

**AGENDA****2:30 p.m. Thursday, May 23, 2019****Neatby-Timlin Theatre – Arts 241**

In 1995, the **University of Saskatchewan Act** established a representative Council for the University of Saskatchewan, conferring on Council responsibility and authority “for overseeing and directing the university’s academic affairs.” The 2018/19 academic year marks the 24<sup>th</sup> year of the representative Council.

As Council gathers, we acknowledge that we are on Treaty 6 Territory and the Homeland of the Métis. We pay our respect to the First Nations and Métis ancestors of our gathering place and reaffirm our relationship with one another.

1. Adoption of the agenda
2. Opening remarks
3. Approval of Minutes of the meeting of April 18, 2019
4. Business Arising from the Minutes
5. Report of the President
6. Report of the Provost
  - 6.1 Enrolment Report – Patti McDougall & Russ Isinger
7. Student Societies
  - 7.1 Report from the USSU
  - 7.2 Report from the GSA
8. Nominations Committee
  - 8.1 Request for decision: nominations for the review committee for the President

*It is recommended: that Council approve the nominations of the four members of the General Academic Assembly (GAA) to the Review Committee for the President effective immediately.*
  - 8.2 Request for decision: nominations to the Senate Review Committee for the Conflict of Interest Policy

*It is recommended: that Council approve the nominations of the two Council members to the Senate conflict of interest policy review committee effective immediately.*
  - 8.3 Request for decision: Council Committee nominations for 2019/20

*It is recommended: that Council approve the nominations to University Council committees, and Collective Agreement committees for 2019/20, as outlined in the attached list.*

8.4 Request for decision: Nomination of the vice-chair of University Council for 2019/20

*It is recommended: that Council approve the nomination of Dr. Pamela Downe to the position of vice-chair of University Council for 2019/20, effective July 1, 2019.*

8.5 Request for decision: Nominations for the Research, Scholarly and Artistic Works (RSAW) committee of Council for 2019/20

*It is recommended: that Council approve the nominations of the members and chair of RSAW effective July 1, 2019.*

9. Academic Programs Committee

9.1 Request for Decision: Bachelor of Science Kinesiology/Bachelor of Education Combined Program

*It is recommended that Council approve the proposed changes to Bachelor of Science Kinesiology/Bachelor of Education combined programs, effective May 2020.*

9.2 Report for Information: Bachelor of Science (B.Sc.) in Hydrology and termination of the Bachelor of Science (B.Sc) in Environmental Earth Science

9.3 Report for Information: Academic Programs Committee Annual report to Council

10. Planning and Priorities Committee

10.1 Request for Decision: Name Change for the Centre for the Study of Cooperatives

*It is recommended that Council approve the name change of the Centre for the Study of Cooperatives to the Canadian Centre for the Study of Cooperatives.*

10.2 Request for Decision: Establishment of the Centre for Quantum Topology and its Applications (quanTA)

*It is recommended that Council approve the establishment of the Centre for Quantum Topology and its Applications (quanTA)*

11. Scholarships and Awards Committee

11.1 Report for Information: Scholarships and Awards Committee Annual Report to Council

12. Joint Committee on Chairs and Professorships Committee

12.1 Report for Information: Joint Committee on Chairs and Professorships Committee Annual Report to Council

13. Coordinating Committee

13.1 Report for Information: Banner System Upgrade and Multi-Term Classes

14. Other business

15. Question period

16. Adjournment

**Minutes of University Council  
2:30 p.m., Thursday, April 18, 2019  
Arts Building Room 241 Neatby-Timlin Theatre**

Attendance: See item 3 Appendix A for the listing of members in attendance.

The chair of Council, Dr. Jay Wilson, called the meeting to order at 2:00 p.m., noting that quorum had been reached.

1. Adoption of the agenda

Gjevre/Brook: *That the agenda be adopted as circulated.*

CARRIED

2. Chair's remarks

The chair acknowledged that Council meets on Treaty 6 territory and the homeland of the Métis.

Dr. Wilson reported that the topics discussed at the PEC and Council chairs breakfast last week were the HARVEST repository in the Library, with Melissa Just, dean of the Library as a guest, and an update on the 2019/20 provincial budget.

16 nominations were received for 15 seats on University Council. Dr. Wilson thanked those who put their names forward and congratulated those who were elected. He also noted that the nominations committee is populating Council committees and encouraged members to consider invitations to participate. He noted that the nominations for the representative of the GAA on the Board of Governors would close on April 23.

Dr. Wilson reminded those in attendance of the usual protocols for discussion and debate.

3. Approval of minutes of the meeting of March 21, 2019

Urquhart/Jones: *That the minutes of the March 21, 2019 meeting be approved as circulated.*

CARRIED

4. Business Arising from the Minutes

Dr. Wilson reported that the coordinating committee of Council considered the matter of the level of detail in Council minutes that was raised at the February Council meeting. The committee reviewed a motion that was passed by Council November 9, 2005 indicating that the

minutes should summarize significant points raised during the debate of motions, but not provide a verbatim account of members' comments. The committee concluded that overall the Council minutes are meeting this standard, and the concerns of members can be met by specific corrections if required.

#### 5. Report of the President

President Peter Stoicheff was invited to give his report.

Dr. Stoicheff acknowledged the importance of the university budget and noted that the provost would be dealing with it in more detail in his report.

The president reported on a recent Universities Canada meeting he attended and on his continued support for ongoing relationships between universities, including Usask, in the two countries despite current geopolitical issues.

USask recently participated in a meeting in Ottawa on Global Water Futures, at which he and members of the Global Institute of Water Security (GIWS) were participants. The president spoke at the meeting. Participants included Dr. John Pomeroy from GIWS, Minister Goodale, policy makers, and members of related institutes across the country. The context of the meeting was the recent report that Canada is warming at two times the global rate, and the Canadian north is warming at three times the global rate. The GIWS will continue to play a leadership role in important research on the implications of these developments for water security.

USask will be signing an MOU with the Prince Albert Grand Council next week, and with the Saskatoon Tribal Council in the near future. These formal agreements speak to the aspirational and high-level goals that the university has regarding reconciliation and Indigenization. They are public declarations that we will remain accountable to, and reflect the spirit of, these relationships.

