92.2	91.8	90.2	89.6
Male	125	74.4	92.7	91.8	90.4	89.9
Okanagan	**51**	**69.0**	**86.1**	**85.3**	**85.8**	**84.9**
Female	24	69.7	85.7	84.7	85.3	83.8
Male	27	68.4	86.5	85.9	86.2	86.0
Total	**293**	**73.7**	**91.4**	**90.7**	**89.5**	**88.9**

Table 1b presents similar data, but separates applicants by gender as opposed to program. The admission averages generated in the proposed process do not depart from the current system in a different manner for males vs females. The one exception is among male students in the Okanagan, where the core average is substantially higher than for females. However, this can easily be explained by the fact that this sample pool for the Okanagan over-represents males in the Bachelor of Applied Science, where the grades required for admission are typically higher than in other Okanagan programs.

All of the above are positive outcomes in the context of the undergraduate admissions process. But the ultimate question remains: which of the assessment generates the most accurate and reliable predictor of first-year success? Table 2 below provides an overview:

Table 2: Correlation (r) between admission averages and first-year performance at UBC, 2016

		Current Admit Avg		Proposed Admit Avg	
	n	Spring	Final	Overall	Core
Vancouver	242	0.44	0.47	0.47	0.48
Male	125	0.43	0.44	0.46	0.44
Female	117	0.47	0.52	0.49	0.54
Okanagan	51	0.46	0.49	0.49	0.47
UBC	293	0.47	0.50	0.50	0.50

The analysis suggests that use of an overall and a core average will lead to slightly more valid admission decisions (in terms of the relationship with first-year performance at UBC). This conclusion is reached in two ways. First of all, for the Vancouver campus, the new core average typically shows higher correlations with first-year performance than final averages calculated in the current process.

More importantly, the new core and overall average calculated at point of admission look a lot more like the final average than the current spring average. If we only look at UBC's current admission practices in Table 2, we can clearly see that final grades currently used to *confirm* the offer of admission in the summer have a higher correlation with performance at UBC than the grades used in the spring to make the *initial* offer of admission. UBC would make better admission decisions if we waited for final grades

(in the summer) before admitting students. Obviously, the timing of this approach is impractical. It would be wiser to find a way to make admission averages in the spring in a manner where the average is less likely to change by the summer (final grades).

The more we focus on a smaller subset of Grade 12 courses, the greater the difference between Spring grades and Final grades. Imagine the "typical" high school student, who takes a set number of Grade 11 courses evenly distributed throughout their penultimate year of secondary study and a set number of Grade 12 courses evenly distributed throughout their ultimate year of secondary study. In the current admission model, anywhere from half to all of the course grades used at point of admission (Spring) are likely to change by the time we get final grades (see Table 3a).

Table 3a: Change in BC secondary school admission average between point of admission (Feb/March) and final grades (July), Current Admissions Practice

	Current Admit Avg		
	Feb/March	July	Variation between Spring & Final averages
Linear BC School	Four interim (term 2) Gr12 grades as of March	Four final Gr12 grades	100%: All of the four grades used in the final average will be different than those used in the Spring
Semestered BC School	Two final Gr12s and two final Gr11s as of January	Four final Gr12 grades	50%: two of four grades used in the final average will be different than those used in the Spring

We know that proposed core/overall averages correlate at the same (if not slightly higher) level with first-year performance as the current final average (see Table 3). And we know that the grades we use to admit in the Spring are less likely to change through to final grades than in the current system. This suggests that the proposed approach (with the core and overall averages) will allow UBC to make better admission decisions (via data that correlates better with first-year performance) earlier in the cycle. In doing so, UBC can also potentially reduce the number of revoked offers of admission in the summer, as the change between grades at point of admission and final grades has been minimized.

Table 3b: Change in BC secondary school admission average between point of admission (Feb/March) and final grades (July), Proposed Admissions Practice (Overall and Core)

	Proposed Admit Avg		
	Feb/March	July	Variation between Spring & Final averages
Linear BC School	Final Gr11s and interim Gr12s to March	Final Gr11s and final Gr12s	50%: All final Gr11 grades are the same; all Gr12 grades will change between March and July.
Semestered BC School	Final Gr11s and Final Gr12s up to January.	Final Gr11s and final Gr12s	25%: Only Gr12 courses from the final semester of the sr. year are new to the final average.

Messaging

General Messaging

UBC takes a holistic approach to undergraduate admissions. From an academic perspective, UBC will look at almost all your academic Grade 11 and Grade 12 courses. UBC will pay particular attention to courses that are related to your intended area of study. In addition, if you do poorly in a single course that is not related to your intended area of study at UBC, it will not affect your chances of gaining admission. UBC also considers an applicant's personal characteristics and extra-curricular activities via the UBC personal profile. Students who have the appropriate pre-requisites, the minimum number of Grade 12 courses with strong grades, and a strong personal profile will be eligible for a competitive assessment. That being said, taking one, two or three courses above the minimum or taking particularly rigorous courses (e.g.,AP, IB or Calculus) can improve the chance of admission. Furthermore, taking non-academic courses (i.e., technical or applied courses) may also increase an applicant's chance of gaining admission. Finally, UBC understands that not all students have the same opportunities regarding course-selection, so an applicant's individual context will be taken into consideration.

Detailed Messaging

- UBC will look at your grades in nearly ALL your academic Grade 11 and 12 courses. There are some exclusions: Applied Design, Skills and Technology; Physical & Health Education; Career and Personal Planning (see https://curriculum.gov.bc.ca/curriculum/10-12).
- You must have the pre-requisite courses (Grade 11 and Grade 12) for your program of study.
- You must take at least six Grade 12 courses.
- You must take at least four Grade 12 courses related to what you want to study at UBC. English 12 always counts as one of these courses. Other courses can be determined either by identifying individual courses (e.g.,English 12) or by groupings of courses (e.g.,Arts will consider any second language a "core" course).
- If you do not have the minimum number of courses, UBC will still consider your application, although the university will look to understand why you are deficient in the number of courses presented.
- You must be able to provide a final assessment on the Literacy Assessment (BC/YT students only) before you can be admitted.
- If you don't have a grade in a required Grade 12 course at point of evaluation, a final grade in a Grade 11 course may be used as a substitute. However, make sure that you have taken the correct Grade 11 course that serves as a substitute for a missing Grade 12 course grade.
- UBC will make three academic assessments. The first is based upon your overall grades on all Grade 11 and 12 courses. The second will be based upon your grades on courses related to what you want to study at UBC. The third will be based upon the individual grade in courses deemed to be key for success in a particular program (e.g., English 12 or Pre-Calculus 12).
- In the overall assessment, UBC will drop your lowest course (lowest Grade 11 and Grade 12) on your overall academic assessment. If these is a course that you are interested in taking but are not sure if you will do well, feel comfortable that a good grade will help your chances of admission but a bad grade will not hurt your chances.
- On the overall assessment, UBC will use a maximum of two Grade 11 and two Grade 12 courses in the visual and performing arts.
- On the core assessment, UBC will look at all grades in courses related to what you want to study at UBC. UBC will not drop your lowest course if it is related to what you want to study at UBC. However, we will not use a Grade 11 grade if you take the course at Grade 12 level.

- Having high grades is important. But showing that you have challenged yourself in high school can also increase your chances of gaining admission. You can demonstrate this by taking a few courses above the minimum and/or by pursing challenging course such as Advanced Placement courses (with or without the exam) or International Baccalaureate certificates.
- UBC may look favorably upon students who have taken Applied Design, Skills and Technology courses related to their intended area of study, although the grades will not be used in the calculation of either admission average.
- UBC understands that not all students have the same opportunities of access to courses. Applicants will be given the opportunity to tell UBC about how they made their academic decisions in high school. Students with fewer than the required number of courses who present strong grades may still be competitive based upon their individual context.

