



Okanagan Senate

 THE THIRD REGULAR MEETING OF
 THE OKANAGAN SENATE
 FOR THE 2022/2023 ACADEMIC YEAR

THURSDAY, 24 NOVEMBER 2022

3:30 P.M. | RHS 257 AND VIA ZOOM

1. **Call to Order – Dr Deborah Buszard**
2. **Minutes of the Meeting of 27 October 2021 - Dr Deborah Buszard**
(approval)(docket pages 3-10)
3. **Business Arising from the Minutes – Dr Deborah Buszard** (information)
4. **Remarks from the Acting President – Dr Deborah Buszard** (information)
5. **Remarks from the Deputy Vice-Chancellor – Dr Lesley Cormack**
(information)
6. **Remarks from the Provost – Dr Rehan Sadiq** (information)
7. **Candidates for Degrees - Dr Deborah Buszard** (approval)
 The list as approved by the faculties is available for advance inspection from the Senate Office, and will also be available at the meeting.
 The Vice-Chair of Senate calls for the following motion:
That the candidates for degrees as recommended by the faculties and the College of Graduate Studies, be granted the degrees for which they were recommended, effective November 2022, and that a committee comprised of the Registrar, the relevant dean(s), and the Chair of Senate be empowered to make any necessary adjustments. (2/3 majority required)
8. **Academic Policy Committee – Dr Jan Cioe**
 Discussion regarding Senate Response to Anti-Racism and Inclusive Excellence Task Force Report (information) (report available at
<https://antiracism.sites.olt.ubc.ca/files/2022/07/00-UBC-Complete-Report-UBC.0847-ARIE-TF-Digital-11-complete.pdf>)



9. **Admissions and Awards Committee – Ms Tamara Ebl**
New and Revised Awards (approval) (docket pages 11-13)
10. **Curriculum Committee - Dr Yves Lucet**
Curriculum proposals from Faculty of Arts & Social Sciences and Creative & Critical Studies (approval) (docket pages 14-23)
11. **Learning & Research Committee – Dr Sally Stewart**
Proposal for the Establishment of the Analytics in Medical Sciences (AiMS) Institute (approval) (docket pages 24-47)
12. **Ad Hoc Committee on Course Scheduling – Mr Rob Johnson**
Final Report (approval) (docket pages 48-79)
13. **Report from the Deputy Vice-Chancellor - Dr Lesley Cormack**
Wall Fellowships and Awards (Approval (docket pages 80-81
14. **Other Business**
15. **IN CAMERA – Learning & Research Committee – Dr Sally Stewart**
Honorary Degrees (approval) (circulated separately)

Note: A reception will directly follow this meeting.



OKANAGAN SENATE

MINUTES OF 27 October 2022

DRAFT

Attendance

Present: L. Cormack, R. Ross (Secretary), R. Sadiq, S. Barker, J. Olson, P. Simpson, J M. Tarrant, S. Tomášková, R. Sugden, G. DiLabio, P. Arthur, R. Campbell, J. Cioe, T. Ebl, J. Eikenaar, S. Hutchinson, P. Lasserre, Y. Lucet, J. Picault, B. Marcolin, S. Hilton, S. Stewart, T. Forneris, S. McNeil, J. Jakobi, Y. Zhu, J. Holzman, R. Frost, S. Cherkowski, R. Johnson, S. O’Leary, K. Hodges, M. Reeves, M. Arthur, P. Aulakh, A. Shatzko, J. Low, M. Matin Panah, P. Uribe, G. Jarry-Bolduc, J. Milliken, S. Hafeez, K. Christianson, A. Nair

Regrets: S. Point, H. Berringer, S. Bates, G. Gerrard, J. Hare, M. Evans, I. Parkins, L. Markley, M. Libben, A. Alnaar, H. Chopra, S. Chopra, B. He,

Clerk: C. Eaton

Call to Order

The Vice Chair of Senate, Dr Lesley Cormack, called the second regular meeting of the Senate for the 2022-2023 academic year to order at 3:36 pm.

Senate Membership

NEW MEMBERS

The Registrar, Dr Kate Ross welcomed Blair Visscher, student from the Faculty of Education, to Senate for a term ending 30 September 2023 and thereafter until replaced.

Minutes of September

Jan Cioe
Peter Arthur

That the Minutes of September 29 2022 be adopted as corrected.

Corrections:

Senators Legault was present.

Senator Reeves’ comments were corrected from “Senator Reeves asked if there were any plans for developing family housing” to

“Senator Reeves asked if there were any plans for



developing housing for graduate students with families”.

Approved as
Amended

Business Arising from the Minutes

CANADA RESEARCH COUNCIL (CRC) CHAIRS AT THE OKANAGAN CAMPUS

Senator Barker advised the Senate that CRC Chairs were nominally allocated on the basis of research income that flowed to UBC faculties. As research has grown on the Okanagan campus, the distribution has not kept pace. The Vice-President Research and Innovation, Dr Gail Murphy, has agreed to a working group co-chaired by her and himself and comprised of deans from both campuses to work through the distribution model for CRC chairs.

Barker Comments.

Senator Cioe asked when a new model may be implemented.

Dr Barker said that he expected the group to start to meet in a few weeks and for recommendations to come this Winter Session. It was unlikely that a new model would be agreed to before the end of this fiscal year but some recommendations may come forward.

Senator DiLabio asked how this will work with Vancouver Provost's office administering CRC chairs for the system.

Senator Barker said that the working group would examine if this was the best home for their administration.

Senator DiLabio and a number of other senators raised a concern regarding timeliness.

Senator Barker agreed to report back to Senate by the end of this term.

Remarks from the Deputy Vice-Chancellor

The Deputy Vice-Chancellor noted that the Acting President of UBC was now Dr Deborah Buszard, the former Deputy Vice-Chancellor for the Okanagan campus. She also noted that this would be the last meeting for Dr Kate Ross as Associate Vice-President Enrolment Services and University Registrar. Ms Rella Ng would be assuming the role of Registrar on 15 November 2022.



Dr Cormack noted the decline in international student enrolment this year due to visa issues, students taking fewer courses, fewer transfer students, and students not continuing their studies. She said this was making the campus re-examine what it did to support students, especially as we emerged from COVID-19. She also noted challenges with setting enrolment targets

Senator Cioe said that a number of international students had decried that online courses weren't still available.

Dr Cormack noted the complicated geopolitical issues recently, especially with China and residency rules around immigration, and with lockdowns.

Dr Cormack noted that a new mayor and council were elected for the City of Kelowna and that the Okanagan campus looked forward to working with them.

Remarks from the Provost

The Vice-President Academic and Provost, Dr Rehan Sadiq, advised that the Okanagan campus was commended by the Degree Quality Assurance Board following their Quality Assurance Process Audit last year. The campus would not be required to do a follow-up progress report.

Dr Sadiq advised that the search for the next dean of Health and Social Development was nearing its conclusion and the search for the next dean of Management was about to begin.

The Provost noted that the Okanagan campus would be hosting a conference on scholarship of teaching and learning in the next week with more than 400 delegates from 16 countries planning to attend.

In closing, Dr Sadiq noted that he and Dr Cormack would be travelling to the United Arab Emirates in the next week for recruitment and partner development.

Admissions and Awards Committee

The Chair of the Senate Admissions and Awards Committee, Ms Tamara Ebl, presented.

NEW AWARDS

See Appendix A: Awards Report

Tamara Ebl
Marianne Legault

That Senate approve and recommend to the Board of Governors for approval the terms of the Faculty of Arts and Social Sciences Interdisciplinary Graduate Studies Masters Entrance Award and



*the Faculty of Arts and Social Sciences Graduate
Entrance Award.*

Senator Lasserre asked if the awards could be granted cumulatively.

Senator Tomášková said it depends on performance in the program if it is granted for the second year.

Senator Lasserre clarified that her question was if someone could earn both awards

Senator Tomášková said it wasn't intended but could be possible.

Approved

NEW AND REVISED AWARDS

See Appendix A: Awards Report

Tamara Ebl
W. S. McNeil

That the Senate accept the new and revised awards as listed, that they be forwarded to the Board of Governors for approval, and that letters of thanks be sent to the donors.

Approved

SAT/ACT EXAMINATIONS FOR ADMISSIONS

Tamara Ebl
Sandy Hilton

That Senate approve changes to admission requirements for applicants following the American secondary school curriculum, effective for the 2023 Winter Sessions and thereafter.

Senator McNeil said the document made a compelling argument for not using SAT/ACT examinations, but not for making them optional vs not asking for them at all.

Senator Ebl replied that their use did matter for some students and there is some indication that in those circumstances they may perform better.

A student senator said that it being on the website meant that students would think it should be submitted.

Senator Cioe noted an issue with access and costs, especially for international students. He also said that if we only consider the results only when they are advantageous, this may make students who do not think they will do well on the exam be more hesitant to apply.



Senate recognized Sam Saini, Director of Undergraduate Admissions, who noted recruitment challenges around top quality international students. He said some students appreciated being able to demonstrate their proficiency by these exams.

Senator Cioe said that the SAT was a marker for other things.

Senator McNeil said that it was not clear if a student who did submit a test score could be advantaged; he further opined that standardized testing was racist.

Senator Legault said that this would result in disparities in assessment. .

Senator Hodges noted that this was being forced on us by the pandemic and it being term limited. She noted that the proposal today would make this an ongoing matter.

AMENDMENT

Karen Hodges
Jan Cioe

That the proposal be amended to make it effective for the 2023 and 2024 admissions cycles only, and that the text to be added be struck.

Senator Ebl suggested having the time limits but leaving in the text.

Senator Cioe asked if this amendment would cost us good students?

Mr Saini said some students wanted us to consider these tests and may not consider us if we do not.

Senator Cioe said he thought this was contradictory.

The Clerk clarified for Senator Stewart that the Vancouver Senate had already approved the original proposal as presented.

Senator Hutchinson asked how the optional use could be only advantageous; how would people know?

Mr Saini said that we asked them if they want them used as part of the admissions process.

Senator Zhu asked what other universities were doing.

Mr Saini said McGill and Toronto were also test optional.

Senator Lasserre spoke against the motion to amend.



Dr Ross suggested that being test optional increased student diversity.

Senator Picault asked what was the process where a SAT vs a non-SAT applicant could be adjudicated.

Mr Saini said a core assessment is done.

The Provost raised a concern with the two campuses going different directions and this confusing applicants.

A student senator asked if this would mean two different applications?

Mr Saini said it would be more complicated but still one application.

Amendment not
Approved

AMENDMENT

Tamara Ebl
Sandy Hilton

*That the proposal be amended to make it effective
for the 2023 admissions cycle only.*

Senator Hilton suggested that there wasn't sufficient time to properly consider the matter for 2023 and asked the Senate Admission and Awards Committee to work with the Vancouver Senate Admissions Committee on a further review of standardized tests.

Amendment not
Approved

Main Motion
Approved

NB: Senator Cioe abstained

Curriculum Committee

The Chair of the Senate Curriculum Committee, Dr Yves Lucet, presented.

TEACHING ENGLISH AND ADDITIONAL LANGUAGES CERTIFICATE



Yves Lucet
Peter Arthur

*That the revised certificate brought forward by the
Faculty of Education be approved.*

Approved

Learning & Research Committee

The Chair of the Senate Learning & Research Committee, Dr Sally Stewart, presented.

FINAL REPORT ON STUDENT EXPERIENCE OF INSTRUCTIONS RECOMMENDATIONS

Senate welcomed associate Provost Brad Wuetherick to present along with Dr Abdel-Azim Zumrawi, a statistician with the Centre for Teaching Learning and Technology at the Vancouver campus.

Mr Wuetherick's report noted that in May of 2020 a Student Evaluations of Teaching Working Group presented a report to the Vancouver and Okanagan Senates with sixteen recommendations, which both Senates endorsed (including a name change to Student Experience of Instruction). A Steering Committee and an Implementation Committee were set up to oversee and carry out the implementation of these recommendations.

In May of 2021 a progress report on these recommendations was presented to both Senates, and the new Student Experience of Instruction University Module Questions were implemented on both campuses starting in Winter 2021, Term 1.

Presented at this meeting was a final report of the work done to implement the set of recommendations from 2020. Most recommendations are completed, while a few continue in an ongoing fashion. The report also provides information about data analyses conducted on survey results from last year, as well as investigations of automated platforms for analysing text comments.

Senator Zhu asked if we had data on the effect of instructor ethnicity.

Mr Wuetherick said that the employment equity data we had was not complete enough for this analysis. We intended to have these demographic data and there is a commitment to doing that analysis as the data improves.

Dr Zumrawi said that we are missing about half of the instructor data.

Senator O'Leary asked about the participation rate and the decrease that happened when we went online.



Senator Forneris said that a subgroup was looking at SEI and implementation.

By general consent, the time to adjourn was extended by 20 minutes.

Senator McNeil said that we haven't defined and thus cannot measure teaching effectiveness.

Senator Lucet raised a concern with uniform data issues.

Senator Ebl spoke as a lecturer and asked for consideration being given to context and acknowledged the particular concerns of those with precarious appointments being assessed.

Dr Wuetherick asked for the minutes to reflect how appreciative he was of the team that worked on this report.

Senator Stewart noted that there was a joint committee meeting coming up next month to consider outstanding issues.

Ad Hoc Committee on Course Scheduling

The Chair of the Senate Ad Hoc Committee on Course Scheduling, Mr Rob Johnson, presented.

On 29 September 2022 the Senate Ad Hoc Committee on Course Scheduling delivered an interim report to Senate pursuant to its terms of reference. The Committee is now pleased to present an updated interim report.

As indicated in its previous report, the Committee has been working with Enrolment Services staff to obtain data on anticipated impacts of the motion on course scheduling which was originally presented to Senate in January 2022. The Committee has since received a detailed report setting out the requested data. The Committee is grateful to the Deputy Registrar and his team for providing exemplary support despite the busy season and limited staffing resources. The Committee has met to review the report and outline a preliminary set of conclusions and recommendations. It has also begun the work of drafting a final report to Senate which will fully discharge the Committee's mandate under its terms of reference. The Committee intends to present its final report at the next meeting of Senate, 24 November 2022.

Senator Cioe asked if the report would be in time to make a difference for the 2023W Session.

Senator Johnson said that we have passed the window for next year.

Adjournment

Seeing no other business, the meeting was adjourned at 5:40 pm



14 November 2022

To: Okanagan Senate

From: Okanagan Admissions and Awards Committee

Re: New and Revised Awards (approval)

New and Revised Awards (approval)(circulated)

The Committee has reviewed and recommends to Senate for approval the attached list of new and revised awards.

Motion: That the Senate accept the new and revised awards as listed, that they be forwarded to the Board of Governors for approval, and that letters of thanks be sent to the donors.

Respectfully submitted,

Tamara Ebl, Chair
Senate Admissions and Awards Committee



Date: November 7, 2022

From: Paul Greenhough, Development and Alumni Engagement, Okanagan Campus

To: Okanagan Senate Admissions and Awards Committee

Re: Awards recommended for approval of the Okanagan Senate Admissions and Awards Committee

New Awards:

Proposed Title: **Santa J. Ono Bursary**

Bursaries totaling \$2,000 have been made through an endowment established to honour the work of Santa J. Ono, 15th President and Vice-Chancellor of the University of British Columbia and in recognition of his dedication to the students of UBC. Bursaries are available for students at the UBC Vancouver campus and UBC Okanagan campus. The bursaries are adjudicated by Enrolment Services. (First award available for the 2023/2024 winter session).

Revised Award (previously approved award with changes in terms or funding source):

Existing description (2020):

Award Title: **Audain Travel Award**

Current description:

~~A \$7,500 award has been made available annually through a gift from the Audain Foundation to either a BFA or MFA student in the Faculty of Creative and Critical Studies at The University of British Columbia, Okanagan campus. Preference will be given to a student who has demonstrated artistic excellence and academic achievement. The award is made on the recommendation of the Faculty of Creative and Critical Studies.~~

Award Title: **Audain Travel Award – UBC Okanagan**

Amended description:

A \$7,500 travel award has been made available annually through a gift from the Audain Foundation for Bachelor of Fine Arts or Master of Fine Arts students on the Okanagan campus specializing in Visual Art who are undertaking travel to broaden their knowledge of historical and contemporary art. The Audain Foundation was established in 1997 to champion the visual arts in British Columbia through support for exhibitions, galleries, awards, and capital projects at arts galleries and universities. The award is made on the recommendation of the Department of

Creative Studies.

Rationale: To align the Okanagan award description with the Vancouver award description so the donor receives similar award information.



THE UNIVERSITY OF BRITISH COLUMBIA

Office of the Senate
University Centre | UNC 322
3333 University Way
Kelowna, BC Canada V1V 1V7

Phone 250.807.9619
Fax 250.807.8007
www.senate.ubc.ca

24 November 2022

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

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

Therefore, the following is recommended to Senate:

Motion: *That Senate approve and recommend to the Board of Governors for approval the new course and program name change brought forward by the Faculties of Arts and Social Sciences and Creative and Critical Studies.*

- a. From the Faculty of Arts and Social Sciences
 - i. New Course: PSYO 501

- b. From the Faculty of Creative and Critical Studies
 - i. Program Name Change: Intercultural Communication through World Literatures

For the Committee,

Dr. Yves Lucet
Chair, Curriculum Committee



Curriculum Proposal Form

New/Change to Course/Program – Okanagan campus

Category: 1	
Faculty/School: FASS Dept./Unit: Psychology Faculty/School Approval Date: 20220914 Effective Session: 2023S	Date: 20220321 Contact Person: Jan Cioe Phone: 250.807.8732 Email: jan.cioe@ubc.ca
Type of Action: New Course	
Rationale: The Canadian Psychological Association [CPA] regulates our Clinical Psychology doctoral program and has urged programs to include more training on diversity, equity, and inclusion. This course will be required for all our Clinical stream graduate students; it will be optional for our Psychological Science stream graduate students.	
Proposed Academic Calendar Entry: <u>PSYO 501 (3) Equity, Diversity, & Inclusion: Applications in Clinical & Research Practices</u> <u>Inclusivity, equity, and diversity in research design and formulation considering the challenges with research on diverse populations and cultural factors for effective intercultural communication. [3-0-0]</u>	Draft Academic Calendar URL: n/a Present Academic Calendar Entry: n/a



Curriculum Proposal Form

New/Change to Course/Program – Okanagan campus

Category: 2	
Faculty/School: FCCS Dept./Unit: Languages and World Literatures Faculty/School Approval Date: 2022 09 26 Effective Session: 2023S	Date: 2022/09/19 Contact Person: Dr. Francisco Peña Fernández Phone: 250.807.8044 Email: francisco.pena@ubc.ca
Type of Action: Program Title Change – Calendar links	
Rationale: Calendar links update to reflect the new program name change of “World Literatures and Intercultural Communication” to “Intercultural Communication through World Literatures.”	
Proposed Academic Calendar Entry: <u>Intercultural Communication through World Literatures</u> Consult the Faculty of Creative and Critical Studies for information on the Major and Minor in <u>Intercultural Communication through World Literatures.</u>	Draft Academic Calendar URL: https://www.calendar.ubc.ca/okanagan/index.cfm?tree=18,282,857,1487 Present Academic Calendar Entry: World Literatures and Intercultural Communication Consult the Faculty of Creative and Critical Studies for information on the Major and Minor in World Literatures and Intercultural Communication.
Proposed Academic Calendar Entry: [...] <p>The Faculty of Creative and Critical Studies (FCCS) offers programs leading to Bachelor of Arts degrees with majors in Art History and Visual Culture, Creative Writing, Cultural Studies, English, French, Languages, and <u>Intercultural Communication through World Literatures</u> to the Bachelor of Media Studies, and the Bachelor of Fine Arts degree, with a major in Visual Arts. The Faculty’s programs explore different</p>	Draft Academic Calendar URL: https://www.calendar.ubc.ca/okanagan/index.cfm?tree=18,283,831,0 Present Academic Calendar Entry: [...] <p>The Faculty of Creative and Critical Studies (FCCS) offers programs leading to Bachelor of Arts degrees with majors in Art History and Visual Culture, Creative Writing, Cultural Studies, English, French, Languages, and <u>World Literatures and Intercultural Communication</u> to the Bachelor of Media Studies, and the Bachelor of Fine Arts degree, with a major in Visual Arts. The Faculty’s programs explore different dimensions of cultural</p>



<p>dimensions of cultural expressions and relationships, as they relate to interactions among humans and between humans and other phenomena, both physical and abstract. The Faculty's programs cultivate students' abilities to interrogate our cultural and natural heritage; to determine which elements need to be preserved; to explore how best these can be sustained; and to better the human condition.</p> <p>[...]</p>	<p>expressions and relationships, as they relate to interactions among humans and between humans and other phenomena, both physical and abstract. The Faculty's programs cultivate students' abilities to interrogate our cultural and natural heritage; to determine which elements need to be preserved; to explore how best these can be sustained; and to better the human condition.</p> <p>[...]</p>
<p>Proposed Academic Calendar Entry:</p> <p>Admission Requirements</p> <p>Application for admission to B.A. programs is described in <u>Admissions</u>. Specific program requirements for Honours English and for majors in Art History and Visual Culture, Creative Writing, Cultural Studies, English, French, Languages, and <u>Intercultural Communication through World Literatures</u> are described in their respective calendar sections. Please consult the Faculty of Arts and Social Sciences for other BA programs.</p>	<p>Draft Academic Calendar URL:</p> <p>https://www.calendar.ubc.ca/okanagan/index.cfm?tree=18,283,902,1088</p> <p>Present Academic Calendar Entry:</p> <p>Admission Requirements</p> <p>Application for admission to B.A. programs is described in <u>Admissions</u>. Specific program requirements for Honours English and for majors in Art History and Visual Culture, Creative Writing, Cultural Studies, English, French, Languages, and World Literatures and Intercultural Communication are described in their respective calendar sections. Please consult the Faculty of Arts and Social Sciences for other BA programs.</p>
<p>Proposed Academic Calendar Entry:</p> <p>Academic Advising</p> <p>Academic advising for all B.F.A. students and FCCS B.A. students (students majoring in Art History and Visual Culture, Creative Writing, Cultural Studies, English, French, Languages, and <u>Intercultural Communication through World Literatures</u>) is available through the office</p>	<p>Draft Academic Calendar URL:</p> <p>https://www.calendar.ubc.ca/okanagan/index.cfm?tree=18,283,961,0</p> <p>Present Academic Calendar Entry:</p> <p>Academic Advising</p> <p>Academic advising for all B.F.A. students and FCCS B.A. students (students majoring in Art History and Visual Culture, Creative Writing, Cultural Studies, English, French, Languages, and World Literatures and Intercultural Communication) is available through the office of Jessica Beck</p>