A question was raised again from a previous meeting regarding the connection or conflation of the issue of academic freedom and 'without-attribution' basis of meetings. The president responded that in particular he was pointing to the matter of freedom of expression as articulated in article 6.1 of the USFA collective agreement, from which he read a brief excerpt.

#### 6. Report of the Provost

Dr. Tony Vannelli presented the provost's report to Council. Greg Fowler, vice-president finance and resources was invited to join Dr. Vannelli to present the details of the university budget. The provost reiterated that the university budget was approved by the Board in March, and that the Board had confirmed its approval following the provincial budget announcement. Consultations about the development of the budget included the Board, chairs of Council committees, PPC, deans and directors, and now Council. The university leadership is actively

working to stabilize the budget in this the third and ostensibly the last year of the provincial government's austerity budgets. They are looking forward to an improved reflection of the importance of post-secondary education for the province in future years' provincial budgets (*see presentation in attachment a*).

Questions posed considered tuition rates and rate-setting processes. The GSA inquired as to the availability of reports on consultations with graduate students. The associate provost, Institutional Planning and Assessment (IPA), Dr. John Rigby, responded that consultations took place with each college and their graduate students, and townhalls were held with the College of Graduate and Postdoctoral Studies (CGPS). A faculty member asked about the ongoing affordability of the doctor of pharmacy program given that the tuition rates had nearly doubled in recent years. The dean of the college, Dr. Kishor Wasan, responded that scholarship and student loan funding had increased as well, and that the college was alert to the issue of accessibility.

A council member asked about the inter-provincial differential that had been added to out-of-province students in WCVI and the equitability for different students in the same classroom paying different prices. The provost responded that the ongoing affordability, accessibility and predictability will be the focus of discussions on tuition and tuition rates. Also, that tuition for graduate programs in particular needs to be considered holistically as part of the total funding package used to recruit students.

A question was raised about how quality is measured for our academic programs. The provost responded that the USask academic program review process has recently been updated by IPA and a new phase of review for graduate and undergraduate programs will be introduced shortly (as indicated in the provost's written report) . Tuition is used to maintain quality of existing programs, as well as for new initiatives. The university also looks to government programs such as the federal funding for experiential learning to augment the university's and students' investments.

Another question was raised about the province's previous directive that university reserves be spent down, and how we now find ourselves in a deficit position in our reserves. There was another inquiry as to the university's alternative strategies for revenue generation other than tuition and the operating grant. Mr. Greg Fowler responded that this year the priority is to balance the budget, and in the next years the priority will shift to replenishing the reserves to align with university policy. Alternative revenue-generation strategies include the campaign, and land development and revenues. These are both long-term plans.

## Student Societies

### 7.1 Report from the USSU

Rollin Baldhead was welcomed to present the report of the USSU. He noted the transition period for the USSU, introducing each of the newly elected USSU executive.

Mr. Baldhead thanked Brent Kobes, VP Operations for teaching him the intricacies of policies and bylaws of the USSU. He thanked Rose Wu for her openness, and for helping him to understand internal and external issues involving the USSU. He noted her success in the Women in Leadership event that hosted over 100 attendees, for her work on fixing policies, monthly clothing swaps, and Earth Hour. He thanked Sheldon Mollenbeck for his honesty; for encouraging him to speak the truth and how to navigate the system and for encouraging him to take ownership of the title of USSU president.

The members of Council joined in applause thanking the members of the USSU for their service and welcoming the new executive.

## 7.2 Report from the GSA

Naheda Sahtout, president of the GSA, presented the GSA's report to Council. She reflected on her experience from the last year in terms of "5 Cs": communication between students and supervisors being the key to success; collaboration between students, working together in teams, and networking; creating opportunities by supervisors and mentors providing students with the opportunities to succeed; challenging and encouraging students to be better people and to pursue their goals; cultivating a sense of community, bridging the divide of the diversity of our community toward the betterment of humanity, and valuing inclusivity.

Ms. Sahtout thanked the university's senior leadership and the CGPS for their commitment to enhancing the student experience. She thanked women in senior leadership positions for showing acceptance and for their leadership. Lastly, Ms. Sahtout introduced the incoming GSA executive.

Trever Crowe, dean of CGPS, thanked the outgoing executive and invited Council to join him in a round of applause celebrating their accomplishments and welcoming in the new GSA executive.

## 8. Academic Programs Committee

The chair invited Dr. Angela Kalinowski, vice-chair of APC to present the report to Council. Dr. Kalinowski provided the background and rationale for the proposed change.

### 8.1 Request for Decision: Admission Qualification Change – Bachelor of Education (B.Ed.) Special (mature) Admission Category

*Detmer/Brooke: That Council approve the proposed changes to admissions qualification for the Bachelor of Education (B.Ed.) Special (Mature) Admission Category, effective for the 2020/21 admission cycle.*

CARRIED

9. Governance Committee

9.1 Request for Decision: to amend Council Bylaws to include the joint committee on chairs and professorships

Stephen Urquhart, chair of the governance committee, presented the request for decision to Council, noting that it was duly presented as a notice of motion at the March 21, 2019 Council meeting. He provided a summary of responses to questions raised at that meeting, which were considered by the governance committee. There are no changes to the approved terms of reference other than the title of a senior administrative position. He clarified that JCCP is not a 'standing committee of Council', rather it is a joint committee with the Board of Governors. Council membership will continue to be nominated by the nominations committee and is approved by Council. Each proposal for a chair or professorship is individually considered and approved by Council, per the *University Act 1995*. Also, the motion does not include approval of the guidelines, which are within the purview of the JCCP. Council members are invited to provide comments on the guidelines to the governance committee.

*Urquhart/Downe: That Council approve the amendment of Council Bylaws by adding the following terms of reference for the Joint Committee on Chairs and Professorships (JCCP) as Part Two, X, effective immediately.*

A member of Council asked whether we needed to vote on the motion, and why it did not go into the bylaws automatically when the terms of reference were approved if it was duly constituted in 1999. Also, whether the membership of the committee could be reviewed.

Dr. Urquhart responded that the terms of reference are reviewed periodically by the governance committee as are all terms of Council committees, and the membership that constitutes representation from Council is put forward annually by the nominations committee and is approved by University Council.

CARRIED

10. Other business

There was no other business.