Internal Procedures

- Check for pre-reqs (Grade 11 and Grade 12)
- Check for minimum six academic courses at the Grade 12 level; if not, review file for individual context on how student chose their course load.
- Check for at least four Grade 12 courses that are relevant to what the student wants to study. Again, review file for individual context if fewer than four.
- Check that Faculty-imposed course-specific minima have been met.
- Check that there is a final assessment in the Literacy Assessment (BC/YT students only).
- If grades are missing for any of the required Grade 12 courses, ensure that the appropriate Grade 11 final grade is available.
- When conducting the overall academic assessment, drop the lowest course grade.
- Make sure the overall average does include more than the maximum number of visual and performing arts classes.
- When conducting the core academic assessment, if Grade 11 and Grade 12 grades are presented in the same discipline, use the Grade 12 grades only.
- Record four numbers in the system: 1) overall academic assessment/average, 2) number of courses in overall, 3) core academic assessment /average, 4) number of courses in core.
- For competitive programs, establish admission criteria that admits roughly 80% of the admit pool via a straightforward assessment (e.g., applicants who adhere to all the rules, meet course-specific minima for their program and have the strongest scores on the overall average, core average, personal profile score, are admitted). The remaining 20% of UBC's admit pool can be generated by taking a closer look at the applicants, adjusting for breadth, depth, and relevancy of coursework, in addition to individual context.

Examples of Competitive Admission Decisions

There are a variety of ways in which admission decisions can be rendered based upon the proposed methods of assessment.

The Discrete Scores Model

In this model, programs establish cut-offs for the 1) overall average, 2) core average, 3) course-specific minima (e.g., a minimum score of 80% is required in Pre-Calculus 12), and 4) the personal profile. The greater the emphasis a program decides to place on each measure, the higher the cut-off. If the applicant's assessments fall above all four cut-offs, admit the student. Roughly 80% of our admit pool should be generated in this manner. If the applicant has fewer than the required number of courses and/or their assessment falls below one or more of the cut-offs (by an acceptable margin), conduct a discretionary assessment based upon breadth (number of courses taken), depth (academic rigour of courses taken), relevancy (applicability to the student's intended area of study at UBC), and the individual context of the student, as appropriate.

Table 4: Examples of the Disaggregated Scores Model of Selection

	Student A	Student B	Student C	Student D
Overall Average				
Admit range	>=86%	>=86%	>=86%	>=86%
Discretion range	82% - 85%	82% - 85%	82% - 85%	82% - 85%
Applicant's score	89%	89%	89%	89%
Core Average				
Admit range	>=90%	>=95%	>=90%	>=90%
Discretion range	87% -89%	91% -94%	87% -89%	87% -89%
Applicant's score	91%	95%	87%	91%
Course-Specific Minima				
Admit Range	English 12 >=80%; Pre-Calculus 12 >=80%)			
Applicant's score	Yes	Yes	Yes	Yes
Personal Profile				
Admit range	3 (average)	2 (below avg.)	3 (average)	3 (average)
Discretion range	2 (below avg.)	n/a	2 (below avg.)	2 (below avg.)
Applicant's score	3 (average)	3 (average)	5 (best)	1 (worst)
Outcome	**Admit**	**Admit**	**Discretionary admit**	**Refuse**

Student A

This student is a very straightforward admit, having achieved all three competitive thresholds.

Student B

This student was also admitted. The student applied to a Faculty that chose to place a greater emphasis on the core (by elevating the competitive cut-off) and a lower emphasis on the

personal profile (by tolerating a profile deemed "below average") excluding students who fall into the bottom 2% - "one of the worst").

Student C

This student is a discretionary admit as their core average falls outside of the admit range and into the discretionary range. Nevertheless, in reviewing the file holistically, the applicant was admitted for one or more of the following reasons:

- Breadth in the core: the applicant presents an above average number of courses related to their intended area of study.
- Depth in the core: the applicant presents rigorous / advanced coursework in their intended area of study.
- Relevancy in the core: the applicant presents applied courses (where the grades were not used in the calculation of the core average) related to their intended area of study.
- Personal profile: the applicant presents a very strong personal profile.

If the applicant fell into the discretionary range because of they took fewer than the required number of courses, then some consideration may also be given to individual context. If the discretionary evaluation had supported a decision of "ADMIT", the applicant would have been placed upon the waitlist.

Student D

This student is refused. While the applicant meets the cut-offs for the core and overall averages, the personal profile is outside of the discretionary zone.

The strength of the Discrete Scores model is that it ensures minimum standards of performance in all assessments and easily identifies areas of strength and weakness for discretionary decision-making. The dis-advantage of this model is that more complicated to administer.

The Aggregated Scores Model

In this model, all three scores are combined into a single numerical assessment in order to generate an ordinal scale. So, for example:

Weighted Overall Average
+
Weighted Core Average
+
Weighted Personal Profile score
= Admission Score

The strength of the Aggregated Scores model is that it is easy to administer and to rank order applicants. The dis-advantage is that some fidelity is lost in the individual assessments and identifying strengths and weaknesses for the 20% of students who fall into the discretionary decision zone is a bit more difficult.

The Hybrid Model

As the name suggests, this model combines aspects of the Discrete Scores model and the Aggregated Scores model. For any of a) overall average, b) core average, and c) the personal profile score, a minimum threshold is established on one and an aggregated score (that can be rank ordered) is

generated for the others. For example, a Faculty may ask that all applicants present a minimum overall average of 85%. After that, applicants are rank ordered competitively based upon an aggregated score on the core average and the personal profile.

Appendix 1: Use of English Courses in the UBC Undergraduate Admission Decision

TO: Andrew Arida, Director, Undergraduate Admissions

FROM: Tiffany Potter, Associate Head (Curriculum and Planning) and First-year English Coordinator, Vancouver campus.
Sean Lawrence, Associate Professor, English, Faculty of Critical and Creative Students, Okanagan campus.

19 June 2017

Advisory note re: changes to BC English 11 Curriculum

Thanks again Andrew for our useful conversations around the changes to the BC English 11 curriculum, both in reference to UBC admissions and to the First-year English eligibility requirement (LPI). We have reviewed the material currently available from the Ministry (still marked "draft"), and carried out consultation and discussion with colleagues and with UBC-V English Department Head Sian Echard. We both also participated in the telephone meeting on these issues with you and members of the Ministry course design team.

On this basis, the English Departments at both campuses are in agreement on our recommendations:

1) ENGL 12 final grades should remain the standard path to admission to UBC, in the same process that has operated for the last several years

2) Certain—but not all—BC ENGL 11 variant courses are appropriate choices for substitution for ENGL 12 grades in *calculations for early offers of admission where an official interim/final ENGL 12 grade is not available*

3) Students offered early admission on the basis of a grade in an ENGL 11 variant course should have their admission offer reviewed if:
    a. there is a significant difference (e.g., more than 10 percentage points) in the final grades of their ENGL 11 variant and ENGL 12,
    b. the ENGL 11 or 12 course grades are incongruous with the Literacy Assessment results.

4) In calculations for *early* offers of admission, UBC should use 4 credits from among the following ENGL 11 variants: Composition 11; Focused Literary Studies 11; or Creative Writing 11 (or the English First Peoples equivalents of these three English Language Arts courses).

5) We recommend that UBC *not* include in its calculations the following ENGL 11/English First Peoples variants: New Media 11 or Spoken Language 11.

    Recommendations 4 and 5 are the product of extensive discussion. There have always been high school courses that are interesting and valuable, but that do not address/assess the particular

skills that provide the information needed for University admission, and in this case, needed to assess readiness for the level of work in first-year English at UBC. While all of the ENGL 11 variants are designed to address the basic core competencies in distinct ways, the three ENGL 11 variants recommended for Admission weighting all have a primary and significant focus on the critical reading and formal writing that are required in UBC courses. The others teach valuable content, but their focus is on skills other than those that will provide the information about academic English that is necessary in determining rankings in the highly competitive group of students applying to UBC.

We take care to note that all of the variants are equal paths to *ENGL 12, which is the official entry requirement*: choosing to take New Media or Spoken Language will not preclude a student from going to UBC, but only from early admission.

6) We recommend that the UBC academic progress of students from all five ENGL 11 streams be assessed in three to five years' time, and that the report be shared with the Departments of English so that we can use sound data to investigate the possibility of making any adjustments to the LPI requirement that the evidence suggests might be appropriate.

I will also offer a point of information on the First-year English Course-Entry Requirement (LPI Requirement). A 2016 Calendar update confirmed the minimum entry requirement of a final grade of 75% in BC English 12 or equivalent; it also eliminated the use of "interim" ENGL 12 grades for first-year English eligibility, and replaced interims with a minimum final grade of 80% in ENGL 11. Beginning in 2018W, the Department of English will accept a minimum grade of 80% in the three recommended courses (Composition 11, Focused Literary Studies 11, and Creative Writing 11 or their EFP equivalents) from the new curriculum, or in ENGL 11 from the existing curriculum, for eligibility for first-year English courses at UBC-V.