<p>of Jessica Beck located in the Advising and Involvement Centre (UNC 207). That office assists students in academic planning, interpreting faculty course requirements and regulations, and resolving academic and personal problems. Specific program advising is also available through the offices of the Department of Creative Studies, the Department of Languages and World Literatures, and the Department of English and Cultural Studies. B.A. students majoring in other areas should consult the Dean's Office of the Faculty of Arts and Social Sciences.</p>	<p>located in the Advising and Involvement Centre (UNC 207). That office assists students in academic planning, interpreting faculty course requirements and regulations, and resolving academic and personal problems. Specific program advising is also available through the offices of the Department of Creative Studies, the Department of Languages and World Literatures, and the Department of English and Cultural Studies. B.A. students majoring in other areas should consult the Dean's Office of the Faculty of Arts and Social Sciences.</p>
<p>Proposed Academic Calendar Entry: Program Overview</p> <p>[...]</p> <p>Majors offered by the Faculty of Creative and Critical Studies include: Art History and Visual Culture, Creative Writing, Cultural Studies, English, French, Languages, and <u>Intercultural Communication through World Literatures</u>. The Faculty also offers combined majors with Art History and Visual Culture, Creative Writing, Cultural Studies, and English.</p> <p>[...]</p>	<p>Draft Academic Calendar URL: https://www.calendar.ubc.ca/okanagan/index.cfm?tree=18,283,902,1087</p> <p>Present Academic Calendar Entry: Program Overview</p> <p>[...]</p> <p>Majors offered by the Faculty of Creative and Critical Studies include: Art History and Visual Culture, Creative Writing, Cultural Studies, English, French, Languages, and World Literatures and Intercultural Communication. The Faculty also offers combined majors with Art History and Visual Culture, Creative Writing, Cultural Studies, and English.</p> <p>[...]</p>
<p>Proposed Academic Calendar Entry: Program Requirements</p> <p>Registration</p> <p>Students are responsible for meeting all program requirements. Within the Faculty of Creative and Critical Studies, program</p>	<p>Draft Academic Calendar URL: https://www.calendar.ubc.ca/okanagan/index.cfm?tree=18,283,902,1090</p> <p>Present Academic Calendar Entry: Program Requirements</p> <p>Registration</p> <p>Students are responsible for meeting all program requirements. Within the Faculty of Creative and Critical Studies, program</p>



<p>advisors in Art History and Visual Culture, Creative Writing, Cultural Studies, English, French, Spanish, Languages, and Intercultural <u>Communication through World Literatures</u> are available to assist with the appropriate course selection to meet graduation requirements. Students can also meet with academic advisors in the Advising and Involvement Centre (UNC 207). Before completing their final 30 credits, students are encouraged to have their progress reviewed by a program advisor or an Academic Advisor to ensure that they meet all graduation requirements.</p>	<p>advisors in Art History and Visual Culture, Creative Writing, Cultural Studies, English, French, Spanish, Languages, and World Literatures and Intercultural Communication are available to assist with the appropriate course selection to meet graduation requirements. Students can also meet with academic advisors in the Advising and Involvement Centre (UNC 207). Before completing their final 30 credits, students are encouraged to have their progress reviewed by a program advisor or an Academic Advisor to ensure that they meet all graduation requirements.</p>
<p>Proposed Academic Calendar Entry:</p> <p>Bachelor of Arts Programs</p> <p>Contents</p> <p><u>Program Overview</u></p> <p>[...]</p> <p><u>History</u></p> <p><u>Indigenous Studies</u></p> <p><u>Intercultural Communication through World Literatures</u></p> <p><u>International Relations</u></p> <p>[...]</p>	<p>Draft Academic Calendar URL:</p> <p>https://www.calendar.ubc.ca/okanagan/index.cfm?tree=18,283,902,0</p> <p>Present Academic Calendar Entry:</p> <p>Bachelor of Arts Programs</p> <p>Contents</p> <p><u>Program Overview</u></p> <p>[...]</p> <p><u>Theatre (Minor)</u></p> <p><u>World Literatures and Intercultural Communication</u></p>
<p>Proposed Academic Calendar Entry:</p> <p>Bachelor of Arts Programs</p> <p>Contents</p> <p><u>Program Overview</u></p> <p>[...]</p> <p><u>History</u></p> <p><u>Indigenous Studies</u></p>	<p>Draft Academic Calendar URL:</p> <p>https://www.calendar.ubc.ca/okanagan/index.cfm?tree=18,282,857,0</p> <p>Present Academic Calendar Entry:</p> <p>Bachelor of Arts Programs</p> <p>Contents</p> <p><u>Program Overview</u></p> <p>[...]</p> <p><u>Theatre (Minor)</u></p> <p><u>World Literatures and Intercultural Communication</u></p>



<p><u>Intercultural Communication through World Literatures</u></p> <p><u>International Relations</u></p> <p>[...]</p>																	
<p>Proposed Academic Calendar Entry:</p> <p>Program, Course, and Faculty Fees</p> <ul style="list-style-type: none"> • <u>Program and Course Fees</u> • <u>Faculty Fees</u> <p>Program and Course Fees</p> <table border="1"> <thead> <tr> <th>Programs/Courses</th> <th>Amount</th> </tr> </thead> <tbody> <tr> <td>[...]</td> <td></td> </tr> <tr> <td>Intercultural Development Inventory Assessment Fee³</td> <td>Up to \$40.75</td> </tr> <tr> <td>[...]</td> <td></td> </tr> </tbody> </table> <p>³ All students who pursue the major or minor in <u>Intercultural Communication through World Literatures</u> at UBC Okanagan will be required to complete the Intercultural Development Inventory (IDI: a standardized assessment), preferably pre- and post-program, but at least once before they graduate. They will receive individual feedback sessions, scores and reports. Costs for this licensed assessment will be met with a mandatory program fee collected by the Faculty.</p> <p>[...]</p>	Programs/Courses	Amount	[...]		Intercultural Development Inventory Assessment Fee ³	Up to \$40.75	[...]		<p>Draft Academic Calendar URL:</p> <p>https://www.calendar.ubc.ca/okanagan/index.cfm?tree=14,341,0,0</p> <p>Present Academic Calendar Entry:</p> <p>Program, Course, and Faculty Fees</p> <ul style="list-style-type: none"> • <u>Program and Course Fees</u> • <u>Faculty Fees</u> <p>Program and Course Fees</p> <table border="1"> <thead> <tr> <th>Programs/Courses</th> <th>Amount</th> </tr> </thead> <tbody> <tr> <td>[...]</td> <td></td> </tr> <tr> <td>Intercultural Development Inventory Assessment Fee³</td> <td>Up to \$40.75</td> </tr> <tr> <td>[...]</td> <td></td> </tr> </tbody> </table> <p>³ All students who pursue the major or minor in <u>World Literatures and Intercultural Communication</u> at UBC Okanagan will be required to complete the Intercultural Development Inventory (IDI: a standardized assessment), preferably pre- and post-program, but at least once before they graduate. They will receive individual feedback sessions, scores and reports. Costs for this licensed assessment will be met with a mandatory program fee collected by the Faculty.</p> <p>[...]</p>	Programs/Courses	Amount	[...]		Intercultural Development Inventory Assessment Fee ³	Up to \$40.75	[...]	
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Curriculum Proposal Form

New/Change to Course/Program – Okanagan campus

Category: 1	
Faculty/School: FCCS Dept./Unit: Languages and World Literatures Faculty/School Approval Date: 2022 09 26 Effective Session: 2023S	Date: 2022/09/19 Contact Person: Dr. Francisco Peña Fernández Phone: 250.807.8044 Email: francisco.pena@ubc.ca
Type of Action: Program Title Change	
Rationale: The B.A. in World Literatures and Intercultural Communication is seeking approval to change its name to “Intercultural Communication through World Literatures.” While this name change continues to anchor World Literatures as the discipline and central pedagogy for learning and applying the core competency of intercultural communication, placing Intercultural Communication first addresses the feedback and interest received by employers and external partners via consultations completed to date. It also better reflects the revised curriculum structure introduced and approved by the Okanagan Senate earlier this year (May 10, 2022). Finally, this title will bring clarity to students around this B.A.’s focus and expectations.	
Proposed Academic Calendar Entry: <u>Intercultural Communication through World Literatures</u> [19874] This program is pending final approval by the Ministry of Advanced Education and Skills Training. [19858] Major in <u>Intercultural Communication through World Literatures</u> [20347] World Literature is a vibrant and vital field of study encompassing a spectrum of literatures, historical periods, and cultural phenomena through the ages and across the globe. The intercultural learning and international awareness fostered by the study of literature in global perspective prepare students to flourish academically and professionally in an increasingly interconnected world.	Draft Academic Calendar URL: https://www.calendar.ubc.ca/okanagan/prof/edit/index.cfm?tree=18,283,902,1486 Present Academic Calendar Entry: World Literatures and Intercultural Communication [19874] This program is pending final approval by the Ministry of Advanced Education and Skills Training. [19858] Major in World Literatures and Intercultural Communication [20347] World Literature is a vibrant and vital field of study encompassing a spectrum of literatures, historical periods, and cultural phenomena through the ages and across the globe. The intercultural learning and international awareness fostered by the study of literature in global perspective prepare students to flourish academically and professionally in an increasingly interconnected world. [20348] EDUC, LLED, MGMT, and THTR courses have been selected to provide students with employable skills



<p>[20348] EDUC, LLED, MGMT, and THTR courses have been selected to provide students with employable skills at the end of their degree, thereby opening the door to careers in teaching, writing, editing, translation, advertising, marketing, and public relations, among others.</p> <p>[19859] To complete the Intercultural Communication through World Literatures, students must complete at least 30 credits in WRLD, with a minimum of 21 credits at the 300/400 level and 18 additional credits in EDUC, INDG, LLED, MGMT, and THTR courses, as described below.</p> <p>[19861] In addition to the B.A. requirements, students must complete the following:</p> <p><i>[19862] First and Second Years</i></p> <p>[19863] (18 credits)</p> <p>[20349]</p> <ul style="list-style-type: none"> • WRLD 150 • One of WRLD 151, 152, 153, 154, 155, 156, 157, 158 • WRLD 200 • INDG 100 (Introduction to Decolonization: Indigenous Studies) • MGMT 110 (Introduction to Management Thought and Social Responsibility)* • THTR 204 (Creative Communication and Engagement) <p>[19897] *Students may choose to complete MGMT 100 towards a <u>Minor in Management</u> or a <u>Dual Degree Master of Management</u>.</p> <p><i>[19864] Third and Fourth Years</i></p> <p>[19865] (30 credits)</p> <p>[20351]</p> <ul style="list-style-type: none"> • WRLD 382 • WRLD 404 • One of WRLD 497, 498, 499 • 12 additional WRLD credits at the 300- and 400-level • EDUC 300 • INDG 404 (Indigenous Peoples United Nations and Global Issues) • One of LLED 494, 495, 496, 497* <p>[19898] *Students may choose to take more LLED courses towards the completion of the <u>Teaching English and Additional Languages (TEAL) Post-Baccalaureate Certificate</u>.</p>	<p>at the end of their degree, thereby opening the door to careers in teaching, writing, editing, translation, advertising, marketing, and public relations, among others.</p> <p>[19859] To complete the Major in World Literatures and Intercultural Communication, students must complete at least 30 credits in WRLD, with a minimum of 21 credits at the 300/400 level and 18 additional credits in EDUC, INDG, LLED, MGMT, and THTR courses, as described below.</p> <p>[19861] In addition to the B.A. requirements, students must complete the following:</p> <p><i>[19862] First and Second Years</i></p> <p>[19863] (18 credits)</p> <p>[20349]</p> <ul style="list-style-type: none"> • WRLD 150 • One of WRLD 151, 152, 153, 154, 155, 156, 157, 158 • WRLD 200 • INDG 100 (Introduction to Decolonization: Indigenous Studies) • MGMT 110 (Introduction to Management Thought and Social Responsibility)* • THTR 204 (Creative Communication and Engagement) <p>[19897] *Students may choose to complete MGMT 100 towards a <u>Minor in Management</u> or a <u>Dual Degree Master of Management</u>.</p> <p><i>[19864] Third and Fourth Years</i></p> <p>[19865] (30 credits)</p> <p>[20351]</p> <ul style="list-style-type: none"> • WRLD 382 • WRLD 404 • One of WRLD 497, 498, 499 • 12 additional WRLD credits at the 300- and 400-level • EDUC 300 • INDG 404 (Indigenous Peoples United Nations and Global Issues) • One of LLED 494, 495, 496, 497* <p>[19898] *Students may choose to take more LLED courses towards the completion of the <u>Teaching English and Additional Languages (TEAL) Post-Baccalaureate Certificate</u>.</p> <p>[20350] Students must also complete a standardized Intercultural Development Inventory assessment. The fee</p>
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<p>[20350] Students must also complete a standardized Intercultural Development Inventory assessment. The fee for the assessment is included with the program mandatory fees (up to \$40).</p> <p>[19866] Minor in <u>Intercultural Communication through World Literatures</u></p> <p>[19867] To complete a Minor in <u>Intercultural Communication through World Literatures</u>, students must complete at least 30 credits in WRLD out of the 120 credits required for the B.A. degree, including:</p> <p>[19868]</p> <ul style="list-style-type: none"> • One of WRLD 150, 151, 152, 153, 154, 155, 156, 157 • WRLD 200 • WRLD 382 <p>[19869] At least 18 credits of 300- or 400-level WRLD courses.</p>	<p>for the assessment is included with the program mandatory fees (up to \$40).</p> <p>[19866] Minor in World Literatures and Intercultural Communication</p> <p>[19867] To complete a Minor in World Literatures and Intercultural Communication, students must complete at least 30 credits in WRLD out of the 120 credits required for the B.A. degree, including:</p> <p>[19868]</p> <ul style="list-style-type: none"> • One of WRLD 150, 151, 152, 153, 154, 155, 156, 157 • WRLD 200 • WRLD 382 <p>[19869] At least 18 credits of 300- or 400-level WRLD courses.</p>
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24 November 2022

To: Okanagan Senate

From: Senate Learning and Research Committee

Re: Proposal for the Establishment of the Analytics in Medical Sciences (AiMS) Institute

The Senate Learning and Research Committee has reviewed the attached proposal to establish a new UBC Okanagan Analytics in Medical Sciences (AiMS) Institute. The committee's review of the proposal focused on the academic subject matter and the likelihood that the Institute would foster new interdisciplinary research activities; the impact of the proposed Institute on student activities and regional collaborations; the proposed Institute's financial viability and sustainability; and the proposed Institute's proposed governance structure. The proposal has also been reviewed by the VPRI, the UBCO Deans' Council and the UBCO Chief Librarian and all agreed that this proposed Institute meets the criteria for a successful Institute.

The Senate Learning and Research Committee is pleased to recommend the following:

Motion: ***That Senate approve and recommend to the Board of Governors the establishment of the Analytics in Medical Sciences (AiMS) Institute pursuant to Policy O-5.1 Research Institutes and Centres.***

Respectfully submitted,

Dr Sally Willis-Stewart, Chair
Senate Learning and Research Committee

PROPOSAL FOR UBC RESEARCH INSTITUTE

ANALYTICS IN MEDICAL SCIENCES (AIMS) INSTITUTE

Prepared by: J. Andrews, J. Braun, R. Feldman, A. Jirasek
October 2022

1 EXECUTIVE SUMMARY

Technological advancements in healthcare continue to be made through advances in the natural sciences and engineering. Increasingly, the 'big data' nature of these disciplines dictates that data analytics is becoming an ever-increasingly important aspect of many healthcare solutions. The central aim of the Analytics in Medical Sciences Institute (AiMS) is to formally unite a network of researchers working in the areas of medical physics, imaging, engineering, mathematics, oncology, informatics, and data analytics for the expressed purpose of developing locally relevant and globally impactful advancements in healthcare. While not restrictive, the primary initial efforts within AiMS will be centred on the following healthcare areas:

- Radiation medicine in cancer care
- Traumatic brain injury (TBI)
- Multiple sclerosis (MS)

It is through this lens that the current proposal is formulated and outlined herein.

2 VISION STATEMENT

To create **SMART HEALTHCARE SOLUTIONS OF LOCAL RELEVANCE AND GLOBAL IMPACT.**

3 MISSION STATEMENT

Our mission is to address major healthcare issues of the coming decades through integrated research and the training of next generation researchers in biomedical physics, data analytics, oncology, and biomedical engineering.

4 CENTRAL AIMS

1. To address large-scale challenges in medicine through integrated research in medical physics, biomedical engineering, mathematics, and data analytics, with focus primarily on advancing radiation oncology, TBI, MS, medical imaging, radiation biophysics, and biomedical optics.
2. To train the next generation of fundamental, applied, and clinical scientists working at the interface of allied disciplines, with the goal of addressing the major healthcare issues of the coming decades.
3. To catalyze fundamental and applied discoveries in allied disciplines that are translated to clinical practice.

5 STRATEGIC DIRECTIONS

1. To create an Institute that is the natural home and bridge for the nationally and internationally recognized team of integrated UBC-Okanagan (UBCO), BC Cancer - Kelowna Centre (BCC), and Interior Health (IH) researchers in medical physics and imaging, biomedical engineering, mathematics, and data analytics.
2. To create a nationally unique, interdisciplinary, and high calibre training environment encompassing PDF, graduate, and undergraduate High Quality Personnel (HQP) training opportunities.
3. To increase and maintain the outward visibility of the cumulative efforts and outputs of the group, with the aim of attracting high quality faculty and HQP to UBCO/BCC/IH.
4. To help increase and effectively manage resources and research support for its members.
5. To transfer and mobilize knowledge gained from the activities of its members for the benefit of society.

6 STATEMENT OF PURPOSE

The purpose of the Institute for Analytics in Medicine is to enhance and strengthen existing research and training programs through the sharing of research ideas, samples, technical expertise and specialized equipment, co-supervision of students, interdisciplinary research projects, and joint funding proposals.

6.1 THREE-YEAR AIMS OBJECTIVES

Within the first three years of the formation of AiMS we aim to:

1. Have a base membership of ~20 full members with expertise in medical physics, oncology, data analytics, mathematics, biomedical science and engineering, and computer science;
2. Create a nationally unique training environment that encompasses undergraduate, graduate, and postdoctoral HQP working at the interface of our allied disciplines;
3. Develop strong research linkages with external allied researchers, Centres, and Institutes, and industry including, but not limited to, the UBCO MMRI, UBCO's Southern Medical Program, Banff International Research Station (BIRS), The Rocky Mountain Data Science Training Network (with U Calgary), SFU, Western University, Carleton University, D-Pace Inc, and TRIUMF.

6.2 SIX-YEAR AIMS OBJECTIVES

Within the first six years of the formation of AiMS we aim to:

1. To explore the joint appointment of 1-2 research faculty between UBCO FoS and BCC, with target areas in radiation oncology (1) and biostatistics (1);
2. To integrate into the developing Network for Data Analytics and the proposed Interdisciplinary Collaboration & Innovation (ICI) building at UBCO;
3. To fully integrate an open science data analytic framework for code and acquired data to promote reproducible science.
4. To enable collaborative research output and momentum that in turn facilitates applications to competitive collaborative national grant opportunities, for example, NSERC CREATE, CFI Innovation Fund, CIHR, and other relevant opportunities.

7 CONTEXT AND RATIONALE

7.1 BACKGROUND

Cancer: Cancer is a leading cause of mortality in Canada, with lifetime incidence rates estimated at 40%, and an associated 25% mortality rate (Canadian Cancer Society (CCS) Statistics 2018). Furthermore, it is estimated that by 2028-2032 the annual average rate of cancer incidence is projected to increase by 79% over 2003-2007 levels (CCS 2015). From an economic perspective, cancer places a severe burden on the BC and Canadian economy, costing \$17.4 billion in Canada in the year 2000 alone (CCS 2014), translating to close to \$4000 per BC resident per year. Approximately half of all diagnosed patients receive some form of radiation therapy (RT) treatment, however, several key areas of radiation oncology remain bottlenecks for enabling the next generation of cancer care. For example, oncologists still have no means to accurately predict or monitor how patients will respond to treatment; medical imaging for tumour delineation still requires the addition of error-prone margins in order to encompass microscopic disease; and delivery of precision radiation to highly localized regions of interest remains a challenge.

Multiple Sclerosis: There are approximately 2.8 million people living with multiple sclerosis (MS) world-wide, and Canada ranks among countries with some of the the highest rates of MS (Atlas of MS 3rd edition, 2020). This is a life-long condition that has major physical, emotional, and economic impact. While treatments are available that can permit the management of symptoms, accurate diagnosis of MS can be challenging. Symptoms of MS are unpredictable and highly variable (including blurred vision, weak limbs, tingling sensations, dizziness, fatigue), making rapid recognition of MS difficult. Neuroimaging, using MRI (magnetic resonance imaging) can detect the presence of MS lesions (indications of demyelination and disease progression), and confirm a diagnosis. However, symptoms are often experienced for years prior to detection by current neuroimaging protocols and a first diagnosis.

Traumatic brain injury (TBI): TBI results from some sort of external mechanical factor, including a fall or other blow to head (i.e assault, a motor vehicle accident, or other). Brain injuries in Canada occur at a rate of approximate 5/1,000 individuals per year (this statistic does not take into account concussions, mild TBI's, military injuries, or unreported cases). Acquired brain injury is a leading cause of disability and death for Canadians under the age of 40 (Brain Injury Canada, 2020). There is often a significant delay between a TBI and manifestation of the sequelae of TBI (motor impairment, epilepsy, anxiety, sensory impairment), with an elevated risk of symptom onset persisting for years post-insult. Unfortunately, early clinical symptoms and acute impairment do not seem to predict long term sequelae and conventional approaches to evaluating TBI may not successfully detect any associated axonal injury, making it difficult to understand or predict when TBI may result in additional symptoms, or how to accurately diagnose and mitigate the effects of the condition.

While the technical aspects of these examples fall within the purview of biomedical physics and engineering, it is fair to say that these problems are associated with fundamentally stochastic characteristics and meaningful advancements will only be enabled through the co-application of rigorous statistically based approaches centred around a 'big data' and machine learning framework.