11. Question period

None.

12. Adjournment

Jones: The meeting was adjourned by motion at 4:30pm.

Attachments:

- A. University of Saskatchewan Budget Context 2019/20



Name	Sept 20	Oct 25	Nov 22	Dec 20	Jan 17	Feb 14	Mar 21	Apr 18	May 23	June 20
MacLean, Jason	P	R	R	A	P	A	A	P		
Manley-Tannis, Richard	A	P	P	P	P	P	R	R		
Martinez-Soberanes, Edgar	P	P	P	R	P	P	P	P		
Mousseau, Darrell	P	A	P	P	A	A	A	P		
Munoz, Carlos	P	P	R	R	A	P	P	R		
Murphy, JoAnn	P	P	R	P	P	P	P	R		
Newman, Kagen	A	A	A	A	A	A	A	A		
Papagerakis, Petros	P	P	P	A	P	R	P	P		
Phillips, Peter	R	A	P	P	R	P	P	P		
Phillipson, Martin	P	R	P	P	P	P	A	R		
Pocha, Sheila	A	P	P	A	A	R	P	P		
Poettcker, Grant	A	A	A	A	A	A	A	A		
Prytula, Michelle	R	A	R	P	P	R	R	P		
Racine, Louise	P	R	P	R	P	P	R	R		
Risling, Tracie	P	P	P	P	P	R	P	P		
Sarty, Gordon	P	P	P	P	P	P	P	P		
Saxena, Anurag	R	R	R	R	P	A	A	R		
Shevyakov, Alexey	R	R	R	R	P	R	P	R		
Simons, Gabe	R	A	R	A	A	P	A	A		
Smith, Charles	P	P	R	P	R	A	P	R		
Smith, Preston	P	P	A	P	A	P	P	R		
Smith, Martha	P	P	P	P	P	P	R	R		
Solose, Kathleen	P	P	P	R	P	P	P	P		
Soltan, Jafar	R	P	P	P	P	P	P	P		
Spurr, Shelley	P	P	R	P	P	P	R	P		
Stoicheff, Peter	P	P	P	P	P	P	P	P		
Squires, Vicki	P	R	P	P	P	P	P	P		
Swidrovich, Jaris	P	P	P	R	P	R	R	P		
Thompson, Emma	A	A	A	A	A	A	A	A		
Tzeng, Huey-Ming	A	A	A	A	A	A	A	A		
Urquhart, Stephen	P	P	P	P	P	P	P	P		
Vannelli, Tony	P	P	P	P	R	P	P	P		
Vassileva, Julita	P	P	P	P	P	P	P	R		
Waldner, Cheryl	P	P	P	P	R	A	R	P		
Walker, Keith	P	R	P	P	P	A	R	P		
Walker, Ryan	R	R	R	P	P	R	P	P		
Wallace, Alexa	A	A	A	A	A	A	A	A		
Wasan, Kishor	P	P	P	P	R	P	P	P		
Willenborg, Christian	P	P	R	P	P	P	P	R		
Willness, Chelsea	P	P	P	P	P	P	P	P		
Willoughby, Keith	R	P	R	P	P	R	P	R		
Wilson, Jay	P	P	P	P	P	P	P	P		
Wilson, Ken	P	P	P	P	P	P	P	P		
Wilson, Lee	P	R	P	P	P	P	P	A		
Woods, Phil	P	P	P	P	P	P	P	A		
Wotherspoon, Terry	R	R	P	P	P	P	R	P		
Wurzer, Greg	P	P	P	P	P	R	R	P		
Zello, Gordon	P	P	P	P	P	P	R	P		
Zhang, Chris	R	P	A	P	P	R	P	A		

COUNCIL ATTENDANCE 2017-18

Non-voting participants

Name	Sept 20	Oct 25	Nov 22	Dec 20	Jan 17	Feb 14	Mar 21	Apr 18	May 23	June 20
Baldhead, Rollin	N/A	P	P	P	P	P	A	P		
Bilson, Beth	P	P	P	P	P	P	P	P		
Chad, Karen	P	P	P	R	P	P	R	R		
Fowler, Greg	A	A	A	A	A	P	P	P		
Gough, Rhonda	P	P	P	P	P	R	P	R		
Isinger, Russell	P	P	P	P	P	P	P	P		
Kobes, Brent	R	P	A	A	A	A	A	A		
McDougall, Patricia	P	P	P	P	P	P	P	P		
Moellenbeck, Sheldon	P	A	P	P	R	P	R	P		
Morrison, Karen	P	P	P	P	R	P	P	P		
Ottmann, Jacqueline	R	R	R	P	P	A	P	P		
Pozega Osburn, Debra	R	R	R	P	P	R	P	A		
Sahtout, Naheda	P	P	R	P	R	P	P	P		
Still, Carl	P	A	P	R	R	A	P	R		

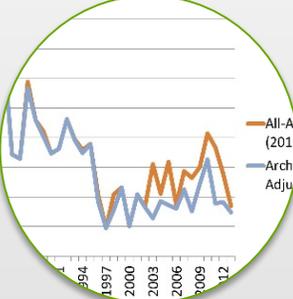


Council Presentation April 18, 2019

## Purpose of Presentation

- Explain the financial situation
- Actively managing the situation
- Continue to focus on Mission and Plan

# 2018/19 Comprehensive Forecast Q.3

	 <b>Operating</b> <b>\$(35.7)M</b>	 <b>Ancillary</b> <b>\$2.2M</b>	 <b>Student Financial Aid</b> <b>\$1.7M</b>	 <b>Research</b> <b>\$12.6M</b>	 <b>Capital</b> <b>\$9.6M</b>	 <b>Endowments</b> <b>\$18.5M</b>	<b>Total</b> <b>\$8.9M</b>
<b>Budget</b>							
	↑	↑	↓	↓	↓	↑	
<b>Forecast</b>	<b>\$(5.8)M</b>	<b>\$3M</b>	<b>\$.4M</b>	<b>\$(1.3)M</b>	<b>\$4.0M</b>	<b>\$18.7M</b>	<b>\$19.0M</b>
<b>Variance</b>	<b>\$29.9M</b>	<b>\$.8M</b>	<b>\$(1.3)M</b>	<b>\$(13.9)M</b>	<b>\$(5.6)M</b>	<b>\$.2M</b>	<b>\$10.1M</b>