Appendix 2: Selective Environmental Scan of Canadian Universities and BC Grade 12 Courses used in the Calculation of the Admission Average

	UBC Vancouver	UBC Okanagan	Uof Victoria	SFU	Uof Alberta	Uof Toronto	McGill
Number of BC courses used	4	4	4	4	5	4	5
General Academic Courses							
Accounting							X
Agriculture							X
Art Foundations							X
Art History							X
Astronomy							X
BC/YT First Nations Studies	X	X	X	X	X	X	X
Biology	X	X	X	X	X	X	X
Biopsychology							X
Calculus	X	X	X	X	X	X	X
Chemistry	X	X	X	X	X	X	X
Child Psychology							X
Comparative Civilizations			X	X	X	X	X
Computer Information Systems		X					
Computer Programming		X	X		X		
Creative Writing							X
Earth Science							X
Economics	X	X	X	X	X	X	X
English or English First Peoples	X	X	X	X	X	X	X
English Literature	X	X	X	X	X	X	X
Ethics and Morality							X
Financial Accounting							X
Fine Art							X
Forensic Science							X
Foundations of Math			X	X	X	X	X
Francais - Communication et Litterature			X				X
Gender Studies							X
Genetics							X
Geography	X	X	X	X	X	X	X
Geology	X	X	X	X	X	X	X
Geometry					X		
Health Science							X
History	X	X	X	X	X	X	X
History of Christian Church							X
ICT: Applied Digital Communications			X				
Jewish History							X
Jewish Philosophy							X
Law	X	X	X	X	X	X	X
Philosophy				X			X
Physics	X	X	X	X	X	X	X
Pre-calculus	X	X	X	X	X	X	X
Psychology							X
Religion							X
Religious Studies							X
Social Justice		X	X	X	X		X
Social Studies							X
Statistics					X		X
Sustainable Resources		X		X			
Visual Arts: Media Arts							X

World Literature							X
World Religions							X
TOTAL	**13**	**17**	**19**	**18**	**19**	**15**	**44**
Language Courses							
American Sign Language (ASL)	X	X		X	X		
Arabic		X	X				
Croatian		X	X				
Français Langue or French	X	X	X	X	X	X	X
Francais Langue Seconde-Immersion			X	X	X		
German	X	X	X	X	X	X	X
Hebrew					X		X
Italian		X	X		X		
Japanese	X	X	X	X	X	X	X
Korean		X	X		X		X
Latin					X		X
Mandarin	X	X	X	X	X	X	X
Punjabi	X	X	X	X	X	X	X
Russian		X	X		X		X
Spanish	X	X	X	X	X	X	X
TOTAL	**7**			**8**	**13**	**6**	**10**
First Nations Language Courses							
Halq'eméylem	X	X	X			X	
Heiltsuk	X	X				X	
Hul'q'umi'num'	X	X	X			X	
Kwak'wala	X	X	X			X	
Liqwala/Kwakwala	X	X	X			X	
nsíylxcən (Okanagan Language)	X	X	X			X	
Nte?kepmxcin	X	X	X			X	
Nuu-chah-nulth	X	X	X			X	
Secwepemctsin (Shuswap Language)	X	X	X			X	
Sencoten			X			X	
Shashishalhem (Sechelt Language)	X	X	X			X	
Sim'algaxhl Nisga'a	X	X	X			X	
Sm'algyax	X	X	X			X	
Tsek'ene	X	X	X			X	
Upper St'at'imcets	X	X	X			X	
TOTAL	**14**	**14**	**14**	**0**	**0**	**15**	**0**

Appendix 3: Correlations between BC Grade 12 Course Grades and First-year Performance at UBC (Vancouver Campus), 2014

			Pearson r						UBC performance		
	n	rank	r	SE	mean	st dev	admt avg - course (mean)	Rank	UBC Ses Avg	mean Δ	mean Δ rank
Mandarin	375		*not sig*	18.19	92.29	6.73	1.53	4	72.74	-20	5
Social Justice *	111	21	*not sig*	7.37	91.40	7.30	1.33	7	72.27	-19	7
Korean *	49	24	*not sig*	14.43	97.53	3.16	7.16	1	72.59	-25	1
First Nations Studies	37	26	0.548	7.17	90.31	6.10	2.39	3	71.58	-19	9
Geology	48	25	0.532	5.53	90.00	6.46	0.92		69.66	-20	3
Physics	1,435	5	0.464	7.76	88.45	8.75	-3.47	25	74.30	-14	24
Geography	386	11	0.458	5.82	89.63	6.06	0.05	15	71.66	-18	13
Economics	506	10	0.457	5.87	90.75	6.28	0.37	13	72.25	-18	11
Chemistry	2,021	3	0.452	7.10	88.09	7.96	-3.29	23	73.32	-15	22
Calculus	1,156	6	0.443	10.28	85.68	11.46	-6.36	27	73.54	-	26
Punjabi	25	27	0.435	4.82	91.67	5.83	-0.92	17	70.44	-21	2
Biology	1,925	4	0.391	6.94	89.37	7.54	-1.67	19	72.98	-16	18
Law	904	7	0.358	5.34	91.36	5.56	1.37	5	72.04	-19	6
Computer Prog *	91	23	0.339	7.74	92.09	8.18	1.34	6	75.04	-17	14
Pre-Calculus	2,592	2	0.338	8.08	89.35	8.58	-1.81	20	73.03	-16	19
English	3,084	1	0.335	5.56	87.59	5.90	-3.45	24	73.18	-14	23
Francais Langue	205	16	0.335	7.55	86.03	7.98	-5.44	26	74.00	-	27
French	819	8	0.327	6.78	89.59	7.09	-1.85	21	74.10	-15	21
English Lit	357	13	0.319	5.51	88.51	5.87	-2.97	22	75.01	-13	25
History	675	9	0.309	6.38	88.87	6.55	-1.22	18	73.23	-16	20
Comp Civ **	162	17	0.303	6.75	90.83	6.98	0.99	9	73.82	-17	16
Phil & Religon **	249	15	0.303	6.97	90.49	7.25	0.99	9	70.59	-20	4
Music **	274	14	0.255	5.19	93.68	5.37	2.55	2	74.68	-19	8
Writing **	133	19	0.207	6.95	91.10	7.06	0.32	14	74.32	-17	17
Psychology **	110	22	0.206	7.59	88.97	7.72	-0.76	16	71.95	-17	15
Japanese	2	20	0.205	6.03	92.40	5.93	1.07	8	73.89	-19	10
Spanish	157	18	0.177	9.78	91.41	6.97	0.95	11	73.01	-18	
TOTAL	**3,089**										

Note: Includes students who attempted at least 24 credits and obtained a sessional average of at least 50%. * Course used by UBC Okanagan only. ** Course not used by either Okanagan or Vancouver.

Appendix 4: Correlations between Secondary School Admission Averages and First-year Performance at UBC, 2014

UBC Admission Decision Based Upon…	Correlation with first-year performance
Alberta secondary school admit avg (final)	r = .59, $p < .001$
BC secondary school admit avg (final)	r = .54, $p < .001$
International Baccalaureate (IB), final grades	r = .66, $p < .001$
Ontario secondary school admit avg (final)	r = .52, $p < .001$
US secondary school grade-point average, SAT I, SAT II, and parental / SES combined within UCalifornia System**	r = .50, $p < .001$

** From: Geiser, S., & Santelices, M. (2007). *Validity of high-school grades in predicting student success beyond the freshman year: High-school record vs. standardized tests as indicators of four-year college outcomes*. Berkeley: Center for Studies in Higher Education, University of California, Berkeley.