7.2 CONTEXT AND HISTORICAL DEVELOPMENT

A number of research and HQP training initiatives now exist on the UBCO campus that directly address the research problems stated above, are now fully operational, active, are directly relevant to the current AiMS proposal, and would benefit from a formal institutional umbrella.

7.2.1 Graduate Program in Medical Physics (GPMP, UBCO): The Graduate Program in Medical Physics (GPMP) was initiated in 2016 and offers MSc and PhD programs (first in kind in BC) that are fully accredited by the Commission on the Accreditation of Medical Physics Education Programs (CAMPEP, www.campep.org). The GPMP consists of three full faculty, 14 adjunct faculty (11 BC Cancer - Kelowna (BCC), 1 Interior Health (IH), 1 TRIUMF, 1 D-Pace Industries), and 12 MSc and PhD graduate HQP. The GPMP is funded through research grants from NSERC, CIHR, CFI, UBCO, BCC, as well as UBCO donor and BC Cancer Foundation initiatives (more information on funding is given in section 13).

7.2.2 Concentration in Statistics (UBCO): The graduate concentration in statistics, a stream in the mathematics graduate program, offers MSc and PhD degrees covering both theoretical and applied topics, including areas of biostatistics and inferential data science. There are currently three supervisory faculty and two additional teaching stream faculty who provide some of the graduate level instruction. There are also two affiliate faculty from Simon Fraser University and the University of Western Ontario who provide additional capacity for co-supervision of research students. Two additional research faculty positions in Statistics have been recently filled (Drs Shi and Thompson). This will enable the statistics graduate population to grow from the current enrolment of six to ten. The concentration in statistics is funded through external grants from NSERC with lab infrastructure funded by CFI and BCKDF grants. Several MITACS interns have been supported in the recent past, and this activity is expected to continue. There is also funding from Scotiabank which has been used to fund several risk analytics projects - on both the Vancouver and Okanagan campuses. An NSERC Alliance Option 2 proposal to match sum of this funding is in draft form. Further funding support frequently comes from the Canadian Statistical Sciences Institute (CANSSI) and the Pacific Institute for the Mathematical Sciences (PIMS).

7.2.3 Graduate Program in Mathematics (UBCO): The graduate program in mathematics at UBCO has within it a world renowned research concentration in the area of mathematical optimization, a branch of mathematics directly relevant to the efforts of data analytic-based solutions of interest to researchers in AiMS. The core AiMS research group contains workers in the sub field of optimization, with the group exhibiting a proven track record of collaboration and productivity. On a wider scale, the mathematical optimization group consists of seven research-active faculty working in both fundamental and applied problems in optimization. Mathematics faculty are externally funded through NSERC and Mitacs.

7.2.4 Department of Radiology (UBCV): Our network of researchers work with a collection of BCC radiation oncologists who are cross-appointed in the Department of Radiology. Our collaborations with radiation oncology are vital in maintaining the clinical focus of AiMS's research mandate. BCC radiation oncologists are funded through BCC, The BC Cancer Foundation, and a range of external cancer-specific granting agencies

(e.g. Can. Cancer Soc.).

7.2.5 The Centre for Optimization, Convex Analysis, and Non-Smooth Analysis (CO-CANA, UBCO): COCANA is a multidisciplinary research centre consisting of researchers working in computer science, mathematics, and statistics. A subset of COCANA researchers are cross-listed as members of AiMS due to the direct work conducted between COCANA and members of AiMS (BCC, IH, UBCO physics).

7.2.6 BIRS-UBC-Okanagan: The Banff International Research Station for Mathematical Innovation and Discovery (BIRS) runs a suite of research programs in the mathematical sciences at the Banff Centre, including week-long workshops in a large variety of topics. BIRS-UBC-Okanagan is an affiliate of BIRS which will run similar programming on the Okanagan campus, starting in the summer of 2021, with a multi-disciplinary perspective on data science, artificial intelligence and machine learning. These programs will provide tremendous opportunities for HQP, including the possibility of teaming up to launch a graduate summer school with BIRS and Berkeley's Mathematical Sciences Research Institute (MSRI) in 2022.

7.2.7 UBCO School of Engineering (SOE) and the Manufacturing & Materials Research Institute (MMRI, UBCO/V): Researchers within UBCO's SOE now engage directly with UBCO and BCC/IH physicists on a range of projects directly related to health including, but not limited to: radiation oncology; health informatics; medical imaging; and medical device fabrication. Furthermore, the MMRI is lead from UBCO and has embedded within it a dedicated biomedical research theme, thus acting as an ideal bridge between the AiMS and the SOE. SOE faculty working within AiMS are externally funded through NSERC, Mitacs, and a collection of industry partnerships.

7.2.8 Master of Data Science Program (MDS, UBCO): The Master of Data Science program at UBCO is a professional graduate program for about 30-40 students, supported by ten faculty members in computer science, mathematics and statistics. This intensive program runs for ten months and features a two month capstone experience where teams of students partner with industry or government to carry out research projects. Many of these students have biostatistical or biomedical backgrounds, so projects with BC Cancer provide a natural fit.

7.2.9 Additional External Linkages: Linkages with the University of Calgary through the Rocky Mountain Data Science Training Network also provide supervisory capacity, primarily through an internship program which places undergraduate and graduate students at BC Cancer each summer. Medical physics has partnered with D-Pace Inc and TRIUMF through NSERC Connect and Engage grants for work in medical device fabrication.

7.3 CLUSTER DEVELOPMENT AND INSTITUTE RATIONALE

In 2017, UBCO's Eminence Fund Competition awarded \$300,000 to researchers in the Departments of Physics, Statistics, and along with adjunct members at BCC and Interior Health (IH) to form a Medical Physics and Data Analytics Cluster (MPDAC). The MPDAC was successful in (i) creating a core collaborative team working on allied projects at the interface of data analytics and medical physics, (ii) creating strong, productive research ties with both BCC and IH, (iii) creating collaborative research ties with

internationally-recognized researchers at Canadian Universities (Western, Carleton, Calgary, SFU), (iv) enabling the co-supervision of graduate HQP by researchers in physics and statistics, (v) the collaboration of researchers across the physical sciences and UBCO's School of Applied Science, and (vi) raising the national visibility of the group through the organization of joint workshops at the conferences of the Canadian Organization of Medical Physicists as well as the Statistical Society of Canada. To date MPDAC has resulted in three co-organized national workshops and educational sessions, four invited talks, five co-authored conference presentations, five co-authored published or submitted journal articles, and the current or completed training of 10 HQP.

Since the initial award in 2017, the research cluster has expanded to include researchers in mathematics (optimization), engineering (manufacturing), and new hires in medical physics. The formation of AiMS stems from the initial efforts within MPDAC and will, first and foremost, create a nationally unique collection of researchers and activities at the forefront of solving some of the most pressing fundamental and applied problems in radiation oncology cancer care, TBI, MS, and allied fields. Furthermore, AiMS will allow for (i) an expanded research network not only across UBC but also to other research networks in Canada and internationally; (ii) a pronounced outward visibility of the cumulative research and training activities of AiMS members; (iii) a natural 'home' for researchers with complementary expertise and focus; and (iv) unparalleled multi-disciplinary training opportunities for undergraduate, graduate, and postdoctoral HQP.

Our vision for AiMS is one of a long term strategic initiative that links across faculties, is central to the goals of the developing ICI, is flexible in its ability to adapt to the changing landscape of research at UBCO, and at its core form a university-wide strength in analytical applications to fields of medical science. While our proposal provides examples of initial, existing and emerging research clusters and strengths, we anticipate the Institute research portfolio to expand as the Institute takes shape and presence across the campus community.

8 AIMS ORGANIZATION AND SCOPE

Broadly, AiMS covers methodological and applications-based streams. Furthermore, AiMS consists primarily of (i) direct UBCO partners (e.g. faculties within UBCO/V); (ii) direct UBCO partners (i.e. BCC and IH); and (iii) external partners (i.e. partners external to UBCO and BCC/IH). The broad structure of AiMS is shown in figure 1.

The research scope of AiMS includes the broad areas outlined below and shown in figure 2.

1. Predictive modelling and statistical machine learning (Methodological);
2. Mathematical modelling and optimization (Methodological);
3. Image analysis (Methodological);
4. Patient centred therapy - treatment optimization (Applications);
5. Patient centred therapy - treatment diagnosis, monitoring and prediction (Applications);
6. Medical system design, simulation, and fabrication (Applications).

We do note here that the current research scope is not meant to be restrictive but, rather, form a central nucleus from which to further develop AiMS.

From the perspective of community scope and involvement, the primary collaborators include BC Cancer and Interior Health. However, as can be seen in figure 1, external to

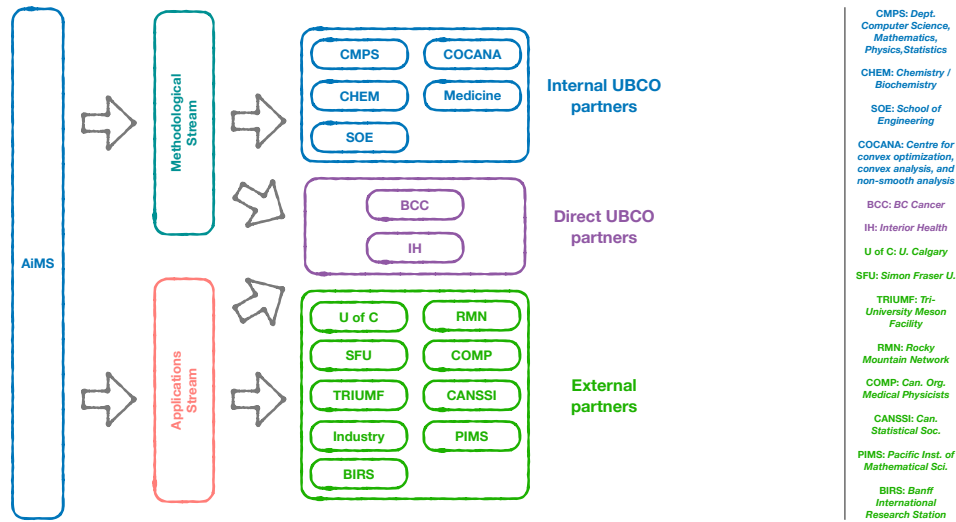


Figure 1: AiMS is divided into Methodological and Applications streams with broad research nodes within each stream (see figure 2). AiMS is composed of internal UBC partners (dark blue), direct UBCO partners but external to the university (purple), and partners external to UBCO and BCC/IH (green). Abbreviations shown in right panel.

UBCO/V we have dedicated collaborative links with a number of additional partners including national organizations (COMP/CANSSI), multi-university data science networks (RMN), and national-level research institutes (PIMS). The integration of BC Cancer, IH, and external partners within AiMS is further outlined in section 10.

9 RESEARCH FOCUS

We envision that the research focii of AiMS will continually evolve with the development of the Institute. However, at its core, the fundamental research directions of AiMS can be summarized as below. Sub-points indicate example research projects within the wider core umbrella.

1. Methodological development in data analytics and mathematical optimization for applications in medicine
 - (a) Mixture model development for patient response monitoring and treatment plan optimization;
 - (b) Iterative image reconstruction algorithm development for 3D radiation dosimetry.
 - (c) LASSO and competing dimension reduction strategies in survival modelling and other predictive applications.
 - (d) Improved control charting methodologies for quality assurance in imaging.
 - (e) Automatic image segmentation and feature classification
2. Personalized radiation oncology through data-driven decision making
 - (a) Development of genetically driven identification of radiation-induced lung injury;
 - (b) Development and deployment of radiomic pipelines for automated tumour identification in CT imaging;

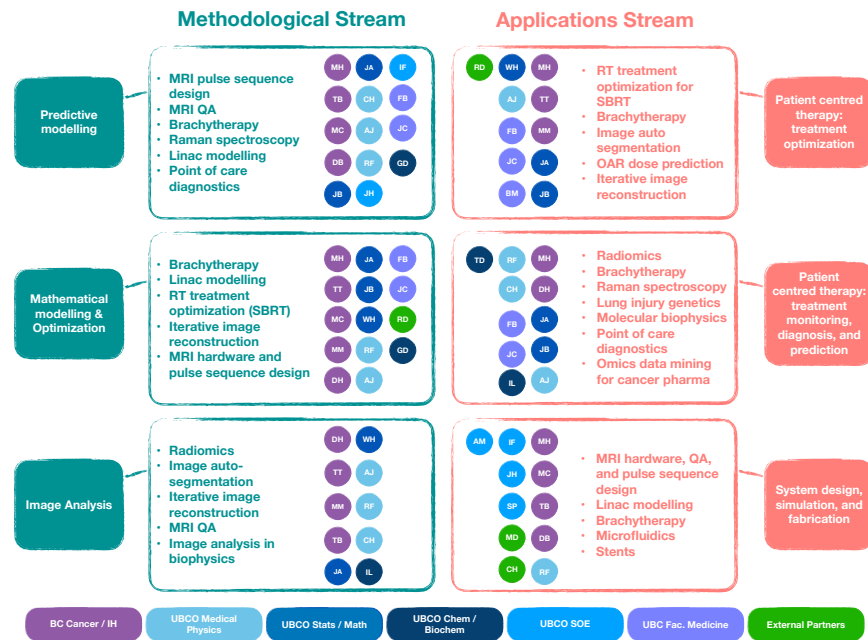


Figure 2: AiMS is divided into Methodological (left panel) and Applications (right panel) streams with broad research nodes within each stream. Example research projects are given for each node. Investigators and their affiliations for each node are shown in coloured circles. Researcher abbreviations are given in section 15.

- (c) Raman spectroscopy for RT treatment monitoring;
- (d) Brachytherapy seed tracking and personalized catheter manufacturing.
- (e) Data mining in Omic-driven drug development for plant-based cancer therapies.
- (f) Biophysical elucidation of molecular dynamics in disease.
- (g) Molecular modelling for biomolecular dynamics analysis.

3. Radiation oncology treatment plan optimization

- (a) Precision RT (Stereotactic Ablative Radiotherapy, SABR, 4pi);
- (b) Organ At Risk (OAR) dose prediction;
- (c) Development of optimization algorithms for iterative reconstruction in 3D radiation dosimetry.

4. Medical systems design and simulation

- (a) Linear accelerator modeling;
- (b) Brachytherapy catheter design;
- (c) MRI hardware design
- (d) MRI pulse sequence design;
- (e) Microfluidic device development for health applications;
- (f) Dental stent simulation and design.

5. Medical image formation and analysis through implementation of advanced analytical techniques

- (a) MRI pulse sequence design and QA image analysis;

- (b) Radiomic pipeline development and deployment for automated tumour identification;
 - (c) Brachytherapy seed tracking;
 - (d) Development of iterative reconstruction methods for 3D radiation dosimetry.
 - (e) Image analysis in biophysical applications.
6. Characterizing time to care for lung cancer patients
- (a) Quantification of wait times in the thoracic surgical lung cancer pathway;
 - (b) Identification of possible disparities in time to care for remote patients;
 - (c) Methodological comparison of LASSO method versus use of expert opinion in choice of variables in survival models;
7. Analysis of COVID-19 outbreaks in long-term care (LTC) homes
- (a) Identification of protective factors in Ontario LTCs;
 - (b) Spatial modelling of mortality using zero-inflated censored Poisson and binomial models;

10 COLLABORATION AND INDUSTRY AND COMMUNITY INVOLVEMENT

10.1 BC CANCER AND INTERIOR HEALTH

As noted above, the primary partners within AiMS that are external to UBCO include BCC and IH. The Medical Physics Department at BCC consists of 10 UBCO Adjunct faculty with heavy involvement in the UBCO GPMP. In turn, BCC Medical Physics is heavily integrated with radiation oncology via clinical practice and research partnerships. Our medical physics graduate students are co-supervised by BCC adjunct faculty, have dedicated student space within the clinic, and are fully integrated within the medical physics internship program, where medical physics graduate students perform paid quality assurance work on a rotational basis. Research projects that are joint with BCC enjoy excellent direct collaboration with radiation oncologists (cross appointed in UBC Radiology), ensuring that research directions maintain a clinical scope.

All medical physics graduate courses are offered on an annual basis at BCC, are co-taught by BCC faculty, and are video-linked with allied programs in Vancouver and Victoria. BCC adjunct faculty also supervise undergraduate student research projects for students within computer science, math, physics, and statistics (CMPS). Cumulatively, the efforts of the BCC adjunct faculty result in a strong, productive, positive, and vibrant partnership between UBCO CMPS and BCC Medical Physics.

Further collaborative involvement stems from our partnership with IH, where one of our adjunct faculty maintains a permanent full time position. Our partnership with IH includes co-supervised graduate students as well as medical imaging internships within IH, resulting in a productive and bilateral partnership.

From a funding perspective, and aside from individual researcher grants (e.g. NSERC DG, CFI JELF, CIHR Project Scheme etc), the group as a whole has secured funding from a range of sources, for example (details given in section 13):

- UBCO Eminence Program (\$300,000 over 3 years);
- NSERC Research Tools and Instruments (~\$150,000 through SOE);
- BC Cancer Internship Program (\$50,000/yr ongoing);
- Moss Rock Park, donor award (\$100,000 over 3 years);
- BC Cancer Foundation donor awards (variable, ~30,000/student)

- BC Cancer Centre Priorities Advisory Group awards (CPAG, variable, ~\$15,000 – \$50,000 / award)
- UBCO Excellence Fund (\$50,000)
- Scotiabank (\$875,000 over 5 years, shared with UBCV)
- CANSSI (\$267,000 over 6 years)

10.2 EXTERNAL PARTNERSHIPS

Medical Physics has partnered with D-Pace Industries (<https://www.d-pace.com>) for research projects centred around linear accelerator diagnostic instrumentation development. Our partnership has resulted in one UBC-O adjunct appointment within D-Pace, an NSERC Connect and NSERC Engage grant partnership, and in our D-Pace adjunct guest lecturing within our physics undergraduate program. Further links in linear accelerator diagnostics have been made between UBC-O medical physics and TRIUMF via work with Dr. Cornelia Hoehr.

Data Science has partnered with researchers at Statistics Canada and St Michael's hospital in Toronto, under a small grant from the Canadian Statistical Sciences Institute (CANSSI) to apply data reduction strategies and machine learning approaches to the data on long term care homes in Ontario to determine the factors associated with COVID-19 outbreaks and deaths. Spatial statistical analysis has been carried out on the data and will be submitted for publication in spring, 2021, after similar methodologies are applied to data from British Columbia. Collaborations with biostatistical researchers at University of Calgary will continue, through the Rocky Mountain Data Science Training Network as mentioned earlier. We are also seeking Eminence Funding for an allied cluster which will study robustness of artificial intelligence implementations. This study will also bridge to work being done with the support of Scotiabank on financial risk and cybersecurity.

Our cumulative collaborations and community engagement form a strong foundation upon which AiMS is built. We envision our activities to not only continue as described above, but to also expand as our Centre grows in breadth. For example, we are well represented on the UBCO/BCC/IH Health Leadership Committee which is forming the strategic directions for health research in the Okanagan Interior. Our involvement within the committee will enable new collaborations between AiMS members and members of the Okanagan health research community. We are also well positioned to continue to develop our partnerships with industry, as AiMS members are well connected to a host of industry partners (D-Pace, Scotiabank, SIMAC).

11 COHERENCE WITH UBCO STRATEGIC RESEARCH PLAN

The AiMS initiative aligns well with UBC-Okanagan's Strategic Research Plan in the following aspects:

1. Campus Vision, Aspire

<https://research.ok.ubc.ca/about-us/strategic-plans/>

Through our cluster's integrated research in medical physics and data analytics AiMS aligns with UBC-O Aspire's research excellence mandate of "*interdisciplinarity, internal and external collaboration, undergraduate and graduate research opportunities, and research impact.*"

2. Defining Our Strengths

<https://ok.ubc.ca/shaping-ubco-future>

The existing cluster in medical physics and data analytics has been recognized as a

research strength within the “*Healthy People - Rural and Remote Health, Chronic Disease Prevention, Healthy Living and Aging*” mandate of UBC-O’s Strategic Research Plan.

3. **Shaping UBC-O’s Future**

<https://ok.ubc.ca/shaping-ubco-future/>

AiMS aligns with “The Okanagan Opportunity” missions of “*improving health and wellbeing*” and “*cultivating new ways of working together.*”

4. **UBC-O 2040**

<https://ok.ubc.ca/shaping-ubco-future/>

AiMS aligns with UBC-O 2040 vision of research excellence through being “*recognized as a national centre for relevant community-engaged interdisciplinary research that has a direct impact on our region, province and country*” and attracting “*top students from around the world drawn by unique research programs.*”

12 COHERENCE WITH UBCO ACADEMIC PLAN

AiMS aligns with UBC Okanagan’s 2040 vision as pertaining to UBCO’s Academic Plan (<https://ok.ubc.ca/shaping-ubco-future/>) in the following areas:

1. **Transformative Learning**

- Through our graduate program in medical physics AiMS will align with UBC-O’s mission to offer “*academic programs, including professional programs in health and technologies needed in the region.*”
- Our research programs are integrated within BCC and IH, thereby our Institute will “*ensure that learners and communities are served by advances in science, technology, health care...*”

2. **People and Places**

- Through our strong connections to BCC and IH AiMS will align with UBC-O’s vision to “*have further developed outstanding and integrated academic and social supports, significantly building on UBC’s current commitments on health and well-being across its campus communities.*”
- Through our distributed graduate program course offerings our Institute will help UBC-O realize it’s vision to expand “*global connections, creating a truly exceptional learning and teaching environment without boundaries or limits for students.*”

13 SOURCES OF FUNDING AND OPERATING COSTS

13.1 FUNDING SOURCES

The researchers within the proposed AiMS bring in internal and external grant funding from a range of sources, as outlined below.

1. **CFI - JELF:** Medical Physics (Feldman, Haston, Jirasek) and Statistics (Andrews, Braun) faculty have been successful in securing CFI-JELF funding for lab development. With the help of CFI, UBCO-VPR, and UBCO-UKBS medical physics has been successful in creating a multi-user laboratory for medical physics (located in FIP 370). In addition to the three lab PI’s (Feldman, Haston, Jirasek), the medical physics laboratory has housed research projects from statistics (fire modelling) and engineering (material characterization).

Statistics laboratories are now established in ASC 334 (SIMLAB) and SCI 254 (Statistical Machine Learning Lab, SMLL). Medical physics and mathematics researchers have worked within both the SIMLAB and the SMLL.