# Operating Fund Q3 Forecast – Favourable \$29.9M



Increased tuition fees  
-higher enrolment  
\$5M



Increased fundraising  
activities based on  
actual experience year  
to date \$5M

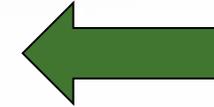


Increased fee for  
service activity \$4M

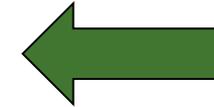


**Operating  
Fund  
Forecasted  
Deficit  
\$5.8M**

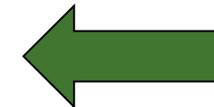
Increase in provincial  
government grants -



Special warrant  
payment of \$10M



retroactive pay for  
medical residents  
\$4M

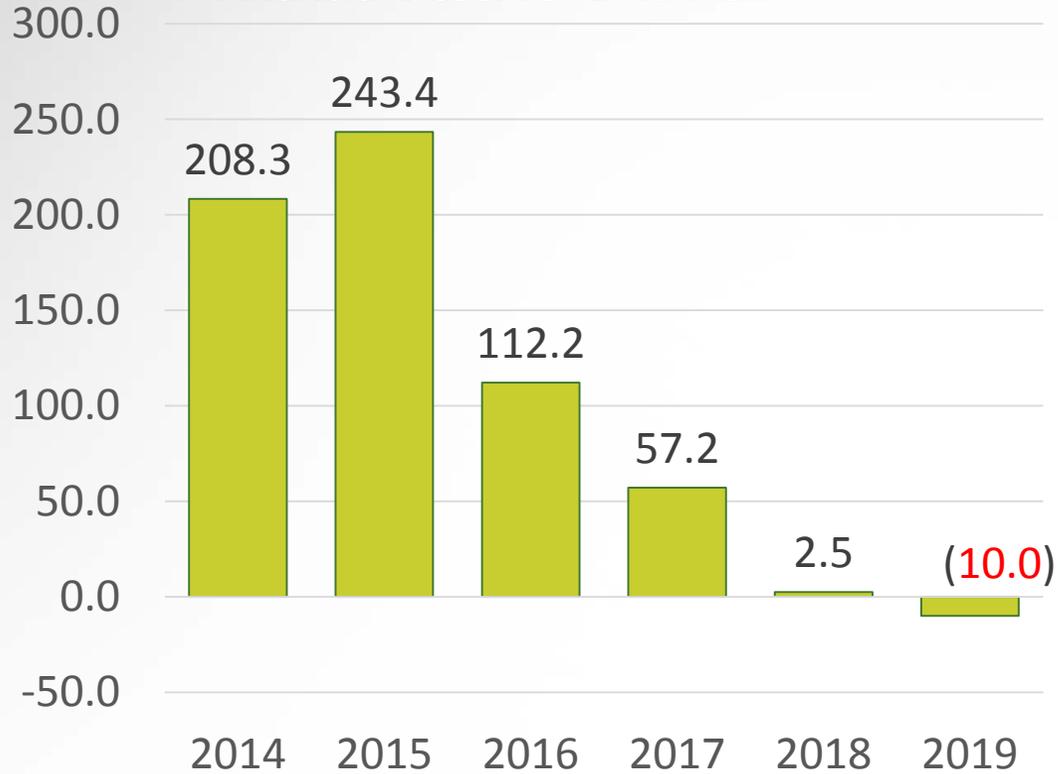


Expected increase of  
non-government grant  
and contracts revenue  
across responsibility  
centres \$2M