Appendix 5a: Number of BC/YT Grade 12 Courses Presented by UBC Applicants, 2016

Note: Excludes courses not considered academic (e.g.,Work Experience , PhysEd, Cafeteria, etc)

	Vancouver				Okanagan			
		Grade 12 courses				Grade 12 courses		
	Apps	**Mean**	**StDev**	**Max**	**Apps**	**Mean**	**StDev**	**Max**
SD39 Vancouver	1755	7.7	2.0	16	56	7.0	1.6	
SD36 Surrey	920	7.1	1.5	14	95	6.4	1.3	11
SD41 Burnaby	631	9.7	3.0	23	20	8.1	2.6	14
SD43 Coquitlam	571	8.0	2.1	16	49	7.0	2.0	15
SD38 Richmond	538	7.7	1.7	15	23	6.9	1.5	10
SD23 Central Okanagan	80	7.8	2.3	15	374	7.1	1.7	
Offshore	297	8.2	1.4	13	99	7.5	1.5	10
SD44 North Vancouver	292	7.3	1.9	15	43	6.1	1.0	8
Online	293	7.5	2.0	18	35	7.0	2.1	
SD45 West Vancouver	237	8.6	2.6	19	27	7.1	1.9	13
Unknown	214	7.6	2.3	14	49	7.3	2.1	14
SD37 Delta	218	7.1	1.5	13	26	6.4	1.4	10
SD61 Greater Victoria	192	8.3	2.3	18	11	6.9	2.5	13
SD34 Abbotsford	166	7.8	2.0	16	36	7.0	1.9	
SD35 Langley	141	8.4	2.6	18	23	7.0	1.5	10
SD79 Cowichan Valley	138	8.4	2.3	17	19	6.8	1.6	10
SD22 Vernon	25	7.7	1.7		88	7.1	1.6	11
SD42 Maple Ridge-Pitt Meadows	75	7.3	1.8	16	7	7.7	1.9	10
SD67 Okanagan Skaha	27	8.5	1.8		49	7.5	1.8	
SD71 Comox Valley	62	7.2	2.1	14	7	5.8	1.2	8
SD91 Nechako Lakes	49	7.2	2.1	14	13	7.2	1.6	10
SD40 New Westminster	56	6.9	2.0	13	2	5.0	0.0	5
SD68 Nanaimo-Ladysmith	50	6.6	1.5	9	4	6.3	2.2	9
SD63 Saanich	50	8.6	2.5	15				
SD48 Sea to Sky	33	8.1	1.5	11	13	8.1	1.6	
SD58 Nicola-Similkameen	27	7.3	2.1		18	6.5	1.2	8
SD33 Chilliwack	32	8.3	2.4	16	8	7.1	1.6	9
SD73 Kamloops/Thompson	28	6.9	1.5	11	11	6.6	1.4	9
SD53 Okanagan Similkameen	20	5.8	1.0	8	17	6.1	1.1	8
SD8 Kootenay Lake	29	7.4	1.7	11	7	6.6	1.3	9
SD83 North Okanagan-Shuswap	11	8.0	2.6	13	24	7.7	2.2	14
SD20 Kootenay-Columbia	19	7.7	1.2	10	15	7.2	2.0	10
SD46 Sunshine Coast	14	6.8	1.7	11	9	6.3	0.9	8
SD72 Campbell River	16	8.9	1.7	14	6	6.5	1.0	8
SD75 Mission	20	7.5	1.9	11	2	7.5	0.7	8
SD82 Coast Mountains		6.5	1.2	8	7	6.7	1.2	8
Yukon	5	6.2	1.1	8	14	6.6	1.6	10
SD57 Prince George	13	8.5	1.9	11	5	4.8	1.3	6
SD60 Peace River North	13	7.0	2.0	11	4	6.5	2.4	9
SD5 Southeast Kootenay	5	6.6	1.5	8	11	6.7	1.6	9
SD69 Qualicum	13	7.2	1.3	9	2	7.0	1.4	8
SD62 Sooke	13	8.7	3.1	13	1	5.0		5
SD19 Revelstoke	5	6.8	1.1	8	9	5.7	1.0	7
SD47 Powell River	6	5.3	1.0	6	7	6.4	1.7	9
SD6 Rocky Mountain	4	8.3	1.5	10	7	6.9	1.1	8
SD28 Quesnel	6	8.3	1.2	10	4	6.3	1.7	8
SD64 Gulf Islands	9	7.4	1.1	9	1	7.0		7
SD51 Boundary	7	6.8	0.4	7	2	8.5	2.1	10
SD70 Alberni	6	6.7	1.4	9	3	8.5	3.5	11
SD59 Peace River South	4	8.0	1.2	9	4	6.3	1.5	7
SD54 Bulkley Valley	1	7.0		7	6	5.5	1.6	8
SD27 Cariboo-Chilcotin					4	7.5	1.3	9
SD78 Fraser-Cascade	2	7.5	0.7	8	2	7.0	0.0	7
SD10 Arrow Lakes	1	6.0		6	2	5.0	0.0	5
SD85 Vancouver Island North	3	7.5	0.7	8				
SD52 Prince Rupert	3	8.7	3.1					
SD74 Gold Trail	2	9.0		9				
SD50 Haida Gwaii	2	7.5	0.7	8				
Grand Total	**7461**	**7.8**	**2.2**	**23**	**1380**	**7.0**	**1.7**	**15**

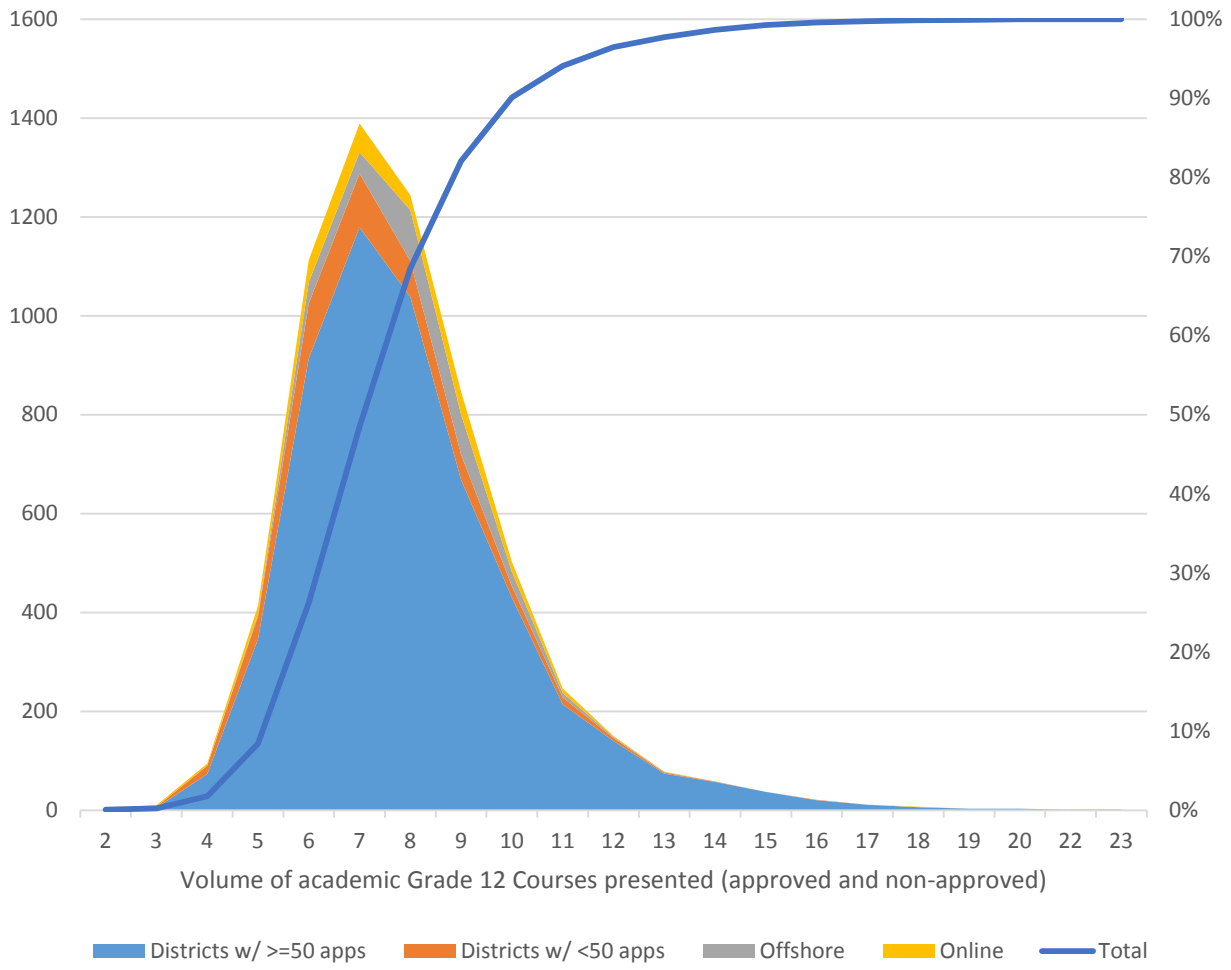
Appendix 5b: Number of UBC-Approved BC/YT Grade 12 Courses Presented by UBC Applicants, 2016