2. **NSERC DG/RTI/Engage:** UBCO researchers associated with the centre enjoy success and are consistently funded through NSERC Discovery grants, Research Tools and Infrastructure grants, and Engage grants. We anticipate this success to continue. Furthermore, we anticipate collaborative grants such as the Alliance or CREATE platforms as being highly attractive to AiMS membership.
3. **CIHR:** Our medical physics faculty have been, and continue to be funded through the CIHR Project Grant scheme.
4. **UBC-O Eminence Fund:** We have secured \$300,000 to develop a Cluster in Medical Physics and Data Analytics. The AiMS proposal is built directly from the successes of the Eminence Fund cluster.
5. **UBC-O Excellence Fund:** We have secured \$50,000 to pilot the BIRS-UBC-Okanagan multidisciplinary data science affiliate which will host workshops on theoretical and applied aspects of data science. Matched funding from the proceeds of the MDS program as well as Scotiabank has provided a total of \$150,000 to launch the operations of this BIRS affiliate. Together with the BIRS Director, a plan is under development to seek stable funding from the Province of British Columbia in parallel with the generous funding provided to the Banff operation by the Province of Alberta.
6. **CMPS & MDS:** CMPS and the Masters of Data Science (MDS) program have committed a combined total of \$25,000 - \$50,000 /yr (minimum 10 yr commitment) to AiMS for HQP training, event hosting, and speaker / conference travel.
7. **BC Cancer - Kelowna:** BCC has committed up to \$50,000/yr for the medical physics internship program. This program provides funding for medical physics graduate students to perform paid quality assurance work on radiotherapy equipment. Funding is ongoing.
 Further BCC funding is available and has been secured in the past from the BCC Foundation and CPAG Program. Both are project-based funding opportunities.
8. **Moss Rock Park Foundation:** The Moss Rock Park Foundation provides seed funding for high quality applicants to our medical physics graduate program (\$100,000 over 3 years).
9. **CANSSI:** The Canadian Statistical Sciences Institute has pledged to support a regional centre called CANSSI Rocky Mountain, based in Kelowna. This regional centre would be responsible for statistical, biostatistical and inferential data science research activities in Alberta and most of British Columbia (outside of Vancouver). The CANSSI regional centre theme at UBCO is slated to be 'health and environment' and hence fits in well with the mandate of AiMS. CANSSI will provide approximately \$25,000 per year towards this enterprise.
10. **UBC-O:** UBC-O provides GTA and GRA funding to statistics, mathematics, and medical physics graduate students. We aim to maintain minimum funding levels within each program in line with discipline norms.

As AiMS develops, we envision funding opportunities from NSERC (CREATE, RTI), CFI (Innovation Fund), CIHR (Project Grant), Canadian Statistical Sciences Institute (CANSSI Collaborative Research Teams), and a range of cancer-specific funding agencies (e.g. Canadian Cancer Society, Prostate Cancer Canada) as being relevant to the members of AiMS.

13.2 INSTITUTE SPACE

AiMS operating space is available within the following locations:

- **FIP 370:** Medical physics laboratory space is available and operational within the multiuser lab in FIP 370. The space houses a wet-lab, MRI prototyping equipment, and a host of optical spectroscopic equipment. The space is operated by Drs Feldman, Haston, and Jirasek and is available to AiMS.
- **ASC 334:** A high performance computing and visualization laboratory is operational within ASC 334. This space is operated by Dr. Braun and is currently utilized by proposed members and associated HQP of AiMS.
- **ASC 310:** ASC 310 is a multiuser computing and mathematical optimization laboratory and is available for AiMS faculty and HQP trainees. The space is operated by CMPS research faculty and is available to AiMS.
- **ASC 301:** ASC 301 is a video-linked seminar room available to host speaker seminars, workshops, AiMS networking and planning sessions, and large scale research group meetings. The room is recently equipped with upgraded video-linking equipment. ASC 301 is operated by CMPS and is available to AiMS. ASC 301 seats 20 - 30 occupants.
- **SCI 224:** SCI 224 is a statistics and data modelling laboratory operated by Dr. Andrews and is available for AiMS HQP.
- **SCI 200 & SCI 388:** SCI 200 is the central office of CMPS. A part-time research coordinator for AiMS could be housed within SCI 200. SCI 388 is home to CMPS graduate and MDS administrative staff and may offer potential space for an AiMS coordinator.
- **Department of Chemistry:** The Department of Chemistry at UBCO operate research laboratories that form central spaces for collaboration and are open to members of AiMS.
- **School of Engineering:** The UBCO SOE operate research laboratories that are open to AiMS collaborators.
- **BC Cancer & Interior Health:** BC Cancer and Interior Health has a host of radiation oncology equipment (linear accelerators, imaging instrumentation etc) available for use by AiMS faculty. Furthermore, dedicated HQP trainee space is available and in use for UBCO undergraduate and graduate students.

13.3 OPERATING COSTS

We anticipate an annual operating budget of \$70,000 based on the estimates given in table 1:

Details of the operational budget are given below:

- **Research coordinator:** The AiMS coordinator will be responsible for all administrative aspects of the Institute. Duties will include leading the collation of annual reporting, coordination of the annual workshop, administration of the travel budget, administration of the PDF award, coordination of AiMS members around group grant opportunities, and any other related administrative tasks. The research coordinator will be hired in consultation of the UBCO VPR's office. Funding for the research coordinator will be secured through AiMS (\$25,000) and departmental funds (\$10,000).
- **Postdoctoral Fellow:** We envision an ongoing postdoctoral fellow (PDF) to be hired through the AiMS. The PDF will explicitly work at the interface of data analytics and

Table 1: Anticipated annual operating budget of AiMS.

Budget Item	Amount (\$/yr)	Description
AiMS coordinator	\$35,000	Part time research coordinator. Duties to include administrative management of AiMS, coordination of: group grant applications, annual workshop, AiMS retreat.
Postdoctoral Fellow	\$25,000	Half salary for an ongoing PDF position for Fellow working directly at the interface of data analytics and healthcare.
Member travel	\$10,000	Annual travel budget for AiMS-specific travel opportunities (networking with national colleagues, multi-institute meetings and collaboration etc).
Workshop	\$5000	Annual in-house AiMS workshop for knowledge dissemination and networking.
Total	\$70,000	

health. The PDF will be hired through advertising opportunities within the relevant national organizations (e.g. COMP, CANSSI). The full PDF salary (\$50,000/yr) will be secured through a combination of AiMS funding (\$25,000), sponsoring faculty (\$20,000), and departmental funds (\$5000).

- Member travel: A budget of \$10,000/yr will be assumed for AiMS-sponsored travel for networking, knowledge dissemination, and related AiMS-specific collaborative opportunities. The budget will be administered through the research coordinator and funds will be secured in partnership with BCC/IH.
- Workshop: An annual AiMS-sponsored collaboration workshop will be in any given year, either during a summer term at UBCO, or in alliance with a COMP and/or CANSSI national annual meeting. The workshop will allow AiMS members to connect on an annual basis for knowledge dissemination, strategic planning, and for the exploration of new collaborative opportunities. Additionally, a keynote speaker will be brought in from affiliated networks and institutions (e.g. RMN, U. Calgary, SFU, Western etc) for knowledge sharing. The \$5000 budget will cover keynote speaker travel and workshop catering etc. Funds will be secured through national organizations (COMP/CANSSI/RMN).

Sources of annual AiMS operational funding are summarized in table 2 below. Note that individual researcher grants are not included in this summary but are assumed throughout.

Table 2: Anticipated annual funding sources for AiMS operational budget.

Budget Item	Amount (\$/yr)	Funding source
AiMS coordinator	\$35,000	AiMS VPRI (\$25,000), CMPS/MDS (\$10,000)
Postdoctoral Fellow	\$25,000	VPRI
Member travel	\$10,000	BCC / CMPS
Workshop	\$5000	COMP / CANSSI / RMN
Total	\$70,000	

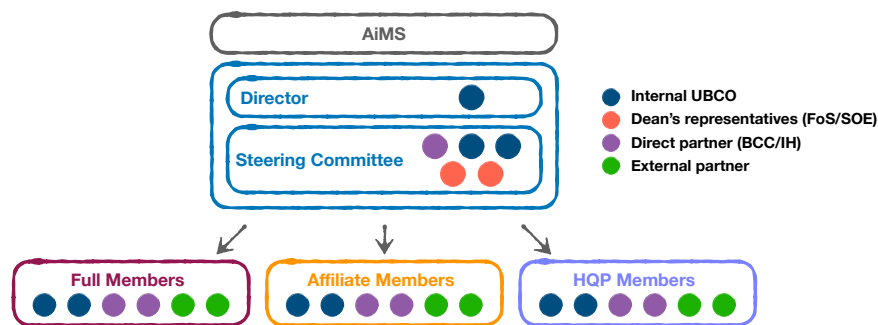


Figure 3: AiMS governance and membership structure. AiMS is governed by an electable Director (1) and steering committee (5 members). The steering committee is composed of 3 members including one direct partner member (to also cover clinical appointment faculties), and two Dean’s representatives (Faculty of Science and School of Engineering). Full, affiliate, and HQP members can be from internal (UBCO) faculties, direct partners (BCC/IH) and external partners, as outlined in figure 1. Internal UBCO (blue markers): UBCO faculty members; Direct partners (purple markers): member’s primary appointments are outside UBCO but directly aligned with AiMS. May be adjunct UBCO faculty; External partners (green markers): member’s primary appoint outside UBCO and BCC/IH. May be adjunct UBCO faculty.

14 MEMBERSHIP AND GOVERNANCE

14.1 MEMBERSHIP

The governance and membership structure of AiMS is shown in figure 3.

The membership of AiMS consists of the following categories: a Director, full members, affiliate members, and HQP (graduate & postdoctoral) members.

The Director is a member of the steering committee and is appointed for 3 year terms.

Full members are voting members and are added by a voting majority of the Steering Committee. Full members can be any faculty (full or adjunct) whose research interests align with AiMS.

Affiliate members can include full or adjunct faculty and are added by a voting majority of the Steering Committee. Affiliate members are non-voting.

All voting members are by application and are approved by a voting majority for a renewable three year term.

Graduate and postdoctoral membership is by application or supervisor recommendation and approved by a voting majority of full members for a three year renewable term. Graduate and postdoctoral membership is non-voting and not restricted to students or fellows of full members.

AiMS, in conjunction with the Vice Principal Research Office, will aim to appoint an external advisory board within the first year of its inception.

14.2 GOVERNANCE

AiMS is governed by a Director and Steering Committee. Both the Director and Steering Committee are elected by a voting majority and serve on a twice-renewable three year term. Directors and Members of the Steering Committee shall be full members of AiMS. The Steering Committee shall be composed of the Director and up to five additional full members of AiMS.

The Director and Steering Committee shall meet a minimum of twice per year. Additionally, the Steering Committee shall call a meeting of the full membership at a minimum frequency of once per year. The mandate of the Steering Committee is to (1) provide strategic guidance to ensure the coordination of resources, training, research activities, budget for sustainable operations, and strategic planning of AiMS, and (2) promote transparency and accountability between AiMS, the university, and other stakeholders.

The Director is responsible for the overall management of AiMS. The inaugural Director of AiMS will be Jirasek. Dr. Jirasek has been the lead of the Eminence-funded cluster, is the Director of the Medical Physics Graduate Program, and has established strong research collaborations with both medical physics and statistics faculty. The Directorship will be reviewed at the first full meeting of the Centre.

The inaugural Steering Committee membership will include Dr. Andrews (Statistics, UBCO), Dr. Braun (Statistics, UBCO), one member from BCC (TBD), and two Dean's representatives (TBD, as needed). The Steering Committee membership will be reviewed at the first full meeting of the Centre.

14.3 COMMITMENTS TO EARLY-CAREER SUPPORT AND EQUITY, DIVERSITY AND INCLUSION

AiMS will build a diverse membership representing people of different ages, backgrounds, cultures, nationalities, ethnicity, race, sexual orientation, and abilities, through recruitment and mentorship approaches. This will help build a strong and diverse membership that creates a stimulating, enriched and innovative research and training environment. Members, including graduate and postdoctoral members, will be encouraged to build their own competencies in the area of equity, diversity and inclusion (EDI) through workshops provided by UBC's Equity & Inclusion Office (EIO) or Indigenous Cultural Safety Training workshops offered by the VPRI Office. Senior members will also be paired with members that are early in their careers to help establish their research profile and develop their academic career.

14.4 SCHEDULE OF REVIEW

As per UBC policy, all Institute activities including research, administrative, and financial will be reported to the VPR on an annual basis.

14.5 AIMS OUTCOMES: YEARS 1-2

AiMS aims for long range development of UBCO-based data analytics, medical sciences, and the deep collaborations between the two disciplines. In terms of initial short range outcomes, AiMS will aim to mobilize across multiple vectors, including:

- Hiring a part-time Institute coordinator.
- Hold a summer workshop amongst AiMS members and the Rocky Mountain Data Science Network (U. Calgary, U. Alberta, UBCO) and potential allied researchers and clinicians. Outputs of the workshop would include the generation of new research collaborations and the expansion of the research clusters within AiMS.
- Formalizing an organizational and research-based relationship with the potential Canadian Statistical Society (CANSSI) regional centre in Health and Environment. The CANSSI regional centre proposal is currently under review within the Faculty of Science.
- Hold exploratory 'get to know you' meetings with executive leadership from the Canadian Organization of Medical Physicists and the Canadian Statistical Society.

15 MEMBERSHIP

15.1 FULL MEMBERS

Name	Degree	Discipline	Primary affiliation	Home UBC Dept.
Andrews, Jeff (JA)	PhD	Statistics	UBCO	CMPS
Bachand, Francois (FB)	MD	Radiation Oncology	BCC	F. Medicine
Batchelar, Deidre (DB)	PhD	Medical Physics	BCC	CMPS
Becker, Nathan (NB)	PhD	Medical Physics	BCC	CMPS
Bjarnason, Thor (TB)	PhD	Medical Physics	IH	CMPS
Braun, John (JB)	PhD	Statistics	UBCO	CMPS
Carlone, Marco (MC)	PhD	Medical Physics	BCC	CMPS
Crooke, Juanita (JC)	MD	Radiation Oncology	BCC	F. Medicine
Dang, Thuy (TD)	PhD	Chemistry	UBCO	Chemistry
DiLabio, Gino (GD)	PhD	Chemistry	UBCO	Chemistry
Feldman, Rebecca (RF)	PhD	Medical Physics	UBCO	CMPS
Foulds, Ian (IF)	PhD	Engineering	UBCO	SOE
Hare, Warren (WH)	PhD	Mathematics	UBCO	CMPS
Haston, Christina (CH)	PhD	Medical Physics	UBCO	CMPS
Hilts, Michelle (MH)	PhD	Medical Physics	BCC	CMPS
Holzman, Jonathan (JH)	PhD	Engineering	UBCO	SOE
Hyde, Derek (DH)	PhD	Medical Physics	BCC	CMPS
Jirasek, Andrew (AJ)	PhD	Medical Physics	UBCO	CMPS
Lamey, Michael (ML)	PhD	Medical Physics	BCC	CMPS
Li, Isaac (IL)	PhD	Chemistry	UBCO	Chemistry
Lyle, Ngan (NL)	MD	Public Health	IH	CMPS
Milani, Abbas (AM)	PhD	Engineering	UBCO	SOE
Sepideh Papkour (SP)	PhD	Engineering	UBCO	SOE
Rasika Rajapakshe (RR)	PhD	Medical Physics	BCC	CMPS
Teke, Tony (TT)	PhD	Medical Physics	BCC	CMPS

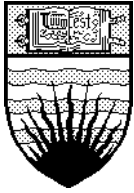
15.2 AFFILIATE MEMBERS

Name	Degree	Discipline	Primary affiliation	Home UBC Dept.
Deardon, Robert	PhD	Statistics	U of C	Veterinary Medicine
Dehnel, Morgan	PhD	Physics	D-Pace	CMPS
Hoehr, Cornelia	PhD	Physics	TRIUMF	CMPS
Kopciuk, Karen	PhD	Statistics	U of C	Cancer Care Alberta
Liu, Zheng	PhD	Engineering	UBCO-O	SOE
Mou, Ben	MD	Radiation Oncology	BCC	F. Medicine
Shen, Hua	PhD	Statistics	U of C	Mathematics and Statistics

15.3 GRADUATE AND POSTDOCTORAL MEMBERS

Name	Degree	Discipline	Primary affiliation	Home UBC Dept.
Collins, Steve	PhD candidate	Medical Physics	UBCO	CMPS
Deng, Alison	PhD candidate	Medical Physics	UBCO	CMPS
Guenter, Maria	MSc candidate	Mathematics	UBCO	CMPS
Frolova, Liubov	PhD candidate	Biochemistry	UBCO	Chemistry
Fuentez, Alejandra	PhD candidate	Medical Physics	UBCO	CMPS
Huang, Dominic	MSc candidate	Mathematics	UBCO	CMPS
Kim, Seongho	PDF	Chemistry	UBCO	Chemistry
Kudla, Michael	PhD candidate	Medical Physics	UBCO	CMPS
Kulkarni, Omkar	MSc candidate	Chemistry	UBCO	Chemistry
Kunkyab, Tenzin	PhD candidate	Medical Physics	UBCO	CMPS
Lessack, Nikolai	MSc candidate	Medical Physics	UBCO	CMPS
Milligan, Kirsty	PDF	Medical Physics	UBCO	CMPS
Nguyen, Trinh Don	PDF	Chemistry	UBCO	Chemistry
Nguyen, Tuan Anh M.	MSc candidate	Chemistry	UBCO	Chemistry
Ogilvy, Andy	PhD candidate	Medical Physics	UBCO	CMPS
Reich, Jason	MSc candidate	Medical Physics	UBCO	CMPS
Tazik, Ladan	MSc candidate	Computer Science	UBCO	CMPS
Wang, Dongying	PhD candidate	Statistics	UBCO	CMPS
Wang, Yue	MSc candidate	Statistics	U of C	Math & Stat
White, Vanessa	MSc candidate	Biochemistry	UBCO	Chemistry
Weibe, Mitchel	MSc candidate	Medical Physics	UBCO	CMPS
Yasunaga, Adam	PhD candidate	Biochemistry	UBCO	Chemistry
Zhang, Claire	PhD candidate	Medical Physics	UBCO	CMPS

THE UNIVERSITY OF BRITISH COLUMBIA



SENATE POLICY: O-5.1

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

Number & Title

O-5: *Research Centres & Research Institutes*

Effective Date:

September 1, 2020

Approval Date:

May 28, 2020

Review Date:

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

Responsible Committee:

Learning and Research

Authority:

University Act, S. 27 (2)

“Without limiting subsection (1) or the general powers conferred on the board by this Act, the board has the following powers:

(k) to provide for chairs, institutes, fellowships, scholarships, exhibitions, bursaries and prizes the board and the senate consider advisable;”

47 (2)

(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

Purpose and Goals:

This policy is designed to:

- 1) Provide a mechanism for the establishment and disestablishment of *Research Centres* and *Research Institutes*; and
- 2) Define the nature of *Research Centres* and *Research Institutes*.

Applicability:

This policy is applicable for all *Research Centres* and *Research Institutes* at the *Okanagan* campus of the *University*.

Exclusions:

None.

Definitions:

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

Research Centre shall mean a *centre* as per the *University Act* and other applicable *Senate* and *Board* policies.

Research Institute shall mean an *institute* as per the *University Act* and other applicable *Senate* and *Board* policies.

Policy:

- 1) *Research Institutes*
 - a. *A Research Institute*:
 - i. Is established or disestablished by the *Board* upon recommendation and with the approval of the *Senate*.
 - ii. Is not normally identified with or located within a faculty.
 - iii. Is an *Academic Unit* with an intended permanent or ongoing nature.
 - iv. Generally involves external funding as well as a *UBC Okanagan* base operating budget.
 - v. Has appropriate administrative personnel appointed, including a director.
 - vi. Shall be governed through a steering committee which shall include senior administrators as well as *faculty members* and the *Research Institute* director. The exact membership of each *Research Institute*'s steering committee shall be determined by the Vice-Principal, Research in consultation with the relevant dean or deans.

- vii. May have an external advisory board appointed by the *Research Institute* director in consultation with the Vice-Principal, Research.
- viii. Shall submit annual reports to the *Senate* on its activities.
- ix. May have *faculty members* appointed part-time provided that such members also hold an appointment to a faculty.

b. Development and Approval of *Research Institutes*:

The steps set out below shall be used to establish a new *Research Institute*:

- i. Proposal initiated by faculty, Dean, or other university personnel.
- ii. Preliminary plan submitted to the Vice-Principal, Research.
- iii. Upon approval of preliminary plan by the Vice-Principal, Research, the faculty, Dean, or other university personnel that developed the preliminary plan will proceed to develop a full proposal for the creation of an Institute.
- iv. The full proposal shall describe the governance structure of the proposed institute; an *institute* operational plan; procedure and plans for review following a specified period of operation; a sustainability plan; and performance metrics that the *Research Institute* will obtain within three years and within six years after approval.
- v. The proposal for a new *Research Institute* shall be provided to the Vice-Principal, Research who will coordinate a review by all faculties, and the Chief Librarian of the Okanagan Library, for overlap with existing initiatives, and consideration of complementary versus competitive or duplicative efforts in research, teaching and community linkages. The full proposal and the results of such review will be forwarded to the *Responsible Committee* for consideration in making its recommendation on whether to approve the proposal.
- vi. The *Responsible Committee* shall report to Senate with any recommendations regarding the proposed *Research Institute*.
- vii. *Senate* recommends approval by the *Board of Governors*.
- viii. Once approved, the proposal returns to the Vice-Principal, Research for implementation oversight.
- ix. The Vice-Principal, Research will report annually to the *Responsible Committee* on each of the *Research Institutes* in operation on the Okanagan Campus.