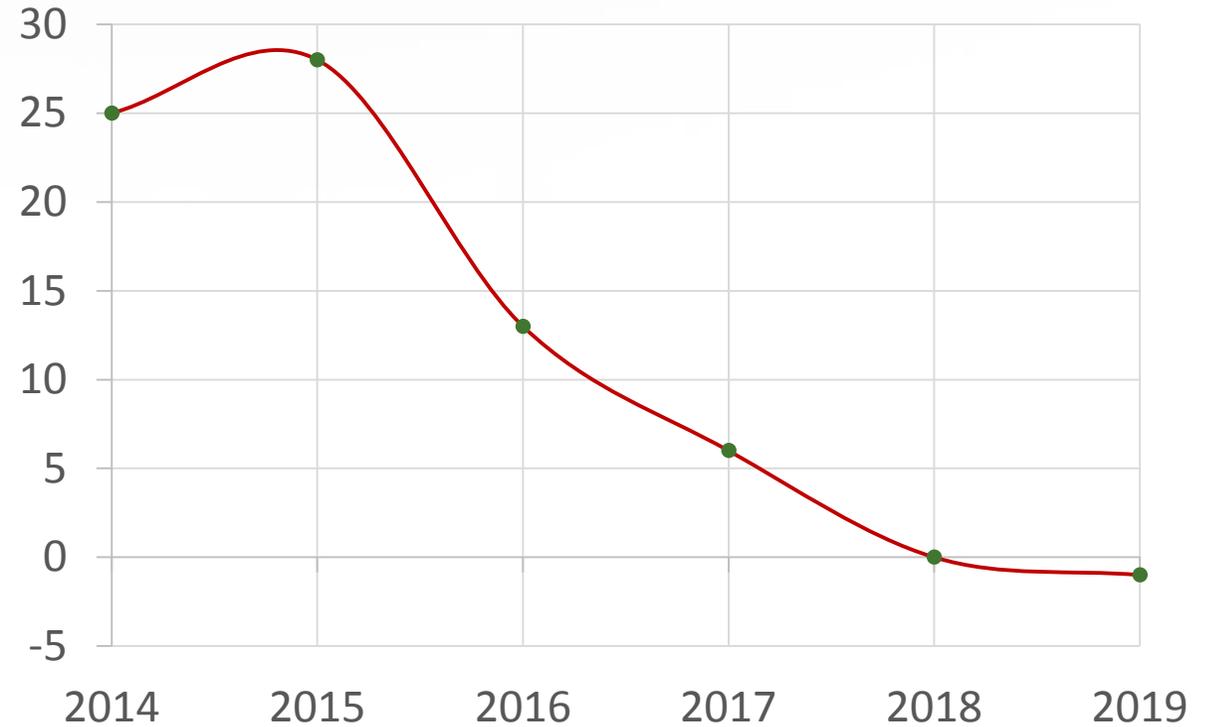


# Financial Reserves

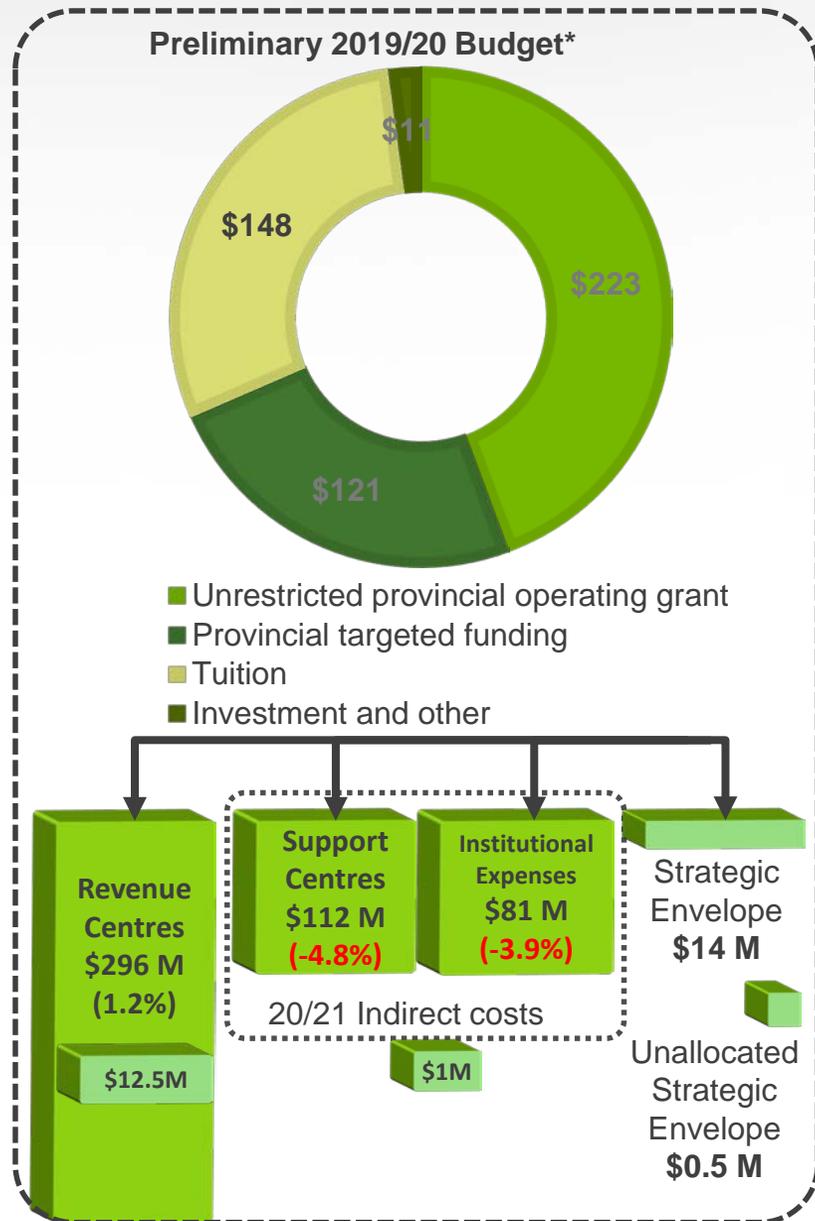
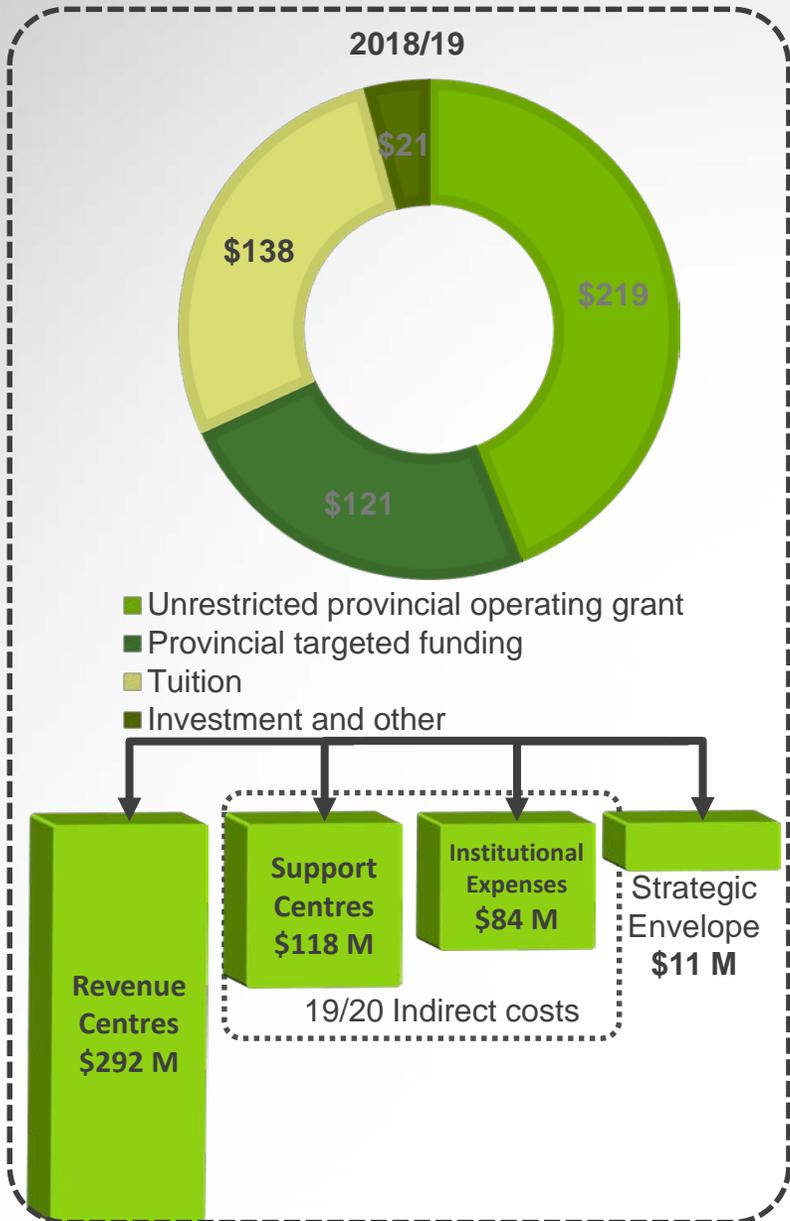
Financial Reserves Balance 000s