	Vancouver				Okanagan			
		Grade 12 courses				Grade 12 courses		
	Apps	Mean	StDev	Max	Apps	Mean	StDev	Max
SD39 Vancouver	1,755	6.3	1.8	16	56	5.7	1.5	11
SD36 Surrey	920	6.0	1.3	11	95	5.3	1.1	8
SD41 Burnaby	631	7.9	2.8	21	20	6.1	2.0	11
SD43 Coquitlam	571	6.4	1.6	13	49	5.3	1.3	9
SD38 Richmond	538	6.3	1.4	11	23	5.6	1.1	8
SD23 Central Okanagan	80	6.1	2.1	13	374	5.6	1.5	11
Offshore	297	6.2	1.1	10	99	5.3	1.0	8
SD44 North Vancouver	292	6.0	1.5	13	43	5.2	1.0	7
Online	293	6.1	1.6		35	5.7	1.7	11
SD45 West Vancouver	237	7.3	2.5	15	27	5.9	1.5	10
Unknown	214	6.0	1.9	13	49	6.0	2.0	11
SD37 Delta	218	6.0	1.2	10	26	5.3	0.8	7
SD61 Greater Victoria	192	6.7	1.9	13	11	5.9	2.7	13
SD34 Abbotsford	166	6.2	1.5	10	36	5.4	1.6	9
SD35 Langley	141	6.7	1.9	13	23	5.5	1.5	9
SD79 Cowichan Valley	138	6.7	2.2	16	19	5.8	1.1	7
SD22 Vernon	25	6.0	1.0	7	88	5.4	1.2	9
SD42 Maple Ridge-Pitt Meadows	75	6.0	1.4		7	5.6	1.6	8
SD67 Okanagan Skaha	27	6.7	1.8	10	49	6.5	1.6	9
SD71 Comox Valley	62	5.5	1.4	9	7	5.3	0.8	6
SD91 Nechako Lakes	49	5.8	1.6	13	13	5.5	1.2	7
SD40 New Westminster	56	5.9	1.5	11	2	4.0	0.0	4
SD68 Nanaimo-Ladysmith	50	5.5	1.2	8	4	4.8	1.3	6
SD63 Saanich	50	6.3	1.3	9				
SD48 Sea to Sky	33	5.4	1.1	8	13	5.5	1.1	7
SD58 Nicola-Similkameen	27	5.8	1.4	9	18	5.3	1.2	8
SD33 Chilliwack	32	6.7	2.0	13	8	5.4	1.1	7
SD73 Kamloops/Thompson	28	5.8	1.2	8	11	5.2	1.1	7
SD53 Okanagan Similkameen	20	5.5	1.0	8	17	5.7	1.2	7
SD8 Kootenay Lake	29	6.1	1.3	10	7	5.7	1.4	8
SD83 North Okanagan-Shuswap	11	5.8	1.6	8	24	5.1	1.4	9
SD20 Kootenay-Columbia	19	6.4	1.2	8	15	5.8	1.2	7
SD46 Sunshine Coast	14	5.7	1.0	7	9	5.0	0.9	6
SD72 Campbell River	16	6.5	1.1	8	6	5.7	0.5	6
SD75 Mission	20	5.8	1.4	10	2	7.5	0.7	8
SD82 Coast Mountains		5.4	1.1	7	7	5.2	0.4	6
Yukon	5	5.2	1.1	7	14	5.6	1.2	8
SD57 Prince George	13	7.5	2.1	11	5	3.8	1.0	5
SD60 Peace River North	13	5.8	1.5	8	4	5.8	2.6	8
SD5 Southeast Kootenay	5	6.0	1.4	7	11	5.2	1.2	7
SD69 Qualicum	13	5.8	1.1	7	2	6.0	0.0	6
SD62 Sooke	13	6.1	2.0	9	1	4.0		4
SD19 Revelstoke	5	6.6	1.1	8	9	5.4	0.9	7
SD47 Powell River	6	5.2	1.0	6	7	4.7	0.8	6
SD6 Rocky Mountain	4	6.3	0.6	7	7	6.0	1.2	7
SD28 Quesnel	6	6.5	1.2	8	4	6.0	1.6	8
SD64 Gulf Islands	9	5.6	1.0	7	1	7.0		7
SD51 Boundary	7	5.8	0.8	7	2	5.5	0.7	6
SD70 Alberni	6	5.8	0.8	7	3	4.5	2.1	6
SD59 Peace River South	4	6.8	1.5	9	4	5.3	1.0	6
SD54 Bulkley Valley	1	7.0		7	6	4.7	1.4	7
SD27 Cariboo-Chilcotin					4	5.8	1.0	7
SD78 Fraser-Cascade	2	6.0	0.0	6	2	5.0	1.4	6
SD10 Arrow Lakes	1	6.0		6	2	4.0	0.0	4
SD85 Vancouver Island North	3	5.0	0.0	5				
SD52 Prince Rupert	3	6.3	2.1	8				
SD74 Gold Trail	2	4.0		4				
SD50 Haida Gwaii	2	5.0	0.0	5				
Grand Total	**7,461**	**6.4**	**1.8**	**21**	**1,380**	**5.5**	**1.4**	**13**