2) *Research Centres*

a. A *Research Centre*:

- i. Is established or disestablished by a faculty or college dean (or,

- in the case of multi-faculty *Research Centres* by the relevant deans serving as a decanal steering committee) after consultation with the Provost and under procedures set by the relevant faculty or faculties.
- ii. Shall have a host faculty or college, or in the case of multi-faculty *Research Centres*, shall be hosted within multiple faculties under such arrangements acceptable to the relevant decanal steering committee.
 - iii. Has a project or theme-based mandate that focuses on scholarly or scientific investigation or inquiry; often associated with an internal or external grant.
 - iv. Benefits from single or multi-faculty involvement.
 - v. Is led by a director who reports to the host faculty or college dean (or a decanal steering committee for multi-faculty *Research Centers*) who report(s) in turn to the Provost on matters relating to the *Research Centre*. A *Research Centre* is otherwise governed as its host faculty, faculties, or college see fit.
 - vi. Does not offer academic programs or courses; *Research Centres* may only offer non-academic courses and non-credit credentials.

b. Establishment and Review of *Research Centres*:

The steps set out below shall be used for the establishment and review of *Research Centres*:

- i. A new *Research Centre* shall be established by a dean or deans on the recommendation of the head or heads of relevant *Academic Units* after consultation with the Provost and Vice-Principal, Research; *Research Centres* are only to be established within a host faculty, college, or within several host faculties.
- ii. Upon establishment, a *Research Centre* must have a management plan that includes a mandate, sources of funding, and a schedule for review. As a result of such a review, the dean or Decanal Steering Committee may determine that a research centre may continue as a research centre, be considered for transition to a research institute or other type of unit, or be discontinued as appropriate. This management plan and any amendments thereto are to be copied to the Provost and the Vice-Principal, Research.
- iii. Upon receipt of the initial management plan, the Vice-Principal, Research will report, for information, on the establishment of a centre to *Senate*, but their establishment does not require *Senate* approval. Upon receipt of an amended management plan that indicates that a *Research Centre* will be discontinued, the Vice-Principal, Research will also report that to *Senate* for information.

Calendar Statement:

There are no calendar statements under this policy.

Consultations

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

Office of the Vice-Principal, Research and Innovation

History:

The second version of this policy transfers responsibility to the Learning and Research Committee. Additionally, the policy was revised in consultation with the Office of the Vice-Principal, Research and Innovation, to reflect current practices and clarify requirements for full proposals. The first version of this policy was approved by Senate in October 2010.

Related Policies:

None.

Appendix:

There is no appendix to this policy.



THE UNIVERSITY OF BRITISH COLUMBIA

Office of the SenateUniversity Centre | UNC 322
3333 University Way
Kelowna, BC Canada V1V 1V7

Phone 250.807.9619

Fax 250.807.8007

www.senate.ubc.ca

24 November 2022

To: Okanagan Senate
From: Ad Hoc Committee on Course Scheduling
Re: Final Report to Senate

The Senate Ad Hoc Committee on Course Scheduling presents the attached Report to Senate and is pleased to recommend that Senate resolve as follows:

That Senate receive the Report of the Senate Ad Hoc Committee on Course Scheduling;

That Senate adopt the recommendations outlined therein;

That the Senate Ad-Hoc Committee on Course Scheduling be discharged with the thanks of Senate for its work.

For the Committee,

Rob Johnson
Chair, Ad Hoc Committee on Course Scheduling

The University of British Columbia
Senate Ad Hoc Committee on Course Scheduling
Report to Senate

Background

At its Faculty Council meeting on January 14, 2022, the Faculty of Arts and Social Sciences (FASS) passed the following resolution:

As, in the opinion of this Council the current campus course scheduling rules (2022-23) do not sufficiently protect research opportunities for research-stream faculty members during the Winter Session; and, as according to Part 8, Section 40 (c) of the University Act of BC a Faculty's powers and duties include a responsibility "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"; and, as according to Part 7, Section 37 of the same Act the "academic governance of the university is vested in the senate" including, under (p) the responsibility "to deal with all matters reported by the faculties, affecting their respective departments or divisions", this council adopts the guideline that normally during the Winter Session research-stream faculty members will have no more than three teaching days in any calendar week, and refers this guideline to Senate for approval.

This motion was debated at the January 27, 2022 Okanagan Senate Meeting. Given the complex and unknown implications of the motion, Senate Tabled the motion until an ad hoc committee could gather relevant data and present recommendations to Senate.

At its March 31, 2022 meeting, the Okanagan Senate established the composition of, and Terms of Reference for, the Senate ad hoc Committee on Course Scheduling (SAHCCS) as follows:

Composition

Three faculty members (Diana Carter, Ruth Frost, Rob Johnson (Chair)), two students (preferably one undergraduate – (Joshua Milliken), one graduate – (Gabriel Jarry-Bolduc), and one Dean (Silvia Tomášková)

Two additional ex officio voting members (Associate Provost Learning Services (Heather Berringer), Deputy Registrar, Okanagan (Bert Annear)

Terms of Reference

1. To examine the impact of the proposed motion on the course schedule to determine if there would be differential impacts on ranks, streams, and faculties.¹
2. To consider how the proposed motion and any recommendations the Ad Hoc Committee may make would affect student schedules and course availability, and
3. To report back to Senate with such findings and recommendations as it sees fit by September 2022.

Process

While the SAHCCS recognized that all ranks and streams of Faculty Association instructors would be impacted by the proposed change, after thorough discussion, the SAHCCS determined that the intent of the term “research-stream faculty members” used in the FASS motion was limited to assistant professors, associate professors, and professors. Lists of the affected instructors were procured from HR. The “two non-teaching day constraint” applied to 313² instructors. The SAHCCS then requested that Enrolment Services run a timetabling model that limited this group to a maximum of three instructional days per week. (The full report is attached as Appendix II below).

The SAHCCS notes that there are currently a considerable number of variables and constraints that impact the creation of the timetable including, but not limited to:

- Attempts to schedule as many course sections as possible within the Standard Teaching Day (8:00 a.m. – 6:30 p.m.) before placing course sections in the evening (after 6:30 p.m.)
- Student sets (SS) – groups of students who will very likely need to take the same courses in a term (e.g., BSC students need biology, chemistry, physics, math), which precludes scheduling these courses at the same time. There are 1912 such student sets
- Programs of study (POS) with fixed timetables (e.g., BSN – where all students are required to take a certain block of courses)
- Faculty-specific rules regarding course section sequencing (e.g., lab must be sequenced after lecture)

¹ While it was clarified at the October 31 SAHCCS meeting that the intent of the original Motion was FASS-specific, that is, that only research-stream faculty from FASS were to move to a three instructional-day limit, the approved Terms of Reference appear to grant broad discretion to investigate the matter on whatever basis the SAHCCS deems appropriate. After discussing the matter at its August 24 meeting, the SAHCCS decided to consider the impacts of the motion as applied on an equal basis across UBCO and accordingly requested Enrolment Services to run a report limited to all research stream faculty on campus.

² A table depicting the number of instructors with various number of teaching days for the 2022 Winter Session is included below as Appendix I.

- Instructors with department Head-approved non-teaching days (note: there is no consistently used non-teaching day)
- Projected enrolment of course sections paired with appropriately sized teaching spaces, larger spaces must get scheduled first
- High utilization of MWF in general teaching space which impacts the ability to place remaining course section components vying for shared high demand space such as computer labs and department owned space
- Campus leadership-approved scheduling rules:
 - Rule 1: Campus instructional hours: 8:00am – 9:30pm
 - Rule 2: Standard teaching day: 8:00am-6:30pm
 - Rule 3: Extended teaching day: classes placed between 6:30pm-9:30pm if no other alternative exists or at the request of the faculty
 - Rule 4: Class lecture meetings for the same sections will not occur on consecutive days
 - Rule 5: Class lecture meetings for the same section will occur at the same time
 - Rule 6: Faculties and departments will have up to 3 weeks to review the schedule before it is published to students
 - Rule 7: Teaching instructors will have one (1) non-teaching day per week
 - Rule 8: Instructors teaching after 6:30pm will normally not instruct prior to 11:00am the following day
 - Departments will be responsible for placement of activities in spaces dedicated to their exclusive use. Related activities in general classrooms will have scheduling priority
- Non-guaranteed but internally followed rules
 - Rule 1: 8-hour max teaching day (beginning of first class to end of last class)
 - Rule 2: Max 3 hr consecutive teaching with 30 min break.

These variables/constraints are applied based on a rank-ordered system. See Item 7 Scheduling Process Priority on page 33 of the ES Report.

Findings

The SAHCCS notes that the attached report is not complete, that is, it does not show a completed model timetable. This is the result of a combination of factors including: incomplete information currently available from faculties (e.g., the names of the TAs who will lead tutorials, seminars or labs), inability to schedule course sections in department owned space³ without permission, inability of current system software to accommodate all potential variables e.g., use “place-

³ A list and description of all “department owned” space on campus is attached below as Appendix III. A list of all instructional space on campus is attached below as Appendix IV.

holder” names for tutorials, seminars, or labs. This is not currently supported by the various systems software.

However, using the data that were available, the following outcomes occurred:

- To maintain a five-day timetable, the number of course sections that had to be scheduled in the evening increased from 63 to 142 (38 Monday, 32 Tuesday, 29 Wednesday, 39 Thursday, 4 Friday).
- If a six-day timetable was used, over 500 course sections would need to be moved to Saturday and still there would be the need for six evening sessions (one each on Monday, Tuesday, Thursday, Saturday, and two on Friday).
- Where course sections have primary, secondary and tertiary section components and the instructor has the 2 non-teaching day constraint profile, the high utilization rate of MWF leaves fewer days available to schedule remaining related section components (ex: lab, tut, sem.).

The impact of either of the first two of these changes on students, on all instructors, on Business Operations (e.g., food services, service units, etc.), and on the Kelowna transit system would be significant.

Considerations

The SAHCCS recognizes the underlying issue behind the motion, namely that pre-tenure and tenured faculty on the two main UBC campuses face very different conditions with respect to scheduling and to their teaching workloads. This fact has potential implications for research output, for tenure and promotion, and for Merit and PSA.

The SAHCCS is also aware that the requested change would have dramatic impacts on all the rest of the instructional ranks and streams. It was noted that even if the Report had been FASS-specific, all other instructional ranks and streams on campus would still be impacted. The extent of such impact is currently unknown.

It further recognizes that due to staffing and technological restraints, Enrolment Services will not have the capacity to run a FASS-specific model or other models now for several months as their focus is creating the timetable for the 2023/24 academic year.

During this review, the systemic concern of how student success and credit courses are viewed differently on the Vancouver and Okanagan campuses again appeared.

Recommendations

The SAHCCS offers the following recommendations, in no particular order, as steps to continue to look for ways to improve the situation:

- With the goal of reducing the number of constraints each faculty places on the scheduling process, that Senate strongly encourage all faculties to complete a review their individual scheduling policies and practices (including but not limited to: course component order, the continued need for all secondary and/or tertiary course components). This review would need to be completed and submitted by March 1, 2023 in order for and reduced constraints to be used to improve the 2024/25 timetable
- Strike a Senate Committee with a mandate to complete the following tasks by the stated deadline(s):
 - To gather from students, instructors, Business Operations, Human Resources, and Kelowna transit, information regarding the implications of the following:
 - increasing the number of evening offerings and/or extending the; instructional week to include Saturday;
 - the extended instructional day i.e., 8:00 am and 6:30 pm;
 - increasing the number of three-hour classes.

This work to be completed by March 1, 2023.

- To explore ways that more courses can be offered with less space-dependent requirements. This work to be completed by March 1, 2023.
- To work with the Strategic Space Committee to actively seek ways to secure additional temporary general instructional space on campus. This work to be completed by March 1, 2023.
- To work, possibly in conjunction with the Deans, to explore ways to establish a process for Heads to communicate timetabling challenges more effectively with Enrolment Services, specifically:
 - urge the Deans' Council and Leadership team to revisit the campus rules for scheduling so that Heads can work with the Scheduling team to make adjustments to individual instructors' schedules once the draft timetable is available;
 - urge the Deans' Council to consider extending the 'do not teach' rule for those who teach after 6 pm (ex., for a 5-6:30 class) so that they do not have to teach before 11 am the next day.

This work to be completed by March 1, 2023.

- To analyze the above-mentioned data, including the reviewed faculty constraints, and report back to Senate with such findings and recommendations as it sees fit by March 31, 2023, thus allowing implementation time for the team developing the 24/25 course schedule.

- In the 2023/24 approved campus budget, increased resources should be made available to Enrolment Services (ES) to conduct modelling. This should include both increases in staff and updates or improvements to degree-audit software tools that would allow ES to forecast course demand, and tracking tools to record room usage/activity levels. These supplemental tools impact ES's understanding of how to project current and future demands, as well as usage for past and current years. These resources will greatly improve ES's ability to schedule courses based on data and information that supports the decision processes.
- Noting that not all Faculties have dedicated classrooms and therefore have to rely on general classrooms only, that the Dean's Council review the process of how classrooms get "dedicated" and make a recommendation(s) as to how to remedy this situation.

Respectfully submitted,

Rob Johnson

Chair, Ad Hoc Committee on Course Scheduling

Appendix I: Number of Teaching Days

The table below shows the number of instructors with various numbers of teaching days, term 1 and term 2 of Winter 2022.

Please note: The definition of a “teaching day” in this instance does not take into consideration the number of hours of teaching. Therefore, in this table, a teaching day consisting of one class or lab/tutorial is considered equal to a teaching day of multiple classes, labs/tutorials.

Winter 2022				
Term 1			Term 2	
# of Days	Count		# of Days	Count
1	62		1	60
2	205		2	161
3	104		3	92
4	70		4	80
5	51		5	20

NB. Most of the 5-day teaching weeks are in Education (approximately 70-75% per term).

Appendix II: Enrolment Services Report on Scheduling Scenario

Scenario Overview (2 non-teaching days – 5 Days M-F)

Scenario has been completed based on the following parameters:

Campus: UBC Okanagan

Session: 2022 Winter Session

SPF DATA FILE: DB2022W_2023S_ALL_DATA_220318_1403_Includes_Unavail.sp

SPF File Contains: Snapshot of scheduling data that was used to complete the UBCO 2022 Winter session production timetable (**Note:** data file contains un-resolved departmental data entry errors as entered in WDC-these errors were not identified and resolved until 2022 W Session timetable release)

Scheduling Methodology: Follows the annual academic scheduling process steps (see folder)

Number of Program of Study (POS): 143

Number of Student Sets: 1912

Number of HR Approved Instructor Unavailability: 8 (interacts with 11 sections)

Number of Instructors with Senate Restriction: 40 (interacts with 103 sections)

Number of classes no days/times/locations: 993

Number of classes with days/times and no location: 220

Number of classes on campus requesting GTS location: 1994

Number of classes on campus requesting restricted space: 1105

Days Scheduled: M-F (5 days) (Note: Saturday scheduled upon request only)

Standard Teaching Day: Course sections are placed during standard teaching day between 8:00 am and 6:30 pm unless no other option is available or at the request of the department.

Non-Teaching Days:

- **2 non-teaching day constraint applied to instructor ranks: 313 Instructors:** Assistant Professor (tenure), Assistant Professor (tenure-track), Assistant Professor without review, Associate Professor (tenure), Associate Professor (tenure-track), Professor (tenure). List provided by HR as instructor rank information is not available to Scheduling Services.
- **1 non-teaching day constraint applied to instructor ranks: 295 Instructors:** Teaching/Lecturer, Sessional and placeholder instructor
 - **34 Instructors:** 1 non-teaching day waived at the request of the department head (WDC)

Variables that interact with the timetable outcome:

- Number of sections requested from session to session
- Number of instructors known and assigned to sections at the time of scheduling
- Number of Instructor with rank that permits 2 non-teaching days
- Number of sections related to instructors with rank that permits 2 non-teaching days
- Repeating patterns and durations related to sections assigned to instructors with rank that permits 2 non-teaching days
- Changes to campus scheduling rules
- Campus growth and program growth
- New programs and new POS, Pathways and Student Set requirements
- Unknown Workday impacts to scheduling process
- Number and size of general use teaching space
- Number of HR approved instructor availability and number of related sections
- Number of sections to be scheduled during each sprint
- Number of course sections sequenced
- Number of Senators and number of related sections
- Number of sections requiring on campus, online sync, online async
- Course sections with multiple instructors assigned
- Number of sections requiring 3X1hr
- Number of departmental data entry errors

Summary

	PROD 2022W	Scenario 1 (M-F)	Scenario 2 (M-S)
Sprint 1-15 time to Complete	5 days	7 days	4 days
Lab placement time to Complete	4 days	Not able to complete*	Not able to complete*
# of Instructor with 2 non-teaching day	NA	313	313
# of Instructor with 1 non-teaching day	463	150	150
# of placeholder Instructors with 1 non-teaching day	145	145	145
Requested Evening Placement	17	17	17
Forced to Evening Placement	51	114	6
Requested Saturday Placement	10	10	10
Saturday Placement by meeting Pattern	0	0	Term 1: 249 Term 2: 233
*Labs unscheduled requiring Department Input	15	61	26
# of SS re-allocations	9	17	4
# of time course historical course combinations used	3	4	0
Maximum 8 hr work span Exceeded	2	5	2

*Scenario 1 - 2 non-teaching days M-F (5 days): Scenario was not complete - Final placement of the remaining unscheduled lab activities would require collaboration with the department to determine appropriate placement in department owned space.

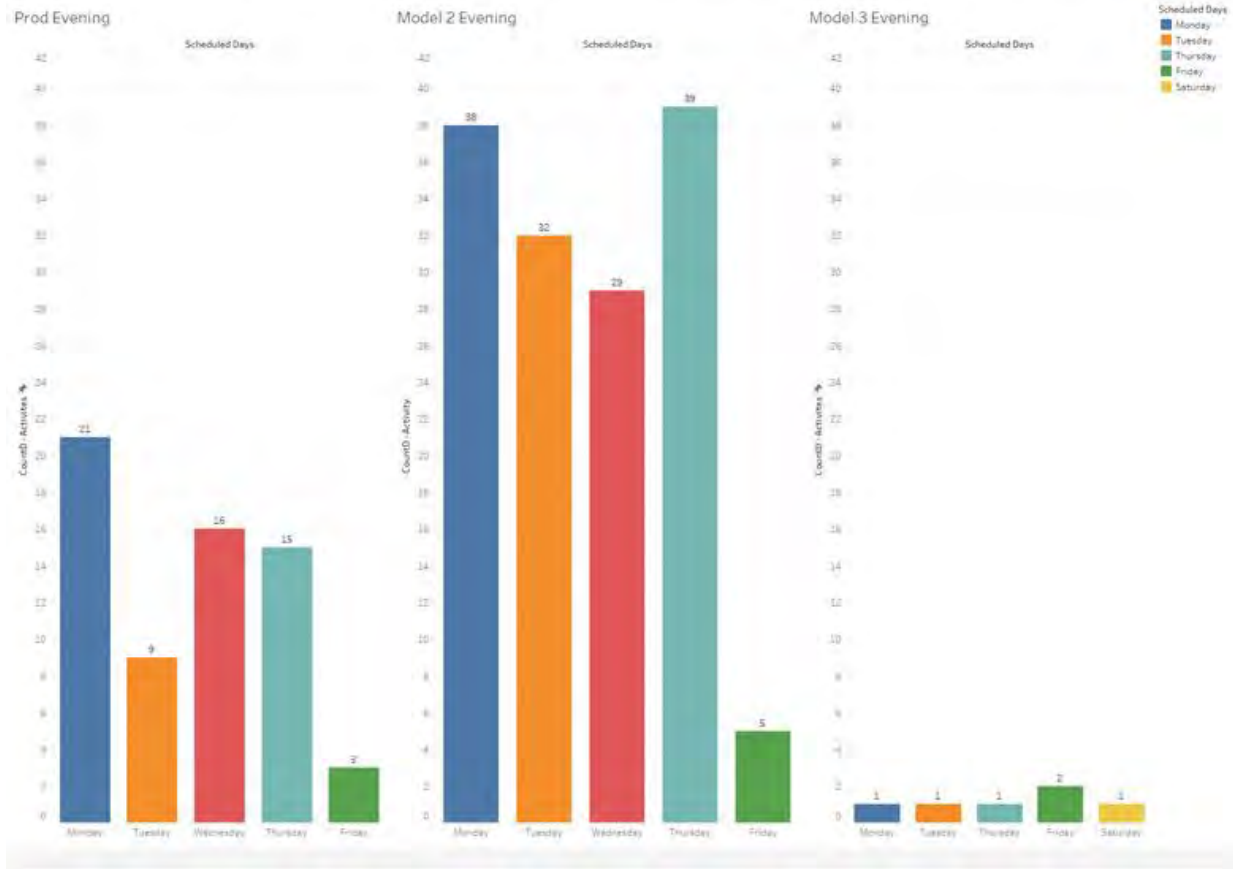
- Every effort was taken to schedule course sections during Standard Teaching Day (8:00am – 6:30pm) before placing course sections in the evening (after 6:30pm)
- Instructors that require a 2 non-teaching day constraint profile and are assigned to teach multiple sections per term, where each section is offered with a different repeating pattern and duration (specifically in combination with 3X1hr), increase the difficulty to place these sections while interacting with campus scheduling rules, POS and SS.
- In order to accommodate the 2 non-teaching days in scenario 1 – meeting patterns MW, WF and MWF are favored by the software Resulting in MWF being highly utilized (primary activities such as Lecture)
- Where course sections have primary, secondary and tertiary section components and the instructor has the 2 non-teaching day constraint profile, the high utilization rate of MWF leaves fewer days available to schedule remaining related section components (ex: lab,

tut, sem). The main difference between production (1 non-teaching day) and the scenario (2 non-teaching days) is that in production we would have the option to place courses on TR, MR, TF in order to accommodate the non-teaching day constraint. When instructors have 2 non-teaching days, the ability to do this is generally limited to those only teaching one activity. It is important to note that course placement (POS and SS) for instructors not allocated the two non-teaching days will be driven by the placement of those with 2 non-teaching days.

- The high utilization of MWF in general teaching space impacts the ability to place remaining course section components vying for shared high demand space such as computer labs; as well as department owned space.
- Courses sections with sequencing applied (ex: labs sequenced to occur after lecture), in combination with 2 non-teaching days and POS and SS, adds additional pressure to the course schedule. Findings imply that course sections with applied sequencing, especially in sprints 1-4 (400 -126 cap), take priority and drive the placement of all other courses across all faculties. In these cases, the primary component requires being placement early in the week in order to accommodate the sequenced secondary and tertiary components. Example of courses with sequencing: ENGL 153 001, ENGL 153 101, GWST 100 001, GWST 100 002, MGMT 100 101, MGMT 110 001.
- For 2022W there were 19 course sections with multiple instructors assigned (in some cases each of the instructors has a different non-teaching day requirement and, in some cases, the multiple instructors assigned are from different faculties). Where multiple instructors are assigned to a course section, there specific assigned non-teaching day requirements could interact with other Faculty and departments POS, SS and overall course placement.
- Programs with highly constrained POS, SS, in combination with campus scheduling rules and the addition of 2 non-teaching days are increasingly difficult to place (e.g.: EEGS).