Percent of Expenditures



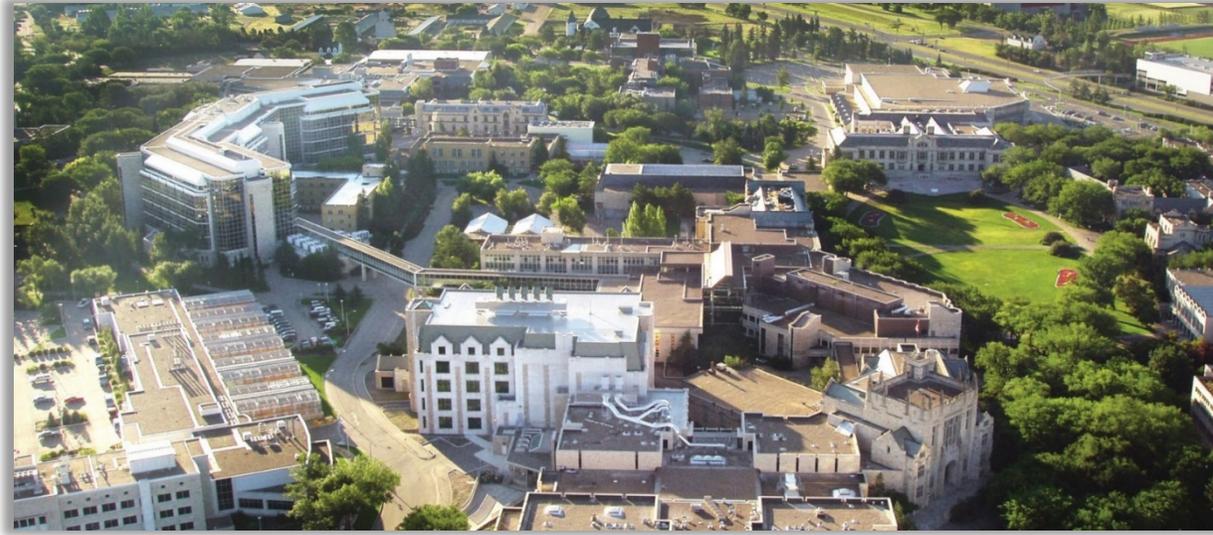
# Resource Allocation Overview



\*as approved by the board prior to provincial grant announcement

2018/19
Total revenue
<b>\$499 M</b>
Total allocations
<b>\$505 M</b>
Surplus/Deficit =
<b>~\$6.5 M)</b>

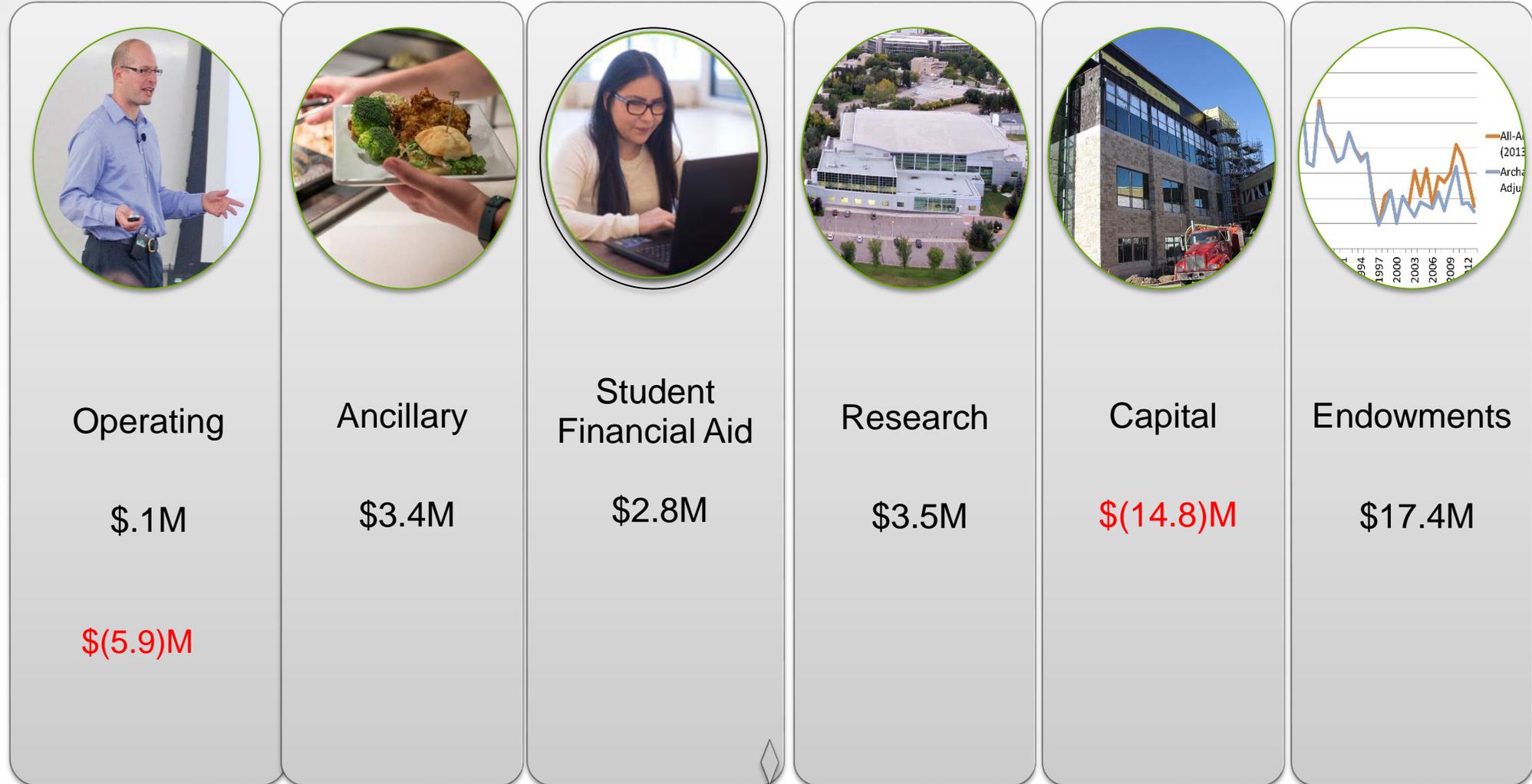
2019/20*
Total revenue
<b>\$503 M</b>
Total allocations
<b>\$503 M</b>
Surplus/Deficit =
<b>\$0 M</b>