Appendix 5c: List of BC School Districts

District Name	Main Office	Region	Communities Served
SD5 Southeast Kootenay	Cranbrook	Kootenays	Cranbrook, Fernie, Sparwood
SD6 Rocky Mountain	Invermere	Kootenays	Kimberley, Invermere, Golden
SD8 Kootenay Lake	Nelson	Kootenays	Nelson, Creston, Salmo, Kaslo
SD10 Arrow Lakes	Nakusp	Kootenays	Nakusp
SD19 Revelstoke	Revelstoke	Okanagan/Mainline	Revelstoke
SD20 Kootenay-Columbia	Trail	Kootenays	Castlegar, Rossland, Trail
SD22 Vernon	Vernon	Okanagan/Mainline	Vernon, Lumby
SD23 Central Okanagan	Kelowna	Okanagan/Mainline	Kelowna, Rutland, West Kelowna, Peachland
SD27 Cariboo-Chilcotin	Williams Lake	Northeast	Williams Lake, 100 Mile House, Canim Lake, Lac La Hache
SD28 Quesnel	Quesnel	Northeast	Quesnel, Wells
SD33 Chilliwack	Chilliwack	Fraser Valley	Chilliwack,
SD34 Abbotsford	Abbotsford	Fraser Valley	Abbotsford
SD35 Langley	Langley	Metro/Coast	Township of Langley, Langley City, Aldergrove, Fort Langley
SD36 Surrey	Surrey	Metro/Coast	Surrey, White Rock, Barnston Island, Cloverdale
SD37 Delta	Delta	Metro/Coast	Delta, Ladner, Tsawwassen
SD38 Richmond	Richmond	Metro/Coast	Richmond
SD39 Vancouver	Vancouver	Metro/Coast	Vancouver, University Endowment Lands
SD40 New Westminster	New Westminster	Metro/Coast	New Westminster, Queensborough
SD41 Burnaby	Burnaby	Metro/Coast	Burnaby
SD42 Maple Ridge-Pitt Meadows	Maple Ridge	Metro/Coast	Maple Ridge, Pitt Meadows
SD43 Coquitlam	Coquitlam	Metro/Coast	Anmore, Belcarra, Coquitlam, Port Coquitlam, Port Moody
SD44 North Vancouver	North Vancouver	Metro/Coast	District of North Vancouver, City of North Vancouver
SD45 West Vancouver	West Vancouver	Metro/Coast	Bowen Island, Lions Bay, West Vancouver
SD46 Sunshine Coast	Gibsons	Metro/Coast	Gibsons, Sechelt
SD47 Powell River	Powell River	Metro/Coast	Powell River
SD48 Sea to Sky	Squamish	Metro/Coast	Whistler, Squamish, Pemberton
SD49 Central Coast	Hagensborg	Northeast	Hagensborg, Bella Coola, Denny Island, Rivers Inlet
SD50 Haida Gwaii	Queen Charlotte City	Northwest	Queen Charlotte City, Masset
SD51 Boundary	Grand Forks	Kootenays	Grand Forks, Midway, Greenwood
SD52 Prince Rupert	Prince Rupert	Northwest	Prince Rupert
SD53 Okanagan Similkameen	Oliver	Okanagan/Mainline	Oliver, Osoyoos, Okanagan Falls, Keremeos
SD54 Bulkley Valley	Smithers	Northwest	Smithers, Telkwa, Houston
SD57 Prince George	Prince George	Northeast	Prince George, McBride, Mackenzie, Valemount
SD58 Nicola-Similkameen	Merritt	Okanagan/Mainline	Merritt, Princeton
SD59 Peace River South	Dawson Creek	Northeast	Dawson Creek, Chetwynd, Tumber Ridge
SD60 Peace River North	Fort St. John	Northeast	Fort St. John, Hudson's Hope, Prespatou
SD61 Greater Victoria	Victoria	Greater Victoria	Victoria, Oak Bay
SD62 Sooke	Langford	Greater Victoria	Colwood, Langford, Metchosin, Sooke
SD63 Saanich	Saanichton	Greater Victoria	Saanich, Central Saanich, North Saanich, Sidney
SD64 Gulf Islands	Salt Spring Island	Vancouver Island	Salt Spring Island, Galiano, Mayne, Saturna, Pender Islands
SD67 Okanagan Skaha	Penticton	Okanagan	Penticton, Summerland
SD68 Nanaimo-Ladysmith	Nanaimo	Vancouver Island	Lantzville, Nanaimo, Cedar, Ladysmith
SD69 Qualicum	Parksville	Vancouver Island	Parksville, Qualicum Beach
SD70 Alberni	Port Alberni	Vancouver Island	Port Alberni, Tofino, Ucluelet
SD71 Comox Valley	Courtenay	Vancouver Island	Comox, Courtenay
SD72 Campbell River	Campbell River	Vancouver Island	Campbell River
SD73 Kamloops/Thompson	Kamloops	Thompson Country	Kamloops, Chase, Barriere, Clearwater, Logan Lake
SD74 Gold Trail	Ashcroft	Thompson Country	Ashcroft, Cache Creek, Clinton, Lytton, Lillooet
SD75 Mission	Mission	Fraser Valley	Mission, Deroche, Dewdney,
SD78 Fraser-Cascade	Hope	Fraser Valley	Hope, Agassiz, Yale, Boston Bar
SD79 Cowichan Valley	Duncan	Vancouver Island	Duncan, Lake Cowichan, Crofton, Chemainus
SD81 Fort Nelson	Fort Nelson	Northeast	Fort Nelson
SD82 Coast Mountains	Terrace	Northwest	Terrace, Kitimat, Stewart
SD83 North Okanagan-Shuswap	Salmon Arm	Okanagan/Mainline	Salmon Arm, Enderby, Armstrong
SD84 Vancouver Island West	Gold River	Vancouver Island	Gold River, Zeballos
SD85 Vancouver Island North	Port Hardy	Vancouver Island	Port Hardy, Port McNeill
SD87 Stikine	Dease Lake	Northwest	Dease Lake, Atlin, Lower Post, Telegraph Creek
SD91 Nechako Lakes	Vanderhoof	Northeast	Vanderhoof, Fort St. James
SD92 Nisga'a	New Aiyansh	Northwest	Gitlakdamix, Gitwinksihlkw, Laxgalts'ap, Gingolx

Appendix 5d: Volume of Grade 12 courses by School District and Admitted Student Volume to UBC, 2016



Appendix 6: Selective vs Comprehensive Assessments of UBC Undergraduate Admission

Curriculum	Van	Oka	Total	Summary
Secondary	75.2%	62.9%	73.8%	
Canadian Sec School	41.2%	53.2%	42.8%	Selective use of courses, four to six, depending upon curriculum; estimate that this represents 50%-70% of senior coursework completed
IB Diploma	11.3%	3.0%	10.2%	All academic courses
US Secondary School	8.2%	2.3%	7.4%	Selective use of courses, a minimum of 4 courses used but there are choices; this is approximately 40-50% of eligible senior coursework completed; SAT/ACT scores are also used
British-Patterned A Lvls	4.5%	1.5%	4.1%	Selective use of courses at O-level (there are usually 6-8 available but we only need 2). Most/All courses at A-Level. We need 3 courses at A-Level and we receive 3 about 90% of the time. AS-level courses ca be used as well and those are available for about 60-70% of the applicant pool (usually 3-4 AS-levels exist if they are present on the record)
China Secondary	5.1%	0.6%	4.5%	All courses are used along with standardized exam results such as Huikao, Gaokao, SAT, ACT, AP exams etc…
India Secondary	1.1%	0.3%	1.1%	All academic courses are used; some grade adjustments are made on interim grade for CBSE or ISC curriculum
Hong Kong Secondary	0.4%	0.2%	0.4%	All academic courses
Turkey Secondary	0.3%	0.2%	0.3%	All academic courses
France Secondary	0.2%	0.0%	0.2%	All academic courses
Mexico Secondary	0.1%	0.1%	0.1%	All academic courses
Other World Secondary	2.8%	1.5%	2.7%	All academic courses are used for the most part
Post-Secondary	24.1%	34.8%	25.5%	
Post-Secondary	16.8%	25.0%	17.9%	All academic courses
Post-Secondary (UBC)	6.9%	9.3%	7.2%	All academic courses
Quebec CEGEP	0.4%	0.4%	0.4%	All academic courses
Other (i.e. MATU)	0.6%	2.3%	0.8%	All academic courses are used
Grand Total	**100.0%**	**100.0%**	**100.0%**	

Appendix 7A: Grade 12 Courses Used in the Calculation of an Overall and a Core Average for Vancouver Programs

The following is a first draft of how the new BC secondary school curriculum can be incorporated into both an overall and a core average. Faculties to determine which courses / subject areas are to be included in their core average. While the example below is for BC/YT students, the same principle of assigning courses/subject areas to a core average will be used for all secondary school applicants.

NEW BC12 CURRICULUM[3]		Overall	Core			
			BA	Science[1]	BCOM	BMUS/BFA
Applied Design, Skills & Technology	Accounting 11/12				discretion	
	Computer Infor Systems 11/12		discretion	discretion	discretion	
	Computer Programming 11/12		discretion	discretion	discretion	
	Digital Communications 11		discretion	discretion	discretion	discretion
	Digital Media Development 12		discretion	discretion	discretion	discretion
	E-Commerce 12				discretion	
	Entrepreneurship 11				discretion	
	Financial Accounting 12				discretion	
	Food Studies 11/12			discretion		
	Marketing and Promotion 11				discretion	
	Media Arts 11/12		discretion			discretion
Dance	Dance Choreography 11/12	✓[2]	✓[2]			✓
	Dance Company 11/12	✓[2]	✓[2]			✓
	Dance Conditioning 11/12	✓[2]	✓[2]			✓
	Dance Foundations 11/12	✓[2]	✓[2]			✓
	Dance Technique & Perf 11/12	✓[2]	✓[2]			✓
Drama	Drama 11/12	✓[2]	✓[2]			✓
	Film & Television 12	✓[2]	✓[2]			✓
	Directing and Scriptwriting 11/12	✓[2]	✓[2]			✓
	Theatre Company 11/12	✓[2]	✓[2]			✓
	Theatre Production 11/12	✓[2]	✓[2]			✓
	Musical Theatre 11/12	✓[2]	✓[2]			✓
Music	Choral Music 11/12	✓[2]	✓[2]			✓
	Composition & Production 11/12	✓[2]	✓[2]			✓
	Contemporary Music 11/12	✓[2]	✓[2]			✓
	Instrumental Music 11/12	✓[2]	✓[2]			✓
Visual Arts	Art Studio 11/12	✓[2]	✓[2]			✓
	Sculpture 11/12	✓[2]	✓[2]			✓
	Drawing and Painting 11/12	✓[2]	✓[2]			✓
	Photography 11/12	✓[2]	✓[2]			✓
	Graphic Arts 11/12	✓[2]	✓[2]			✓
English Lang Arts	English / English First Peoples 12	✓req'd	✓req'd	✓req'd	✓req'd	✓req'd
	Composition 11	✓	✓	✓	✓	✓
	Creative Writing 11	✓	✓	✓	✓	✓
	Focused Literary Studies 11	✓	✓	✓	✓	✓
	New Media 11	✓				
	Spoken Language 11	✓				
	EFP: Composition 11	✓	✓	✓	✓	✓
	EFP: Creative Writing 11	✓	✓	✓	✓	✓
	EFP: Focus Literary Studies 11	✓	✓	✓	✓	✓
	EFP: New Media 11	✓				
	EFP: Spoken Language 11	✓				