Metric: Number of course sections placed after 6:30pm

The graphs below display how many meets of scheduled activities were placed out and end time after 6:30pm. The excludes courses that requested evening or had a fixed day/time. If course is term all, they will be counted back as they the late evening placement occur in each term. The count of each day represents count in the evening, all of a class is M/W/T at 7 pm, it will be counted for in all 3 of the days.



Violation Key

- Equipment Item █
- Location █
- Staff Member █
- Student Set █
- Module █
- Institution █
- Activity █

Supporting Material

Appendix A – Sequencing Interactions with Two Non-Teaching Days

MGMT 250 -

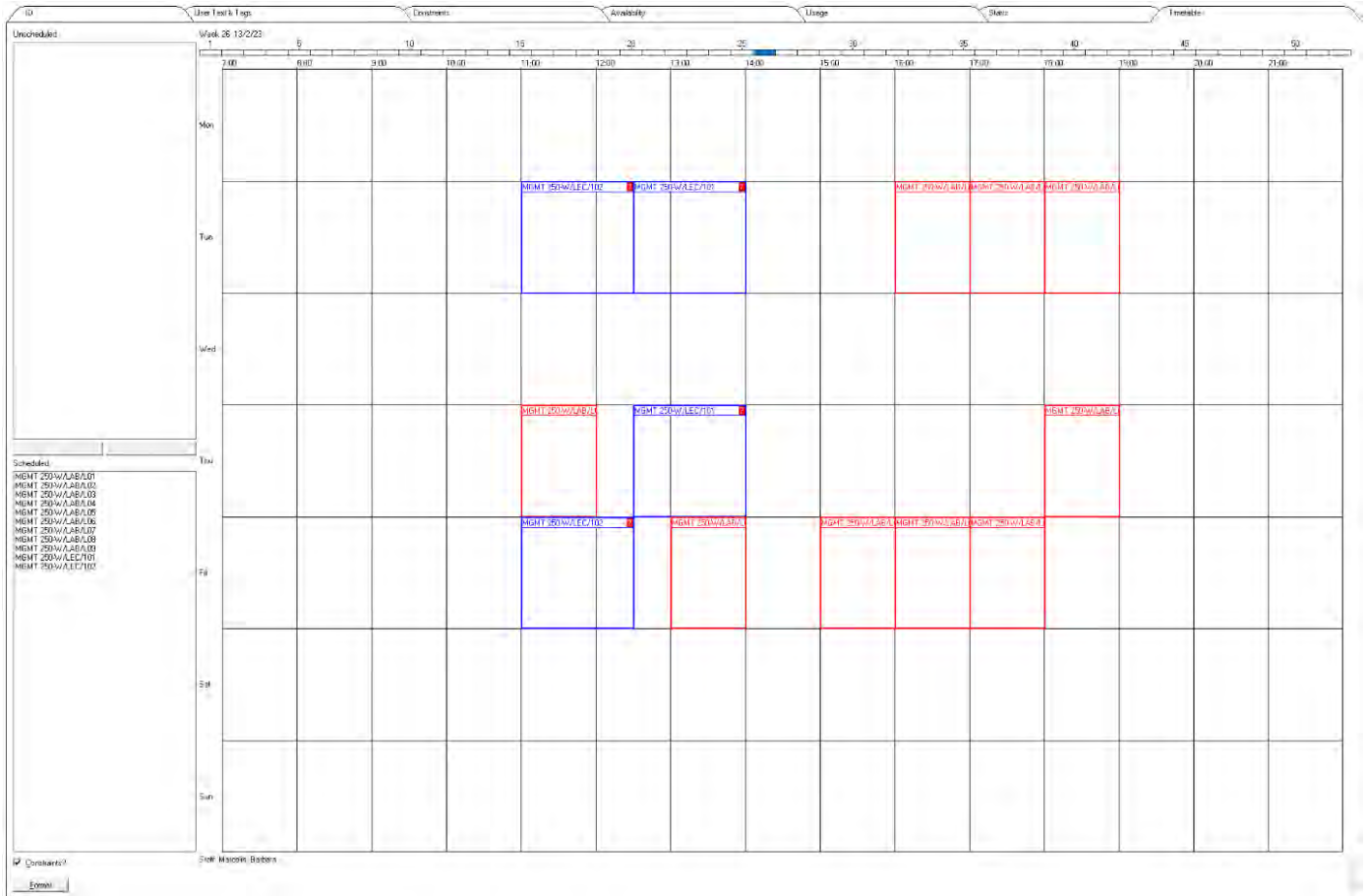
- 2 Lecture sections (175 seats each) and 9 Lab sections (39 seats each) = 11 sections
- Instructor assigned to each of the 11 lecture and lab sections
- Lecture and labs are sequenced (Lecture to occurs before labs).
 - Note: When courses are sequenced Scientia ONLY guarantees that the lab will occur after one meet of the lecture.
- Instructor 2 non-teaching days are – Monday and Wednesday.
 - two lecture sections have been scheduled Tues/Friday at 1100 and Tues/Thurs at 1230.
 - Labs cannot be scheduled on Monday or Wednesday (2 non-teaching days)

A blue diamond represents available time placement. Each of the possible start times for the unplaced labs are currently blocked by instructor availability (Light blue), Location Availability (Pink) or by Student Set (Dark Blue).

Screenshot: both MGMT 250 lectures and 6 labs scheduled (3 labs unscheduled and needing to be placed).



All sections were able to be placed through manual adjustment (reallocation of student sets).
 Below is the final placement of all MGMT 250 Lectures and Labs.

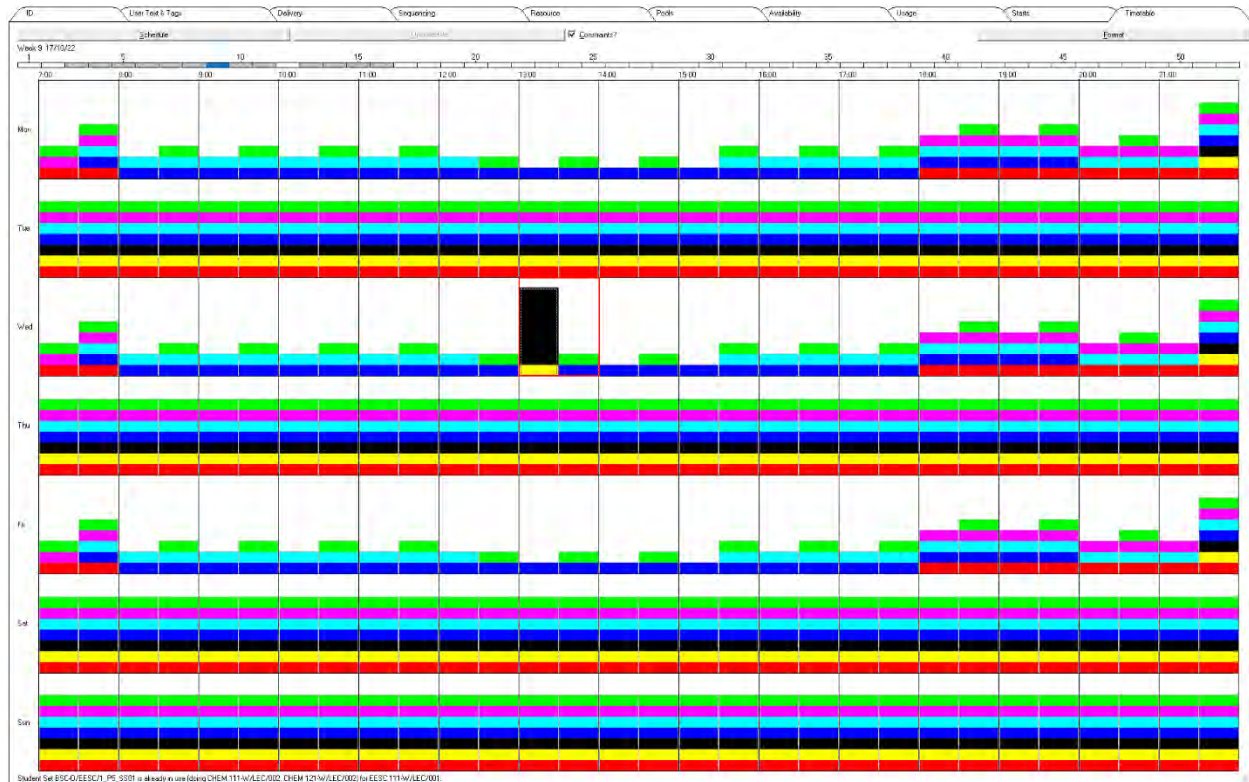


Notes on Sequencing

- Primary sections that have sequencing and are in the top sprint bands drive the placement of other courses as they need to be placed early in the week
 - o Due to sequencing they are gaining priority over other courses and are being placed early in the week.
- In 2022 Winter session– there was an increase in number of course sections with an increased capacity that was not supported by historical registration numbers. In these specific cases, these course sections were large enough to require placement in sprint 1. These sections were also sequenced, and due to sequencing would have priority placement in sprint 1 in order to accommodate time for the sequenced succeeding secondary components. These course section placements directly effect all other course placement in the sprint 1, with a trickle-down effect to succeeding sprints.

Appendix B – 3 x 1hr Course Interactions with Two Non-Teaching Days

EESC 111 – requesting 3 x 1HR



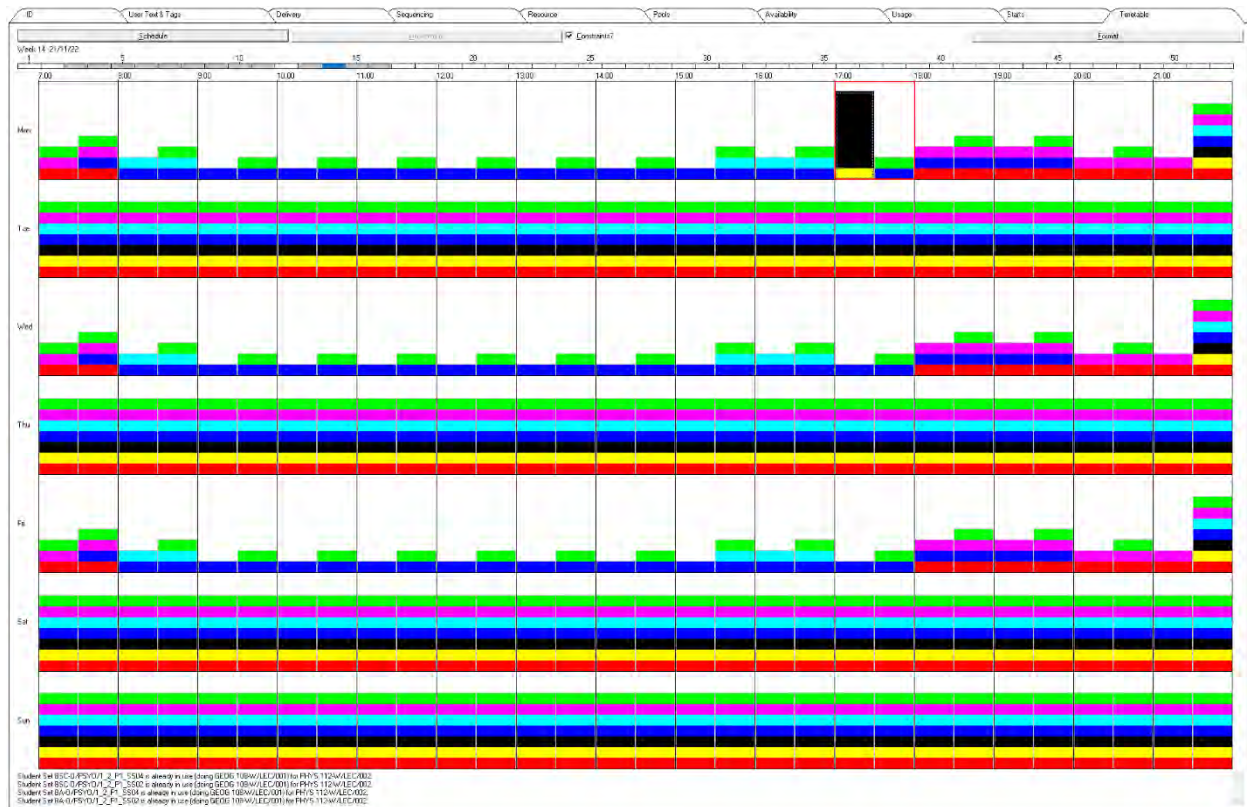
EESC 111 course section does not have a valid placement due to instructor availability (Light Blue), Student Sets (Dark Blue). As this course meets 3 times per week for 1 hour, this course must be scheduled on Monday/Wednesday/Friday. Currently Fridays after 6:30 are blocked off to discourage late Friday classes from being scheduled when other options are available. This time slot can be opened as necessary.

The least constrained placement based on the above screenshot would be MWF at 1300. The student set blocking this placement is requiring EESC 111 001 to be conflict free with CHEM 111/121 001. In Student Set EESC/1_P5_SS01 the requirement has been changed so that it now requires CHEM 111/121 002 to be conflict free with EESC 111 001 – this allows EESC 111 001 to be placed MWF at 1300.

As this instructor requires two non-teaching days and is assigned to a 3 x 1HR section, all other course sections assigned to the instructor must be placed on Monday, Wednesday or Friday. This reduces the amount of options to make adjustments to best fit course additional course sections into the schedule as well as increase the teaching day length on those days.

Please Note: Reallocation of a student sets can only be accomplished when the overall balance of the student set allocations are maintained.

PHYS 112 002 - requesting 3 x 1 HR



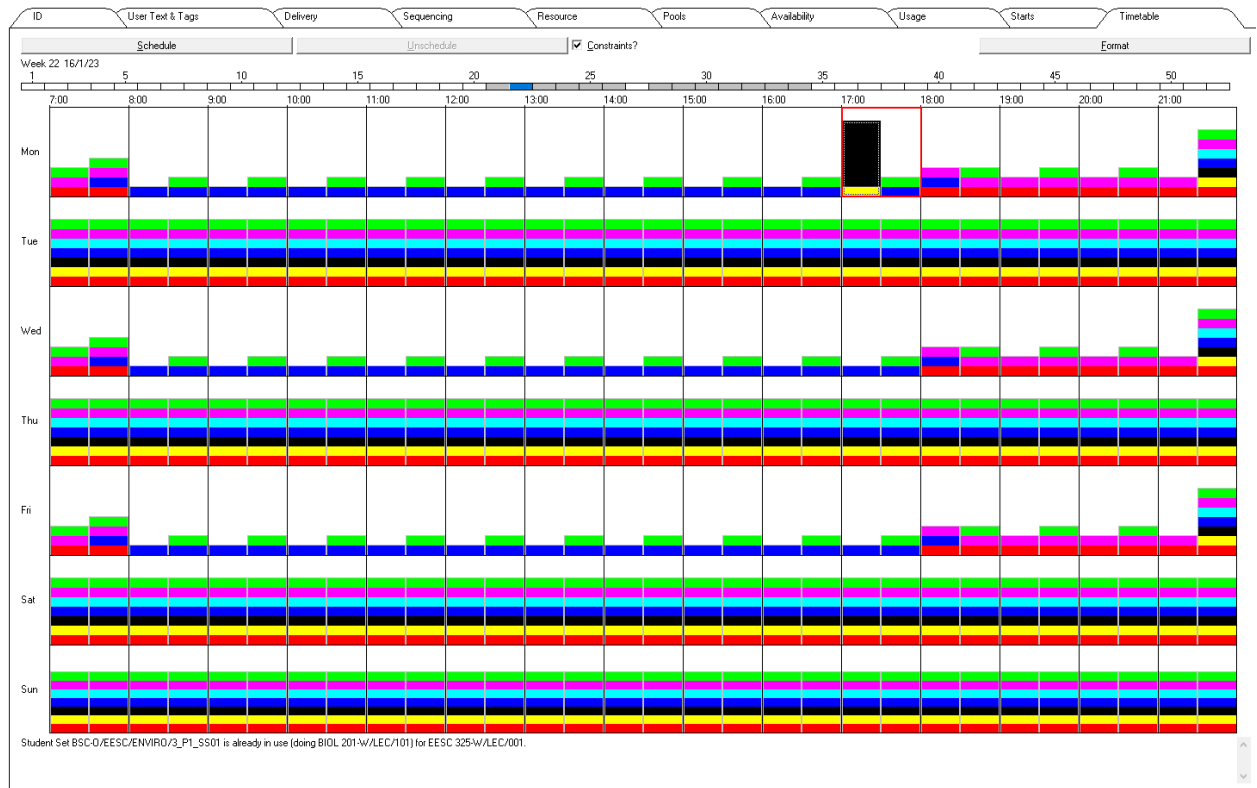
This course does not have a valid placement as it is blocked entirely by Student Sets (Dark Blue) and room availability (Pink). The best placement for this course would be MWF at 1100. This would place it at the same time as PHYS 111 001. In the academic calendar it states that "Credit will only be granted for either PHYS 111 or PHYS 112". The following Student Sets are blocking this placement:

BSC-O/FWSC/1_P1_SS01 and BSC-O/FWSC/1_P1_SS02 are both requesting to be conflict free PHYS 111 001 and PHYS 112 002. In looking at the Historical Compare Tool, we can see only 2 students have taken these courses in combination in the best 3 years. These sets can be reallocated to use PHYS 112 001. This will allow placement of PHYS 112 002 MWF at 1100.

SCHEDULING NOTE: Student sets are created based on information from the department – Scheduling Services does not review each course in the student set to determine if it is either a pre-req for another course in the same set or one course of a set that where only one can be taken for credit. We rely on the departments to be the expert in these cases. In reviewing the pathways requesting this it is the 1st year Fresh Water Science pathway that has caused the issue. This pathway has been noted and will be reviewed with the department.

While this particular example resulted from the inability to place PHYS 112, this issue is not restricted to these particular student sets, departments or faculties. Other examples do exist from other year levels, departments and faculties.

EESC 325 001 requesting 3 x 1HR

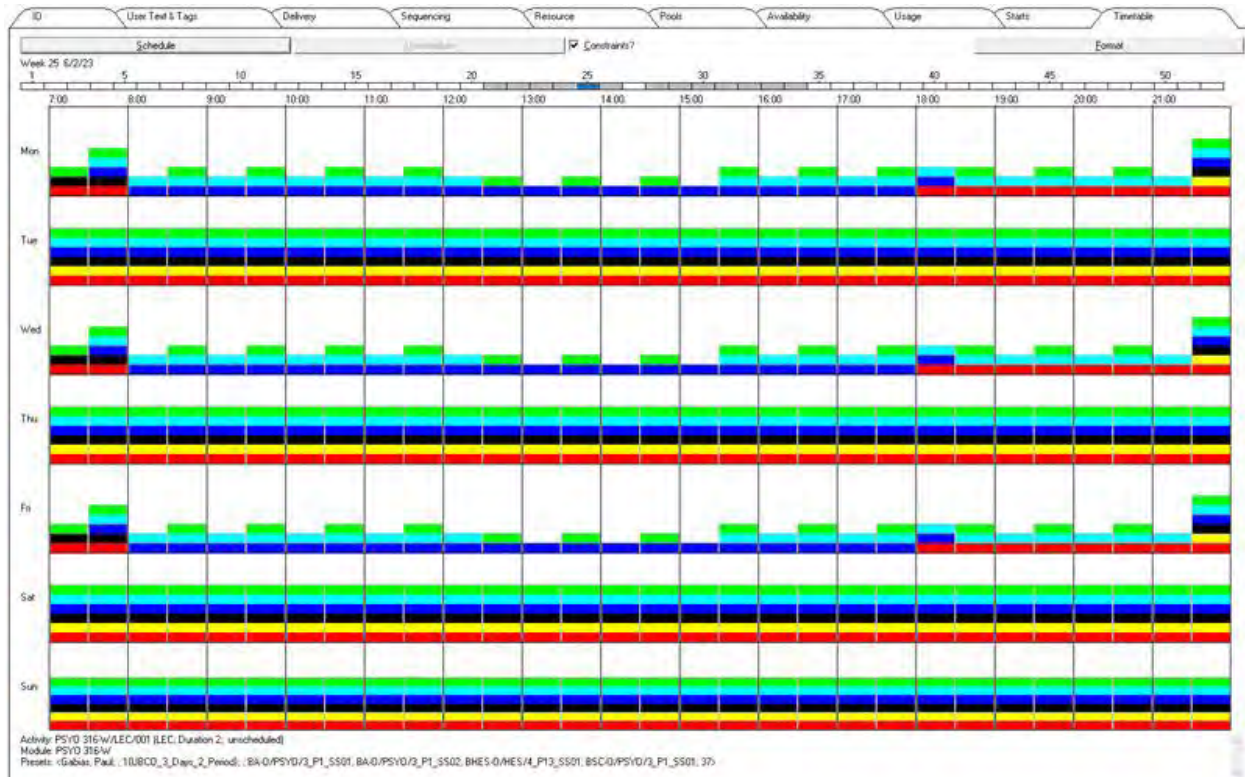


This course section is completely blocked by student sets except for in the evening. This trend appeared to be more prominent in the scenario than in production, likely due to the requirement for more courses to be placed on Monday, Wednesday and Friday in order to accommodate two non-instructional days for instructors assigned to 3 x 1HR sections.

This course was able to be placed M/W/F at 1700 by reallocating the BIOL 201 lecture within the student set to the section in term two. Although this resolves the conflict it also reduces the ability for students to take BIOL 201 and EESC 325 in combination.

Appendix C – Instructor Accommodation Interactions with Two Non-Teaching Days

PSYO 316 001 – Requesting 3 x 1HR



This instructor has an HR approved accommodation to not teach past 5p.m. This course is primarily blocked by students sets (Dark Blue) but the instructor does also teach on MWF 0800 and MWF 0900.

Pathways and student sets for PYSO 300 attempt to keep all 300 courses conflict free with each other. The pathways are heavily constraining. It should be noted that the same is true for PYSO 400 pathways attempting to keep all 400 courses conflict free – there are not as many 400 level course sections so the constraint does not have as great an impact.