## 2019-20 COMPREHENSIVE BUDGET



# 2019-20 Comprehensve Budget



Post provincial budget impact



# 2019 Provincial Budget Update

# 2019/20 Operating Grant

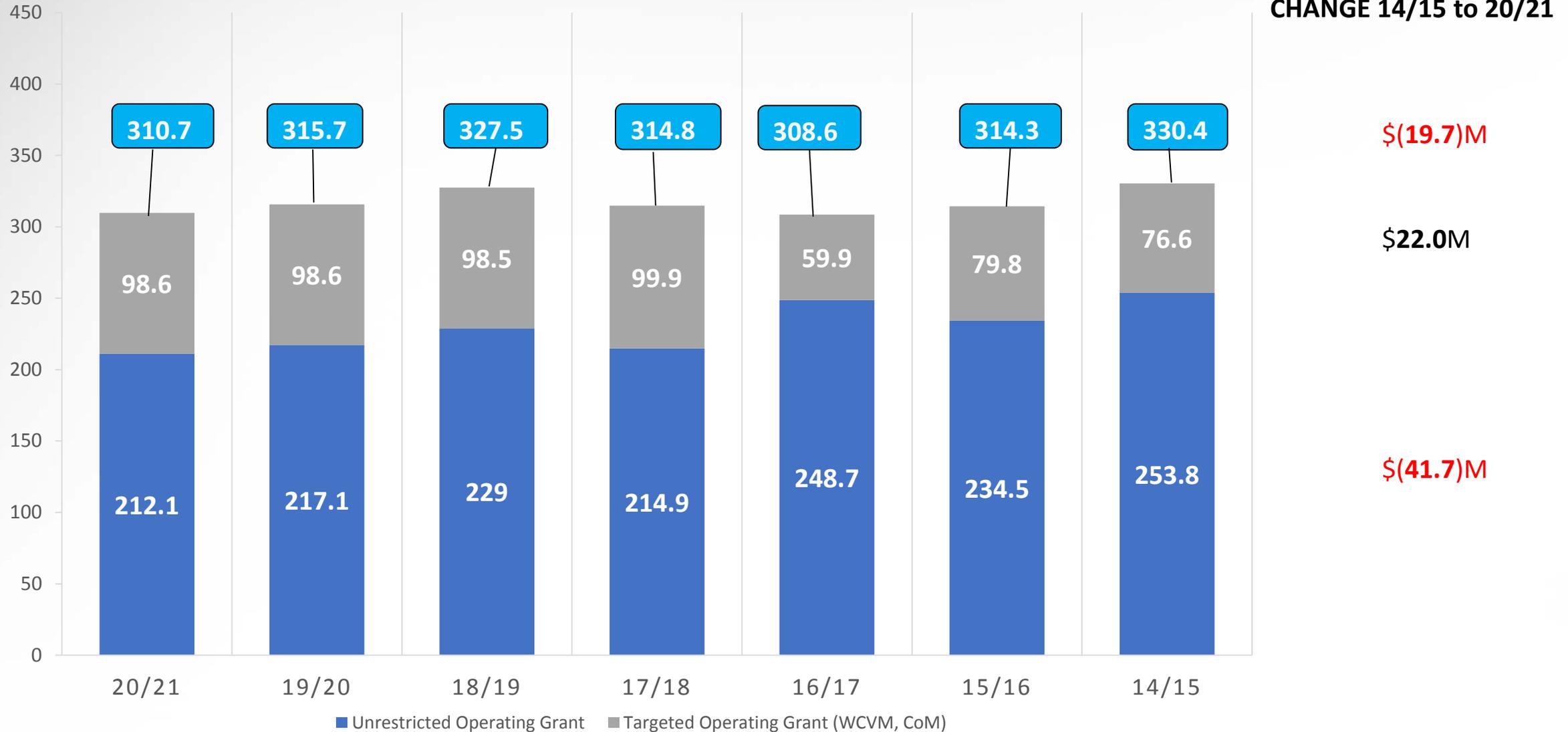
## USask Budget Assumptions

## Actual Provincial Budget

## 20/21 Budget Estimate

▪ 0%	Increase to base grant	▪ 0%	▪ 0%
▪ \$5M	Reinstatement to base grant of funding previously withdrawn	▪ \$0M	▪ \$(5)M
▪ <u>\$(1)M</u>	SUFM adjustment	▪ <u>\$(2)M</u>	▪ <u>\$(2)M</u>
<u>\$4M</u>	Total	<u>\$(2)M</u>	<u>\$(7)M</u>

# Provincial Grant



# Going Forward

- Keep you informed of financial situation
- Confident that situation is manageable
  - Much work has been done – balanced 2019-20 budget
  - Requires our continued collective effort to make changes
  - We have levers (ie. procurement modernization)
- Continue to focus on Mission and Plan

PRESIDENT'S REPORT TO UNIVERSITY COUNCIL May 2019 **Chancellor Announcement**

It is with great pleasure that I am able to report to you that the University of Saskatchewan senate has approved Grit McCreath as the institution's 16<sup>th</sup> chancellor. From spending Sundays on campus with her parents as a youngster, to being a student and alumna, to being a member of the University Senate and the Board of Governors, she has held many roles at USask, giving her time and energy to us for the better part of 20 years. Most recently, Ms. McCreath has served as the university's first honorary ambassador since 2015.

Ms. McCreath will begin her three-year term on July 1<sup>st</sup>, succeeding Roy Romanow. I want to thank Roy for his services, his mentorship, and his leadership these past three years. I am happy to report that he will continue to serve the university in other capacities in the future. An event honouring his chancellorship is to be held on Friday, June 14<sup>th</sup> at 5:00. A location is to be determined and an invitation will go out soon.