Math	Calculus 12	✓	✓	✓	✓	
	Computer Science 11/12	✓	✓	✓	✓	
	Foundations of Math 11/12	✓req'd [3]	✓			
	Geometry 12	✓	✓	✓		
	History of Mathematics 11	✓	✓			
	Workplace Mathematics 11	✓				
	Pre-calculus 11	✓req'd [3]	✓			
	Pre-calculus 12	✓	✓	✓req'd	✓req'd	
	Statistics 12	✓	✓	✓	✓	
Science	Anatomy and Physiology 12	✓		✓		
	Chemistry 12	✓		✓		
	Environmental Science 11/12	✓		✓		
	Geology 12	✓		✓		
	Physics 12	✓		✓		
	Chemistry 11	✓[4]		✓req'd		
	Earth Sciences 11	✓[4]		✓		
	Life Sciences 11	✓[4]		✓		
	Physics 11	✓[4]		✓req'd		
	Science for Citizens 11	✓[4]				
	Earth Sciences 11	✓[4]		✓		
Language	Any Sec Lang 11	✓req'd [4]	✓			✓
	Any Sec Lang 12	✓	✓			✓
	Français langue première	✓	✓			✓
	Français langue seconde - immersion	✓	✓			✓
Social Studies	Comp. World Religions 12	✓	✓			✓
	Contemp. Indigenous Studies 12	✓	✓			✓
	Economics 12	✓	✓		✓	✓
	Genocide Studies 12	✓	✓			✓
	Law Studies 12	✓	✓			✓
	Philosophy 12	✓	✓			✓
	Physical Geography 12	✓	✓			✓
	Social Justice 12	✓	✓			✓
	Urban Studies 12	✓	✓			✓
	20th Century World History 11	✓	✓			✓
	Asian Studies 11	✓	✓			✓
	B.C. First Peoples 11	✓	✓			✓
	Comparative Cultures 11	✓	✓			✓
	Human Geography 11	✓	✓			✓
	Political Studies 11	✓	✓			✓
	20th Century World History 11	✓	✓			✓
	Asian Studies 11	✓	✓			✓
	B.C. First Peoples 11	✓	✓			✓

[1] Note: Engineering, Land and Food Systems, Forestry, Kinesiology, and Science are all included in "Science core" for the sake of presentation. In reality, each program may define its core independently.
[2] Note: The overall average will include a maximum of four course grades from the Visual and Performing Arts: the two highest Grade 11-level courses and the two highest Grade 12-level courses.
[3] Note: Foundations of Math 12 can be substituted for Pre-Calculus 11 for programs that do not require UBC Math.
[4] Note: A language 11 and a science 11 are required for all applicants to the Vancouver campus

Appendix 7B: Grade 12 Courses Used in the Calculation of an Overall and a Core Average for Okanagan Programs

The following is a first draft of how the new BC secondary school curriculum can be incorporated into both an overall and a core average for Okanagan programs. Faculties to determine which courses / subject areas are to be included in their core average. While the example below is for BC/YT students, the same principle of assigning courses/subject areas to a core average will be used for all secondary school applicants.

NEW BC12 CURRICULUM[3]		Overall	Core				
			Arts	Science[1]	BMGT	BFA	BSN/BKIN
Applied Design, Skills & Technology	Accounting 11/12				discretion		
	Computer Infor Systems 11/12		discretion	discretion	discretion		
	Computer Programming 11/12		discretion	discretion	discretion		
	Digital Communications 11		discretion	discretion	discretion	discretion	
	Digital Media Development 12		discretion	discretion	discretion	discretion	
	E-Commerce 12				discretion		
	Entrepreneurship 11				discretion		
	Financial Accounting 12				discretion		
	Food Studies 11/12			discretion			
	Marketing and Promotion 11				discretion		
	Media Arts 11/12		discretion			discretion	
Dance	Dance Choreography 11/12	✓[2]	✓[2]			✓	
	Dance Company 11/12	✓[2]	✓[2]			✓	
	Dance Conditioning 11/12	✓[2]	✓[2]			✓	
	Dance Foundations 11/12	✓[2]	✓[2]			✓	
	Dance Technique & Perf 11/12	✓[2]	✓[2]			✓	
Drama	Drama 11/12	✓[2]	✓[2]			✓	
	Film & Television 12	✓[2]	✓[2]			✓	
	Directing and Scriptwriting 11/12	✓[2]	✓[2]			✓	
	Theatre Company 11/12	✓[2]	✓[2]			✓	
	Theatre Production 11/12	✓[2]	✓[2]			✓	
	Musical Theatre 11/12	✓[2]	✓[2]			✓	
Music	Choral Music 11/12	✓[2]	✓[2]			✓	
	Composition & Production 11/12	✓[2]	✓[2]			✓	
	Contemporary Music 11/12	✓[2]	✓[2]			✓	
	Instrumental Music 11/12	✓[2]	✓[2]			✓	
Visual Arts	Art Studio 11/12	✓[2]	✓[2]			✓	
	Sculpture 11/12	✓[2]	✓[2]			✓	
	Drawing and Painting 11/12	✓[2]	✓[2]			✓	
	Photography 11/12	✓[2]	✓[2]			✓	
	Graphic Arts 11/12	✓[2]	✓[2]			✓	
English Lang Arts	English / English First Peoples 12	✓req'd	✓req'd	✓req'd	✓req'd	✓req'd	✓req'd
	Composition 11	✓	✓	✓	✓	✓	✓
	Creative Writing 11	✓	✓	✓	✓	✓	✓
	Focused Literary Studies 11	✓	✓	✓	✓	✓	✓
	New Media 11	✓					
	Spoken Language 11	✓					
	EFP: Composition 11	✓	✓	✓	✓	✓	✓
	EFP: Creative Writing 11	✓	✓	✓	✓	✓	✓
	EFP: Focus Literary Studies 11	✓	✓	✓	✓	✓	✓
	EFP: New Media 11	✓					

	EFP: Spoken Language 11	✓	✓				
Math	Calculus 12	✓		✓	✓		✓
	Computer Science 11/12	✓	✓	✓	✓		
	Foundations of Math 11/12	✓	✓				✓
	Geometry 12	✓	✓	✓			
	History of Mathematics 11	✓	✓				
	Workplace Mathematics 11	✓					✓
	Pre-calculus 11	✓	✓				✓
	Pre-calculus 12	✓	✓	✓req'd	✓req'd		✓
	Statistics 12	✓	✓	✓	✓		
Science	Anatomy and Physiology 12	✓		✓			✓req'd
	Chemistry 12	✓		✓			✓req'd
	Environmental Science 11/12	✓		✓			
	Geology 12	✓		✓			
	Physics 12	✓		✓			
	Chemistry 11	✓		✓req'd			✓
	Earth Sciences 11	✓		✓			
	Life Sciences 11	✓		✓			✓
	Physics 11	✓		✓req'd			
	Science for Citizens 11	✓					
	Earth Sciences 11	✓		✓			
Language	Any Sec Lang 11	✓	✓			✓	
	Any Sec Lang 12	✓	✓			✓	
	Français langue première	✓	✓			✓	
	Français langue seconde - immersion	✓	✓			✓	
Social Studies	Comp. World Religions 12	✓	✓			✓	
	Contemp. Indigenous Studies 12	✓	✓			✓	
	Economics 12	✓	✓		✓	✓	
	Genocide Studies 12	✓	✓			✓	
	Law Studies 12	✓	✓			✓	
	Philosophy 12	✓	✓			✓	
	Physical Geography 12	✓	✓			✓	
	Social Justice 12	✓	✓			✓	
	Urban Studies 12	✓	✓			✓	
	20th Century World History 11	✓	✓			✓	
	Asian Studies 11	✓	✓			✓	
	B.C. First Peoples 11	✓	✓			✓	
	Comparative Cultures 11	✓	✓			✓	
	Human Geography 11	✓	✓			✓	
	Political Studies 11	✓	✓			✓	
	20th Century World History 11	✓	✓			✓	
	Asian Studies 11	✓	✓			✓	
	B.C. First Peoples 11	✓	✓			✓	

[1] Note: Engineering and Science are all included in "Science core" for the sake of presentation. In reality, each program may define its core independently.
[2] Note: The overall average will include a maximum of four course grades from the Visual and Performing Arts: the two highest Grade 11-level courses and the two highest Grade 12-level courses.
[3] Note: Foundations of Math 12 can be substituted for Pre-Calculus 11 for programs that do not require UBC Math.