In order to place this course, the following courses that are already scheduled will need to be relocated:

- PSYO 335 001 moving from TF at 1230 to MW at 1830 (online section – late placement due to student sets)
- PSYO 321 001 moved from MR at 1230 to TR at 1230

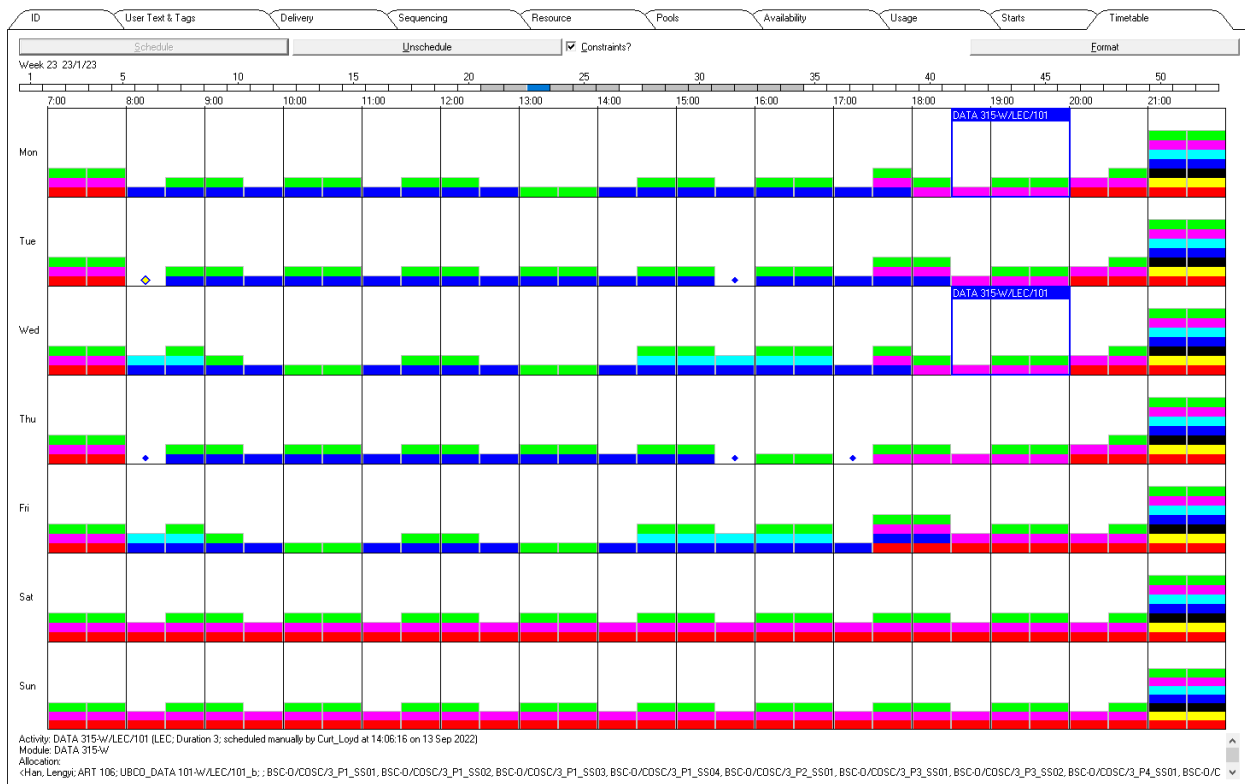
This allows for PSYO 316 001 to be placed MWF at 1300.

Appendix D – Other Interactions

Courses Forced to Evening to Maintain Two Non-Instructional Days

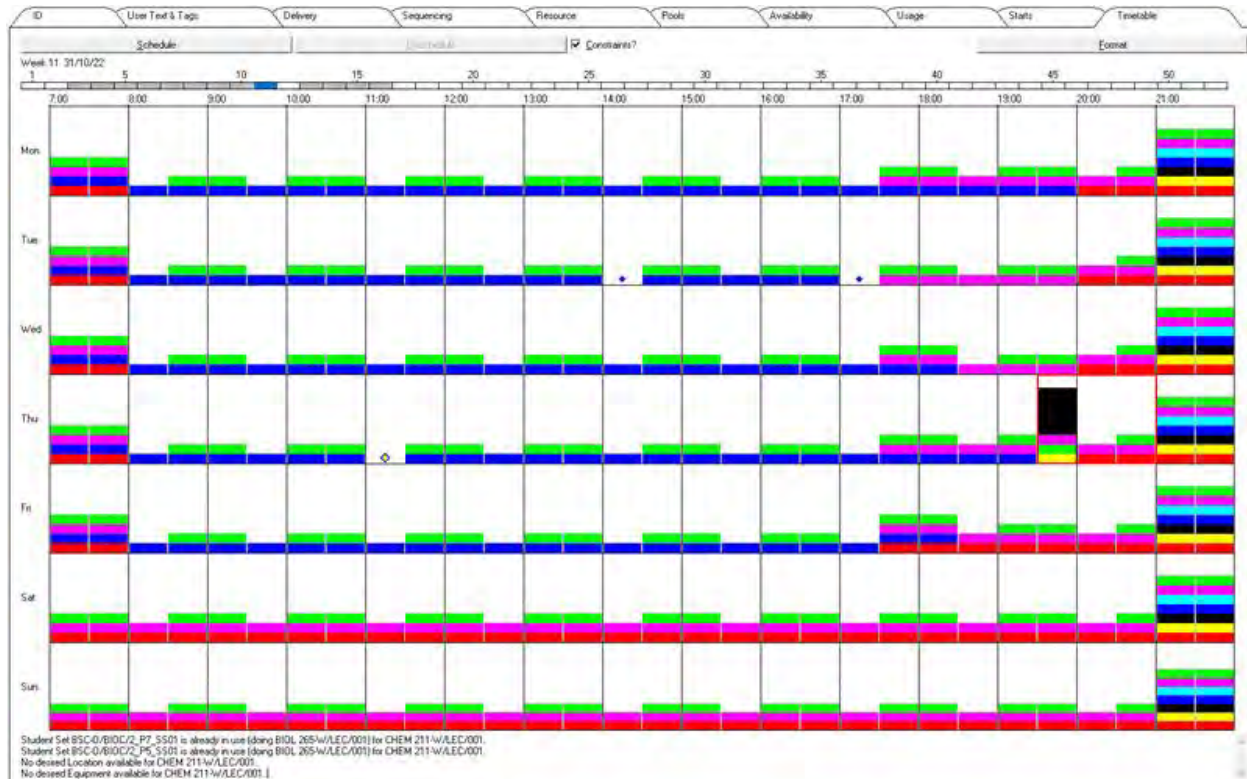
Instructor is teaching a course on Wednesday/Friday. In order to preserve the instructors two non-instructional days, one meet of DATA 315 must be on either Wednesday or Friday. The course is only showing availability with a Tuesday/Thursday placement.

There is availability on TR at 0800 or TR at 1530 but cannot be placed there to preserve research day. In order to place the course section without breaking a constraint, it must be placed in the evening.



Overly Constrained Student Sets

CHEM 211 001 - Requesting 2 x 1.5HR



This course is almost entirely blocked by student sets (dark blue). The available times (represented by diamonds) do not have a matching pattern – for example, Tuesday at 1400 is available however Thursday and Friday at 1400 are blocked by student sets.

This instructor is entitled to 2 research days – this is her first class to be placed so those days have not yet been determined. She has one additional class to be placed which is also a 2 x 1.5 hr course. The research day constraints, will not drive the placement of this particular course.

CHEM 211 is in high demand in multiple student sets. Below is the schedule of all the courses scheduled at the time of CHEM 211 placement with which this course is required to remain conflict free.

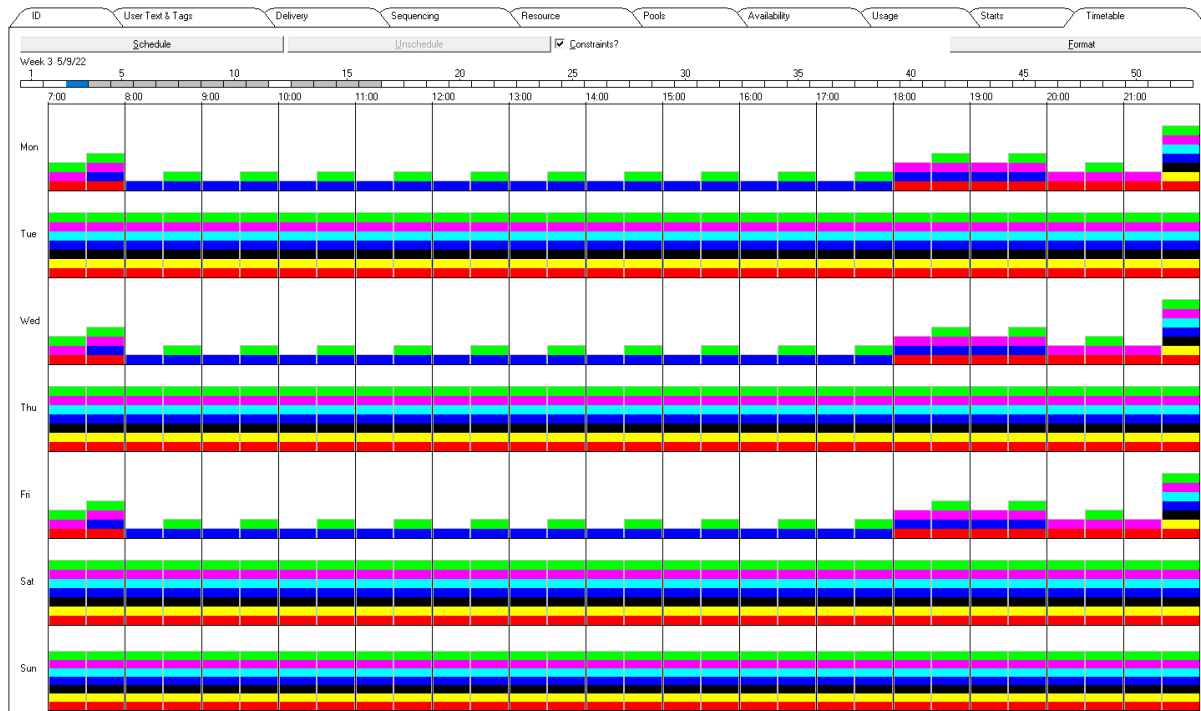
	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00
Mon		+ EESC 342-W	+ CHEM 213-W	MATH 200-W	PHYS 112-W		BIOL 111-EESC 111-W	+ BIOL 116-W/LEC/01		PHYS 112-W	BIOL 200-W/LEC/001	BIOL 265-W/LEC/001			
Tue		+ EESC 205-W/LAB/L03, GEOG 205-W/LAB/L01, EESC 222-W/LAB/L03					BIOL 228-W/LEC/001			MATH 100-W/LEC/01					
Wed		+ EESC 205-W	+ CHEM 213-W	MATH 200-W	PHYS 112-W		BIOL 111-EESC 111-W	+ BIOL 116-W/LEC/01		PHYS 112-W	+ BIOL 201-W/LEC/01				
Thu		+ EESC 205-W/LAB/L01, GEOG 205-W/LAB/L01					BIOL 228-W/LEC/001	BIOL 308-W/LEC/001	MATH 100-W/LEC/01	BIOL 200-W/LEC/001	BIOL 265-W/LEC/001				
Fri		+ EESC 222-W	+ CHEM 213-W	MATH 200-W	PHYS 112-W		EESC 111-W	BIOL 202-W/01		PHYS 112-W	+ BIOL 201-W/LEC/01				
Sat															
Sun															

The best placement for it is TR 1100 – this will conflict with EESC 222 L03 on Tuesdays at 1100. The following Student Sets are blocking this placement:

- Student Set BSC-O/FWSC/2_P3_SS01 is already in use (doing EESC 222-W/LAB/L03, GEOG 222-W/LAB/L03) for CHEM 211-W/LEC/001.
 - Student set is re-allocated for EESC 222/GEOG222 L02

Course placed TR at 1100

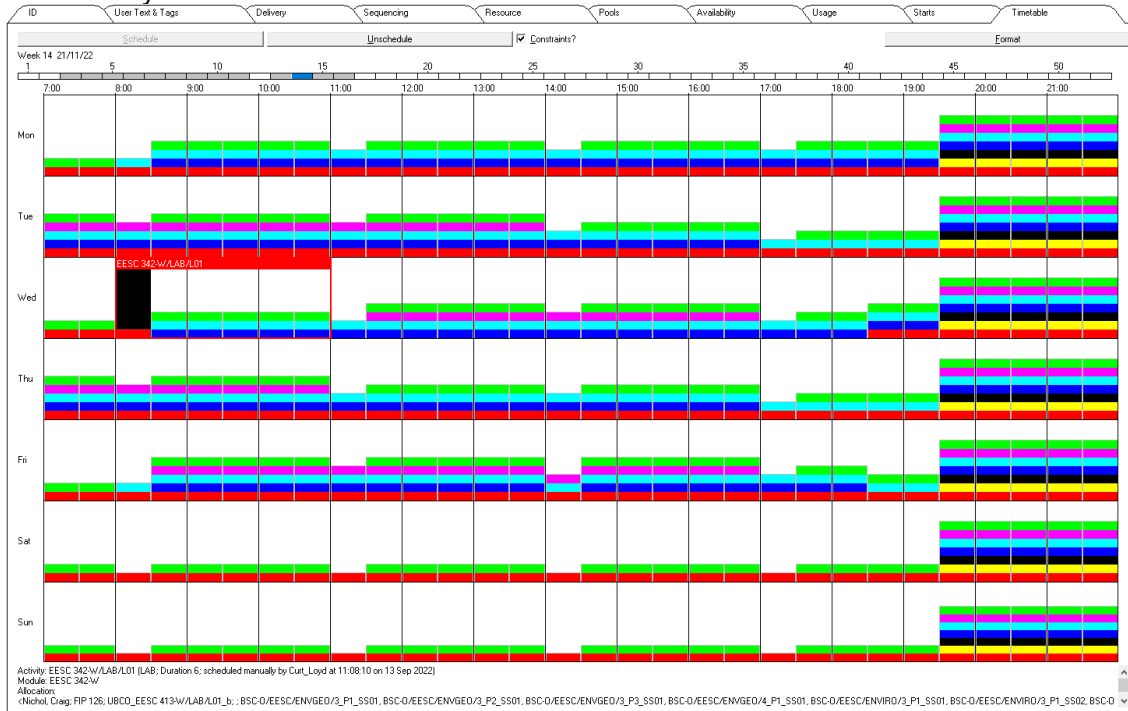
EESC 323 101 - requesting 3 x 1 HR



This course is blocked predominantly by student sets.

Placement Attempt #1 – MWF 0800

Placement is blocked by 8 student sets that are each scheduled to have EESC 342 L01 Wednesday from 0800 to 1100. EESC 342 L01 is not able to be moved.



Activity: EESC 342w/LAB/L01 (LAB: Duration 6; scheduled manually by Curt_Loyd at 11:08:10 on 13 Sep 2022)
Module: EESC 342w
Allocation:
Nichol, Craig; RP 126; UBCCO_EESC 413w/LAB/L01_b.; BSC-O/EESC/ENVGEO/3_P1_S501; BSC-O/EESC/ENVGEO/3_P2_S501; BSC-O/EESC/ENVGEO/3_P3_S501; BSC-O/EESC/ENVGEO/4_P1_S501; BSC-O/EESC/ENVIRO/3_P1_S501; BSC-O/EESC/ENVIRO/3_P1_S502; BSC-O

There is no option for re-allocation of these student sets to use EESC 323 L02 as it would overburden EESC 342 L01. The screenshot below shows the allocation window for EESC 323 Labs. Where a square is greyed out it means that a particular student is already assigned to another course and cannot be allocated to that particular section

ID		User Text & Tags		Planning		Allocate	
Name				EESC 342-W/LAB			
Student Sets				Activity			
Name				L01	L02		
BSC-0/EESC/ENVGEO/3_P1_SS01					T		
BSC-0/EESC/ENVGEO/3_P2_SS01					T		
BSC-0/EESC/ENVGEO/3_P3_SS01					T		
BSC-0/EESC/ENVGEO/3_P4_SS01					T		
BSC-0/EESC/ENVGEO/3_P5_SS01					T		
BSC-0/EESC/ENVGEO/3_P6_SS01					T		
BSC-0/EESC/ENVGEO/4_P1_SS01					T		
BSC-0/EESC/ENVGEO/4_P3_SS01					T		
BSC-0/EESC/ENVGEO/4_P4_SS01					T		
BSC-0/EESC/ENVIRO/3_P1_SS01					T		
BSC-0/EESC/ENVIRO/3_P1_SS02					T		
BSC-0/EESC/ENVIRO/4_P1_SS01					T		
BSC-0/EESC/GEO/3_P1_SS01					T		
BSC-0/EESC/GEO/3_P2_SS01					T		
BSC-0/EESC/GEO/3_P3_SS01					T		
BSC-0/EESC/GEO/3_P4_SS01					T		
BSC-0/EESC/GEO/4_P3_SS01					T		
BSC-0/EESC/GEO/4_P4_SS01					T		
BSC-0/FWSC/3_P1_SS01					T		
BSC-0/FWSC/3_P2_SS01					T		
BSC-0/FWSC/3_P3_SS01					T		
BSC-0/FWSC/3_P4_SS01					T		
BSC-0/FWSC/4_P1_SS01					T		
BSC-0/FWSC/4_P2_SS01					T		
BSC-0/FWSC/4_P3_SS01					T		

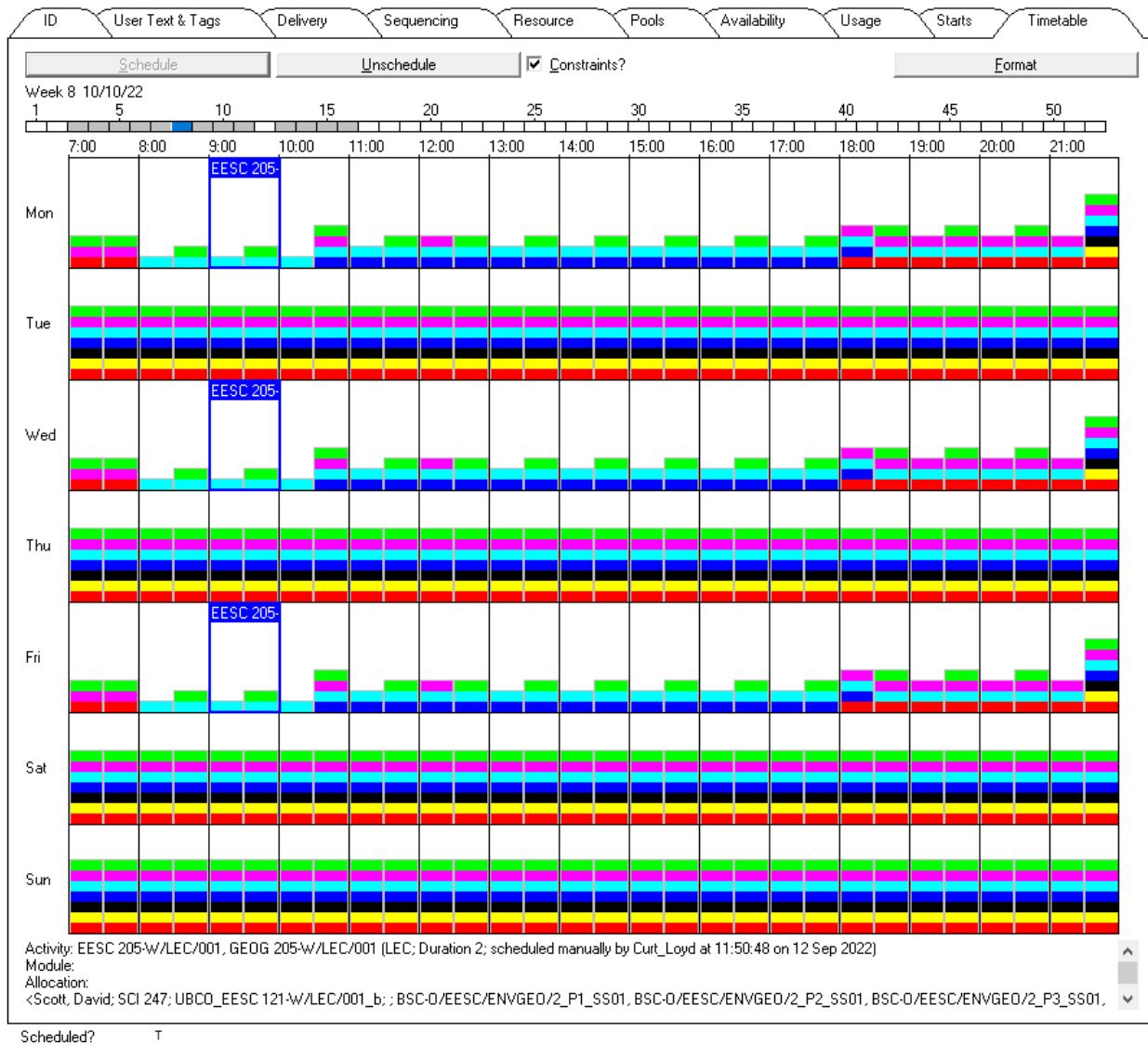
Allocations as if EESC 323 was placed MWF 0800

Placement Attempt #2 – MWF 0900

Placement is blocked by 4 student sets that are scheduled to use EESC 342 L01. As with placement Attempt 1, this time block would conflict with EESC 342 L01 which cannot be moved or reallocated.

Additionally, this placement is blocked by 5 student sets that are scheduled to be in EESC/GEOG 205 001. There is no option to reallocate to a different section as only one lecture section is being offered.

EESC 205 cannot be moved.



Placement Attempt #3 – MWF 1000

As with Placement attempt #1 and 2, this placement is still blocked by the EESC 342 L01.

Placement Attempt #4 – MWF 1100

This placement is blocked by 5 student sets:

- 1 student sets is scheduled for EESC 456/GEOG 456 L01
- 1 student sets scheduled for GEOG 129 001
- 1 student sets for COSC 222 001
- 1 student sets for EESC 205/GEOG 205 L02
- 1 student sets for CHEM 333 001.

CHEM 333 001 can be moved to MWF at either 0800 or 1700, however those timeslots are already conflicted so it would just add an additional conflict to those timeslots. The other student set conflicts for placement at this time cannot be resolved.

Placement Attempt #5 – MWF 1200

This placement is blocked by 27 student sets:

- 2 student sets are scheduled for BIOL 116 002
- 3 student sets are scheduled for COSC 222 001
- 3 student sets are scheduled for EESC 205/GEOG 205 L02
- 3 student sets are scheduled for EESC 456/GEOG 466 L01
- 1 student set is scheduled for GEOG 129 001*
- 14 student sets are scheduled for GISC 380 001
- 1 student set is scheduled for STAT 121 001

**Note it is unusual for a 1st year course to be called for in 3rd year pathway. This pathway has been flagged for review.*

It is not possible to move these courses or re-allocate to allow for the placement of EESC 323 001 at 1200.

Placement Attempt #6 – MWF 1300

This placement is blocked by 22 student sets:

- 2 student sets are scheduled for BIOL 116 002
- 6 student sets are scheduled for EESC 205/GEOG 205 L02
- 14 student sets are scheduled for GISC 380 001

It is not possible to move these courses or re-allocate to allow for the placement of EESC 323 001 at 1300.

Placement Attempt #7 – MWF 1400

This placement is blocked by 18 student sets:

- 1 student sets are scheduled for BIOL 116 001
- 2 student sets are scheduled for BIOL 308 001
- 12 student sets are scheduled for EESC 342 L02
- 2 student sets are scheduled for EESC 456/GEOG 466 L02

It is not possible to move these courses or re-allocate to allow for the placement of EESC 323 001 at 1400.

Placement Attempt #8 – MWF 1500

This placement is blocked by 16 student sets:

- 1 student sets are scheduled for BIOL 116 001
- 2 student sets are scheduled for BIOL 308 001
- 12 student sets are scheduled for EESC 342 L02
- 2 student sets are scheduled for EESC 456/GEOG 466 L02
- 6 student sets are scheduled for GEOG 272 001

It is not possible to move these courses or re-allocate to allow for the placement of EESC 323 001 at 1500.

Placement Attempt #9 – MWF 1600

This placement is blocked by 20 student sets:

- 12 student sets are scheduled for EESC 342 L02
- 2 student sets are scheduled for EESC 456/GEOG 466 L02
- 6 student sets are scheduled for GEOG 272 001

It is not possible to move these courses or re-allocate to allow for the placement of EESC 323 001 at 1600.

Placement Attempt #10 – MWF 1700

This placement is blocked by 21 student sets:

- 4 student sets are scheduled for CHEM 333 101
- 17 student sets are scheduled for EESC 342 L02

It is not possible to move these courses or re-allocate to allow for the placement of EESC 323 001 at 1700.

Placement Attempt #11 – MWF 1800

This placement is blocked by 21 student sets:

- 1 student set is scheduled for COSC 111 001
- 3 student sets are scheduled for COSC 304 001
- 17 student sets are scheduled for EESC 342 L02

It is not possible to move these courses or re-allocate to allow for the placement of EESC 323 001 at 1800.

Placement Attempt #12 – MWF 1900

This placement is blocked by 4 student sets:

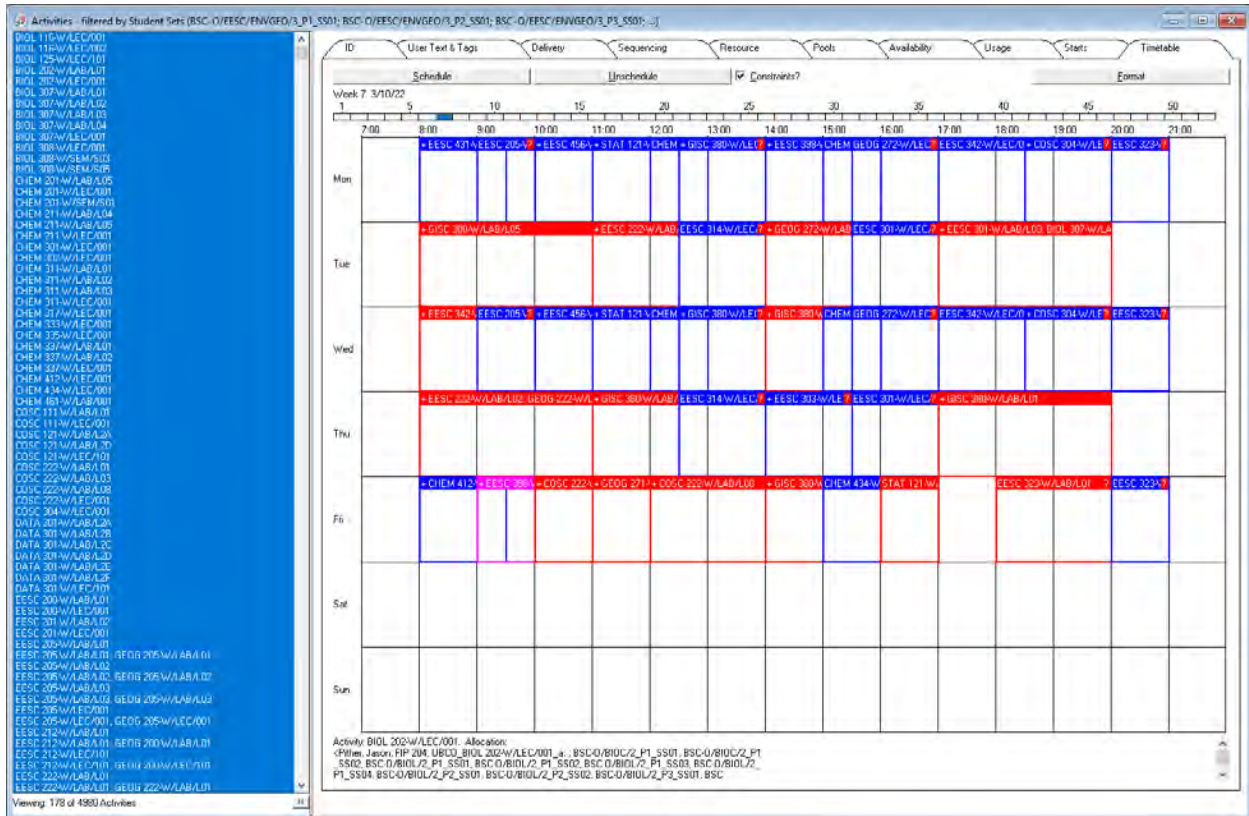
- 1 student set is scheduled for COSC 111 001
- 3 student sets are scheduled for COSC 304 001

It is not possible to move these courses or re-allocate to allow for the placement of EESC 323 001 at 1900.

Placement Attempt #13 – MWF 2000

This placement is not blocked by any student sets and is a valid course placement. It should be noted that Scheduling Services would not normally place a course on Monday/Wednesday/Friday from 2000-2100 without first consulting the department and looking for a different alternative. For the purpose of continuing this scenario, we have placed EESC 323 101 on MWF 2000-2100

The following screenshot is of all the courses that must remain conflict free with EESC 323 001. This screen shot was taken once all course sections were scheduled. There is a total of 60 sections that must remain conflict free with EESC 323 001.



Note: the plus symbol preceding a course name indicates that more than one course is occurring in that time block. These courses are stacked as while they may have to be conflict free with EESC 323 001, they do not have to be conflict free with each other.

Consequences of Multiple Competing Constraints on Instructor Schedules

The following screenshot is an example of multiple competing constraints on an instructor's schedule. This instructor is assigned to four EEGS course sections in Term 1, which are highly constrained by student sets to begin with. As two of these course sections are 3 x 1hr, their non-instructional days must be Tuesday and Thursday. These constraints remove 8 possible daytime placement options (4 on Tuesday, 4 on Thursday), which may have been available with Student Set adjustment.

A consequence of this, besides being unable to schedule EESC 200 L01 is what is expected to be a very unfavorable course plan for the instructor and likely unfavourable time placements for students.

Appendix III: “Department-owned“ Instructional Space on the Okanagan Campus

Count	Room	Room Type	Priority
1	EDL 002	Lab - Dry	APSC, ENGR, MANF
2	EDL 004	Lab - Dry	APSC, ENGR, MANF
3	EME 0211	Lab - Dry	APSC, ENGR, MANF
4	EME 0220	Lab - Dry	APSC, ENGR, MANF
5	EME 0256	Lab - Dry	APSC, ENGR, MANF
6	EME 1207	Lab - Dry	APSC, ENGR, MANF
7	EME 1220	Lab - Dry	APSC, ENGR, MANF
8	EME 2220	Lab - Dry	APSC, ENGR, MANF
9	EME 2223	Lab - Dry	APSC, ENGR, MANF
10	ADM 026	Theater	ARTH, CCS, CRWR, DIHU, FILM, THTR, VISA
11	SCI 238	Lab - Dry	ASTR, COSC, DATA, MATH, PHYS, STAT
12	SCI 239	Lab - Dry	ASTR, COSC, DATA, MATH, PHYS, STAT
13	SCI 241	Lab - Dry	ASTR, COSC, DATA, MATH, PHYS, STAT
14	SCI 242	Lab - Dry	ASTR, COSC, DATA, MATH, PHYS, STAT
15	SCI 243	Lab - Dry	ASTR, COSC, DATA, MATH, PHYS, STAT
16	SCI 322	Lab - Wet	BIOC, BIOL
17	SCI 326	Lab - Wet	BIOC, BIOL
18	ASC 293	Lab - Wet	BIOL
19	FIP 247	Lab - Wet	BIOL
20	FIP 249	Lab - Wet	BIOL
21	SCI 119	Lab - Wet	BIOL
22	SCI 141	Lab - Wet	BIOL
23	SCI 142	Lab - Wet	BIOL
24	ASC 289	Lab - Wet	BIOL, EESC, GEOG
25	SCI 127	Lab - Dry	BIOL, EESC, GEOG
26	FIP 240	Lab - Wet	CHEM
27	FIP 244	Lab - Wet	CHEM
28	SCI 219	Lab - Wet	CHEM
29	SCI 221	Lab - Wet	CHEM
30	SCI 224	Lab - Wet	CHEM
31	SCI 230	Lab - Wet	CHEM
32	SCI 231	Lab - Wet	CHEM
33	ART 220	Lab - Dry	CHIN, CULT, ENGL, FREN, GERM, JPST, KORN, SPAN, WRLD
34	ART 222	Lab - Dry	CHIN, FREN, GERM, JPST, KORN, SPAN, WRLD
35	EME 1123	Lab - Dry	CUST, EADM ECED, EDST, EDUC, EPSE, ETEC, LLED
36	ASC 271	Lab - Dry	EESC, GEOG
37	FIP 126	Lab - Dry	EESC, GEOG
38	FIP 135	Lab - Dry	EESC, GEOG
39	SCI 374	Lab - Dry	EESC, GEOG
40	ART 212	Lab - Dry	EESC, GEOG, GISC
41	CCS 142	Lab - Dry	FREN, GERM, JPST, SPAN
42	UCH 010	Lab - Dry	HMKN
43	UCH 109	Lab - Dry	HMKN
44	UCH 110	Lab - Dry	HMKN
45	CCS 252	Lab - Dry	NRSG
46	CCS 261A	Lab - Dry	NRSG
47	CCS 261B	Lab - Dry	NRSG
48	CCS 262A	Lab - Dry	NRSG
49	CCS 262B	Lab - Dry	NRSG
50	CCS 263A	Lab - Dry	NRSG
51	CCS 263B	Lab - Dry	NRSG
52	ASC 273	Lab - Dry	PHYS
53	CCS 123	Studio - 3D	VISA
54	CCS 124	Studio - Woodworking	VISA
55	CCS 127	Studio - Print Room	VISA
56	CCS 221	Studio - Drawing	VISA
57	CCS 222	Studio - Drawing	VISA
58	CCS 224	Studio - Painting	VISA
59	CCS 144	Studio - Performance	VISA, ARTH, CRWR, FILM, THTR
60	CCS 126	Studio - Metal Shop	VISA, MDST
	SCI 396	Restricted	DATA
	Sun Room	Restricted	

Appendix IV: All Instructional Space on the Okanagan Campus

Below please find the complete list of the rooms as known to Enrolment Services in the scheduling system, which include:

- 56 Classrooms
- 7 Studios
- 1 Theatre
- 1 restricted space
- 51 wet and dry labs
- 8 computer labs

NB: Facilities Management is currently doing a space inventory which may change these numbers

Room	Capacity	Room Type	Priority	Room Suitabilities
ADM 026	200	Theater	ARTH, CCS, CRWR, DIHU, FILM, THTR, VISA	Tiered
ART 102	40	Classroom	General	Moveable Tables
ART 103	121	Classroom	General	Tiered
ART 104	46	Classroom	General	Moveable Tables
ART 106	40	Classroom	General	Moveable Tables
ART 108	40	Classroom	General	Moveable Tables
ART 110	46	Classroom	General	Moveable Tables
ART 112	48	Classroom	General	Moveable Tables
ART 114	100	Classroom	General	Tiered, AC Power to 100% of Seats
ART 202	48	Classroom	General	Moveable Tables
ART 203	24	Classroom	General	Moveable Tables
ART 204	48	Classroom	General	Moveable Tables
ART 206	40	Classroom	General	Moveable Tables
ART 208	40	Classroom	General	Moveable Tables
ART 210	40	Classroom	General	Moveable Tables
ART 212	24	Lab - Dry	EESC, GEOG, GISC	
ART 214	93	Classroom	General	Tiered, AC Power to 100% of Seats
ART 215	41	Computer Lab	General	
ART 218	40	Classroom	General	Moveable Tables
ART 219	42	Classroom	General	Moveable Tables
ART 220	40	Lab - Dry	CHIN, CULT, ENGL, FREN, GERM, JPST, KORN, SPAN, WRLD	
ART 222	36	Lab - Dry	CHIN, FREN, GERM, JPST, KORN, SPAN, WRLD	
ART 281	40	Classroom	General	Moveable Tables
ART 365	36	Classroom	General	Moveable Tables
ART 366	200	Classroom	General	Tiered, AC Power to 100% of Seats
ART 374	30	Classroom	General	Moveable Tables
ART 376	102	Classroom	General	Tiered, AC Power to 100% of Seats
ART 382	18	Classroom	General	
ART 386	95	Classroom	General	Tiered, AC Power to 100% of Seats
ASC 130	114	Classroom	General	Tiered, AC Power to 100% of Seats
ASC 140	302	Classroom	General	Tiered, AC Power to 100% of Seats
ASC 165	31	Computer Lab	General	
ASC 271	36	Lab - Dry	EESC, GEOG	
ASC 273	24	Lab - Dry	PHYS	
ASC 289	20	Lab - Wet	BIOL, EESC, GEOG	
ASC 293	20	Lab - Wet	BIOL	
CCS 123	24	Studio - 3D	VISA	
CCS 124	24	Studio - Woodworking	VISA	
CCS 126	18	Studio - Metal Shop	VISA, MDST	
CCS 127	20	Studio - Print Room	VISA	
CCS 142	35	Lab - Dry	FREN, GERM, JPST, SPAN	
CCS 144	28	Studio - Performance	VISA, ARTH, CRWR, FILM, THTR	
CCS 221	24	Studio - Drawing	VISA	Moveable Tables
CCS 222	24	Studio - Drawing	VISA	
CCS 224	24	Studio - Painting	VISA	

Room	Capacity	Room Type	Priority	Room Suitabilities
CCS 252	42	Lab - Dry	NRSG	
CCS 261A	22	Lab - Dry	NRSG	
CCS 261B	22	Lab - Dry	NRSG	
CCS 262A	22	Lab - Dry	NRSG	
CCS 262B	22	Lab - Dry	NRSG	
CCS 263A	20	Lab - Dry	NRSG	
CCS 263B	12	Lab - Dry	NRSG	
COM 201	400	Classroom	General	Tiered, AC Power to 100% of Seats
EDL 002	40	Lab - Dry	APSC, ENGR, MANF	
EDL 004	40	Lab - Dry	APSC, ENGR, MANF	
EME 0050	192	Classroom	General	Tiered, AC Power to 100% of Seats
EME 0211	20	Lab - Dry	APSC, ENGR, MANF	
EME 0220	24	Lab - Dry	APSC, ENGR, MANF	
EME 0256	24	Lab - Dry	APSC, ENGR, MANF	
EME 1101	80	Classroom	General	Tiered, AC Power to 100% of Seats
EME 1121	72	Classroom	General	Tiered, AC Power to 100% of Seats
EME 1123	36	Lab - Dry	CUST, EADM ECED, EDST, EDUC, EPSE, ETEC, LLED	
EME 1151	49	Classroom	General	Tiered, AC Power to 100% of Seats
EME 1153	48	Classroom	General	Tiered, AC Power to 100% of Seats
EME 1202	60	Classroom	General	Moveable Tables
EME 1207	30	Lab - Dry	APSC, ENGR, MANF	
EME 1220	35	Lab - Dry	APSC, ENGR, MANF	
EME 2111	60	Classroom	General	Moveable Tables
EME 2141	69	Classroom	General	Moveable Tables
EME 2181	50	Classroom	General	Moveable Tables
EME 2202	30	Classroom	General	
EME 2205	32	Computer Lab	General	
EME 2220	40	Lab - Dry	APSC, ENGR, MANF	
EME 2223	30	Lab - Dry	APSC, ENGR, MANF	
FIP 121	70	Classroom	General	Moveable Tables
FIP 124	32	Classroom	General	Moveable Tables
FIP 126	24	Lab - Dry	EESC, GEOG	
FIP 129	21	Computer Lab	General	
FIP 133	21	Computer Lab	General	
FIP 135	20	Lab - Dry	EESC, GEOG	
FIP 138	32	Classroom	General	Moveable Tables
FIP 139	32	Classroom	General	Moveable Tables
FIP 140	30	Classroom	General	Moveable Tables
FIP 204	302	Classroom	General	Tiered
FIP 239	30	Classroom	General	Moveable Tables
FIP 240	20	Lab - Wet	CHEM	
FIP 244	20	Lab - Wet	CHEM	
FIP 247	20	Lab - Wet	BIOL	
FIP 249	20	Lab - Wet	BIOL	
FIP 250	30	Classroom	General	Moveable Tables
LIB 303	22	Classroom	General	Moveable Tables
LIB 305	150	Classroom	General	Moveable Tables
LIB 306	46	Classroom	General	Moveable Tables
LIB 312	116	Classroom	General	Tiered, AC Power to 100% of Seats
LIB 317	126	Classroom	General	Tiered, AC Power to 100% of Seats
SCI 119	20	Lab - Wet	BIOL	
SCI 126	21	Computer Lab	General	
SCI 127	35	Lab - Dry	BIOL, EESC, GEOG	
SCI 128	30	Computer Lab - Mac	General	
SCI 141	20	Lab - Wet	BIOL	
SCI 142	20	Lab - Wet	BIOL	
SCI 219	20	Lab - Wet	CHEM	
SCI 221	20	Lab - Wet	CHEM	
SCI 224	20	Lab - Wet	CHEM	
SCI 230	20	Lab - Wet	CHEM	
SCI 231	20	Lab - Wet	CHEM	
SCI 234	31	Computer Lab	General	
SCI 236	32	Classroom	General	Moveable Tables
SCI 238	20	Lab - Dry	ASTR, COSC, DATA, MATH, PHYS, STAT	
SCI 239	20	Lab - Dry	ASTR, COSC, DATA, MATH, PHYS, STAT	
SCI 241	20	Lab - Dry	ASTR, COSC, DATA, MATH, PHYS, STAT	
SCI 242	20	Lab - Dry	ASTR, COSC, DATA, MATH, PHYS, STAT	
SCI 243	18	Lab - Dry	ASTR, COSC, DATA, MATH, PHYS, STAT	
SCI 247	81	Classroom	General	Tiered
SCI 322	20	Lab - Wet	BIOC, BIOL	
SCI 326	20	Lab - Wet	BIOC, BIOL	
SCI 333	109	Classroom	General	Tiered
SCI 337	104	Classroom	General	Tiered
SCI 374	40	Lab - Dry	EESC, GEOG	
SCI 396	34	Restricted	DATA	
UCH 010	25	Lab - Dry	HMKN	
UCH 109	25	Lab - Dry	HMKN	
UCH 110	25	Lab - Dry	HMKN	



To: Okanagan Senate

From: Dr. Lesley Cormack, Deputy Vice-Chancellor & Principal, Okanagan Campus

Re: Peter Wall Awards (approval)

Date: 20 November 2022

Recommendation:

That the Okanagan Senate concur with the Vancouver Senate in establishing the Wall Research Awards and Wall Fellowships based on the concept descriptions as set out below, with the proviso that the full details on both the awards and fellowship programs also be presented Okanagan Senate Admissions & Awards Committee when they are available.

Background:

In 1991, Vancouver real estate developer Mr. Peter Wall made what was at the time, the largest gift from an individual donor that The University of British Columbia had ever received. Over time, through the Peter Wall Institute for Advanced Study, UBC and the broader community have benefited tremendously from Mr. Wall's vision to enable scholarship and scholarly collaborations that would not otherwise be possible.

"It has always been my desire to invest in the future minds of our province, a province that has been an unlimited source of opportunities for me," he said at the time of this landmark donation to UBC.

Over the last several months, Mr. Wall and the University have been in discussion about a new vision and purpose for his gift. The outcome is an Agreement to launch two new programs for UBC faculty and students. Initially, both programs will focus on sustainable approaches to and development of the urban environment, environmental protection of oceans, beaches and waterfronts, and sustainable approaches to and development of resource-intensive industry. The Awards and Fellowships will focus on benefits to British Columbia, but may also involve Canadian and international locations. We are confident that the Awards and Fellowships will enable UBC faculty and students to make significant contributions to areas of importance in the world.

Given the timing around finalization of the new Agreement with Mr. Wall, the following concept description for the new programs is available now. We recognize that Senate is used to more than just a concept description when presented with new programs. We also recognize that it is essential for the academic elements of these programs to be established by the academic community. Given the confidential nature of the period of negotiation with Mr. Wall, that



academic engagement has not yet been possible. Now that the Agreement has been announced publicly the President will move forward to appoint an Academic Advisory Committee on Wall Awards & Fellowships. This Advisory Committee will have a mandate to establish details for both programs, including eligibility, evaluation criteria, adjudication processes, and reporting. These details will be presented to the senates when they are available.

The following award concept descriptions were considered by the Vancouver Senate:

Wall Fellowships

Two Fellowships valued at \$1,000,000 each will be available for faculty and/or students each year. The Fellowship is awarded on the recommendation of an academic adjudication committee the specific mandate of which will be presented to the Senate Awards Committee in the future. The number and size of these Fellowships will be established by the President's Advisory Committee referred to above. We anticipate that the first cycle of this Award program will launch in the 2023/2024 winter session.

Wall Research Awards

A number of Awards together valued at an additional \$2,000,000 will be available for faculty and/or students each year. The Award is made on the recommendation of an academic adjudication committee, the specific mandate of which will be presented to the Senate Awards Committee in the future. We anticipate that the first cycle of this Award program will launch in the 2023/2024 winter session.