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16 October, 2017

To: Okanagan Senate

From: Curriculum Committee

Re: Curriculum Proposal (approval)

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

Therefore, the following is recommended to Senate:

Motion: *That Senate approve and recommend to the Board of Governors for approval the new program brought forward from the Faculty of Management.*

a. From the Faculty of Management
    i. Minor in Computer Science

For the Committee,

Dr. Peter Arthur
Chair, Curriculum Committee

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

Category**: 1**	
Faculty/School: Management **Dept./Unit:** Management **Faculty/School Approval Date:** 20170516 **Effective Session:** 2017W1	**Date:** 20170327 **Contact Person:** Jan Cioe **Phone:** 250.807.8732 **Email:** jan.cioe@ubc.ca
Type of Action: Adding a new Minor – Minor in Computer Science for the Bachelor of Management students	
Rationale: Students have indicated a desire to develop their computer science skills in order to enhance their marketability with their Bachelor of Management degree. Accordingly, we are proposing the development of a Minor in Computer Science that parallels the other minors already available to students. Computer Science is intending to modify some of their prerequisites to make this option viable.	
Proposed Academic Calendar Entry: [17308] AND [17428] Minors **[17309]** When choosing elective courses, students should keep in mind that these may contribute to a chosen minor. **[17320]** Minors are declared via the Student Service Center (SSC). **[xxxx] Minor in Computer Science**	**Draft Academic Calendar URL:** **http://www.calendar.ubc.ca/okanagan/proof/edit/index.cfm?tree=18,287,1091,1366** **and** **http://www.calendar.ubc.ca/okanagan/proof/edit/index.cfm?tree=18,287,884,1110** **Present Academic Calendar Entry:** [17308] AND [17428] Minors **[17309]** When choosing elective courses, students should keep in mind that these may contribute to a chosen minor. **[17320]** Minors are declared via the Student Service Center (SSC).

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To complete a Minor in Computer Science, students must accumulate no fewer than 30 credits in Computer Science. At least 18 of these credits must be numbered 300 or above. This may require students to take additional credits of study. [14957] Minor in Economics **[14958]** To complete a Minor in Economics, students must accumulate no fewer than 30 credits in Economics. At least 18 of these credits must be numbered 300 or above. This may require students to take additional credits of study. [14959] Minor in Psychology **[14960]** To complete a Minor in Psychology, students must accumulate no fewer than 30 credits in Psychology. At least 18 of these credits must be numbered 300 or above. This may require students to take additional credits of study. [14961] Minor in Sociology **[14962]** To complete a Minor in Sociology, students must accumulate no fewer than 30 credits in Sociology as specified below. This may require students to take additional credits of study. **[14963]** • SOCI 111, 121; • At least 6 credits of 200-level Sociology (excluding SOCI 202); • 18 credits of 300- or 400-level Sociology. **[17310]** For more information on minors, visit Degree Requirements, and visit current Minors for a list that could be completed. Minors are declared via the Student Service Center (SSC).	[14957] Minor in Economics **[14958]** To complete a Minor in Economics, students must accumulate no fewer than 30 credits in Economics. At least 18 of these credits must be numbered 300 or above. This may require students to take additional credits of study. [14959] Minor in Psychology **[14960]** To complete a Minor in Psychology, students must accumulate no fewer than 30 credits in Psychology. At least 18 of these credits must be numbered 300 or above. This may require students to take additional credits of study. [14961] Minor in Sociology **[14962]** To complete a Minor in Sociology, students must accumulate no fewer than 30 credits in Sociology as specified below. This may require students to take additional credits of study. **[14963]** • SOCI 111, 121; • At least 6 credits of 200-level Sociology (excluding SOCI 202); • 18 credits of 300- or 400-level Sociology. **[17310]** For more information on minors, visit Degree Requirements, and visit current Minors for a list that could be completed. Minors are declared via the Student Service Center (SSC).

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16 October 2017

To: Senate
From Nominating Committee

Re: A) Amendments to Policy 18: Appointment of Designated Senior Academic Administrators
B) Committee Adjustments

A) Amendments to Policy 18: Appointment of Designated Senior Academic Administrators

The Senate Nominating Committee has received a request from the Office of the University Counsel to amend Joint Board/Senate Policy 18: Appointment of Designated Senior Academic Administrators. The amendments proposed by the University Counsel related to adjusting the title of the Vice-President Research and International to that of Vice-President Research and Innovation, to delineate the procedures for the appointment of a Vice-Provost International, and consequential and editorial changes throughout. As Senate may be aware, Policy 18 is one of several joint Board and Senate policies established to implement the following power of the Board of Governors under Section 27 (2)(f) of the *University Act*: "with the approval of the senate, to establish procedures for the recommendation and selection of candidates for president, deans, librarians, registrar and other senior academic administrators as the board may designate". Included in this package are both the policy itself and the procedures to Policy 18; the Board has delegated to the President the ability to amend the procedures to Policy 18, while the Senate generally considers both the policy and the procedures thereto. The Nominating Committee is in support of the changes and recommends them to Senate; however, the Committee has received a further request from its counterpart committee in Vancouver regarding Policy 18's committee memberships to which it has also agreed. That request and its rationale are set out below.

As some senators are aware, from the establishment of the offices of academic vice-presidents in the 1970s through 2012, both the Board and the Senate were represented on search committees. In 2012 the Board approved an amendment to remove mandated senator search committee members in favour of faculty members at-large to be appointed to search committees by the Senate. While this change was noted in some detail in the submission made to the Board of Governors, it was only described in a covering memorandum to each Senate as "to increase faculty member representation on the advisory committees." In substance, the change made was to strike "by and from" a Senate and replace this with merely "by".

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Upon review, while the Committee is fully supportive of faculty involvement in administrative appointments, it agrees with the position of the Vancouver Senate Nominating Committee that this is best accomplished through active faculty participation in the formal senior governance structures of the University (Namely, the Board of Governors and Senates) and through open consultation and comments from faculty members, rather than through ad-hoc appointments of faculty at-large to search committees. The Committee also agrees with the opinion that those faculty members involved in governing bodies have the most current and frequent interaction with those offices to be appointed and thus are best informed to serve on these search committees. The Committee further believes that co-representation should be restored between the Board and from the Senates as equal branches of UBC's governing structure. The Committee notes that should a responsible executive (in this case the President or an academic vice-president) wish to have additional faculty members serve on these committees, they have - and will continue to have - the ability to appoint further members. The Committee encourages and will continue to encourage the President or vice-president to make such appointments for experience and diversity of faculty opinions.

Therefore, the Senate Nominating Committee recommends to Senate:

That Senate approve the attached amendments to Policy 18 and its procedures with the proviso that the Board of Governors or the President concur with amendments to the Procedures to Policy 18 to change all appointments to be made "by" a Senate to read "by and from" a Senate.

B) Committee Adjustments

The Nominating Committee would recommend the following changes to the membership of committees of Senate:

That Ms Kelly Lu be appointed to the Council Budget Committee (Academic Building and Resources Committee) until 31 March 2018 and thereafter until replaced, to replace Ms Kelsey DesRoches;

That Ms Gillianne Hardy-Legault be appointed to the Academic Policy Committee until 31 March 2018 and thereafter until replaced, to replace Mr Arash Aghshahi;

That Ms Kristen Morgan be appointed to the Admission & Awards Committee until 31 March 2018 and thereafter until replaced, to replace Mr Daniel Kandie;

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That Ms Gillianne Hardy-Legault be appointed to the Appeals on Standing & Discipline Committee until 31 March 2018 and thereafter until replaced, to replace Ms May Ly;

That Mr Arash Aghshahi be appointed to the Curriculum Committee until 31 March 2018 and thereafter until replaced, to replace Ms Janessa Tom;

That Ms May Ly and Mr Kyle Lee be appointed to the Learning & Research Committee until 31 March 2018 and thereafter until replaced, to replace Mr Arash Aghshahi and fill a vacancy; and

That Mr Kyle Lee's appointment to the Admission & Awards Committee and Ms Kelly Lu's appointment to the Agenda Committee be rescinded effective 26 October 2017.

Respectfully submitted,

Dr Jannik Eikenaar
Chair, Senate Nominating Committee