Those who serve in the chancellor position are not simply ceremonial ambassadors for the institution. The chancellor plays a key role in our governance system serving as chair of the university senate and as one of the 11 members of the board of governors. In addition to governing, the chancellor also presides over convocation and confers degrees upon our graduating students.

**YWCA Nominees**

Since 1982, the Saskatoon's Women of Distinction Awards event has honoured hundreds of women for their leadership and contributions to our community. The awards program is renowned nationally as one of the most prestigious for women and USask has been a proud sponsor of it for the past four years. Of particular interest to council members this year will be the number of USask connections among the nominees.

Among those being honoured in 2019 is Senator Lillian Dyck, who will be presented with the Lifetime Achievement Award in part for her work in advocating for equity in the education and employment of women, Chinese Canadians and Aboriginals. An alumna with USask (BA'66, MA'70, PHD'81), she is the first female First Nations senator and first Canadian born Chinese senator.

Other notable nominees with USask connections include:

**Athletics Award:** Evelyn Nesdole (BAPE'70, BED'71, PGD'84); Kimberly Davy (MPH'14)

**Community Building Award:** Darlene Brander (BED'95); Susan Delanoy (former staff); Karen Robson (BCOMM'13); Abigail Zita Seshie (PhD student)

**Education Award:** Priscilla Settee (BA'76, BED'87, PHD'07; current staff/faculty); Michelle Prytula (BCOMM'92, BED'95, MEDUC'04, PHD'08; current staff/faculty); Valerie Korinek (current staff/faculty); Debbie Pushor (current staff/faculty); Naheda Sahtout (GPSC'17; current student)

**Entrepreneurship Award:** Jennilee Cardinal Schultz (former student); Jennifer Kardynal (MPH'12)

**Health & Wellness Award:** Susan Tupper (PHD'12; former staff/faculty); Della Magnusson (BSN'09); Haylie Lashta (BSKI'09, MPT'11); Carolyn Schur (former staff/faculty)

**Leadership & Professions Award:** Candace Laing (BCOMM'99; former staff/faculty); Frances Walley (PHD'93; current staff/faculty); Candace Wasacase-Lafferty (BA'18; current staff/faculty)

**Research & Technology:** Kalowatie Deonandan (current staff/faculty); Candice Jackel-Cram (BSC'03, PHD'09); Mays Aiyed Mohan Al-Dulaymi (PHD'18); Andrea Hawrysh (BSC'98); Angie Bugg (BE'85); Sarah Buhler (LLM'11; current faculty)

**29 and Under Award for Young Women:** Tara Desroches (BED'13); Amanda Guthrie (BA'16; former staff/faculty)

**Saskatchewan Spirit:** Terri Hansen-Gardiner (current staff/faculty); Amanda Perrot (BSC'06)

## Steacie Fellowship

The Steacie Fellowship is one of Canada's most prestigious research awards. It honours the memory of Edgar William Richard Steacie, an outstanding chemist and research leader who made major contributions to the development of science in Canada during, and immediately following, the Second World War. Steacie believed that young researchers are a great national asset and should be given every opportunity to develop their own ideas. He nurtured Canadian talent and drew many promising scientists to Canada. The Steacie Fellowship aims to give young researchers the freedom to develop original ideas and answer questions in creative and unique ways.

One of this year's recipients is Professor Maud Ferrari (PhD), a member of both the Western College of Veterinary Medicine and the College of Arts and Science, and a mentor to many early-career researchers. Her USask research laboratory currently includes a post-doctoral fellow, four PhD students, four master's students, and three undergraduates.

Professor Ferrari's research excellence has been repeatedly recognized, including with the Governor General's Gold Medal for best PhD thesis at USask, an NSERC post-doctoral fellowship, and the Outstanding Young Investigator award of the Animal Behavior Society. Last year, she earned a place in the Royal Society of Canada's College of New Scholars, Artists and Scientists.

The Steacie Fellowship, which is held for two years, provides an award of \$250,000 that enables academics to focus on their research.

## Honorary Degrees

Honorary degrees are the highest honour USask can bestow, and acknowledge the worthy and unique contributions recipients have made to their community and to the world. I am proud to announce the following individuals who will receive their degrees at our spring convocation:

***Louise Halfe—Sky Dancer*** is a Cree poet and writer, Elder and teacher. Born in Two Hills, Alta., she attended a residential school as a child and has drawn on this experience to explore resiliency, reconciliation and the legacy of colonialism, in her poetry. Her volumes of poetry have received numerous literary awards, and she served for two years as Saskatchewan's Poet

Laureate, a position which allowed her to mentor young poets and writers. Ms. Halfe has participated as an instructor in university courses, and as a speaker and reader at numerous conferences, workshops and literary festivals in Canada and abroad. She is an Elder and advisor on Indigenous traditions at the Gordon Oakes Red Bear Student Centre at USask.

**Tim Hearn** grew up in Regina, and received a bachelor's degree in science at the University of Manitoba. He began his career with Imperial Oil as a marketing representative in North Battleford and took on positions of increasing responsibility in the company, including close to a decade managing international business ventures associated with Imperial Oil and its parent company Exxon Mobil. As chair and board member of the Calgary Homeless Foundation, he worked to build non-profit networks and to secure financial support for the campaign.

**Dr. Gerald McMaster** (PhD), born near North Battleford on the Red Pheasant First Nation, is a Plains Cree artist, curator and professor. In the words of one of his honorary-degree nominators, he has made significant contributions to visual arts, arts administration, and to inclusion and reconciliation. He is currently a Canada Research Chair at the Ontario College of Art and Design University, an officer of the Order of Canada and a recipient of a National Aboriginal Achievement Award.

**Don Seaman** was born in Rouleau, Sask., in 1925, to parents who encouraged their four children to take advantage of educational opportunities. Like his two brothers, Doc and B.J., he pursued a degree in mechanical engineering at USask, and graduated in 1947. The company he participated in with his brothers—the Seaman Engineering and Drilling Company—became Bow Valley Industries, a successful energy company in Alberta.

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May 1<sup>st</sup>, 2019 saw the transition of new executive leadership in the University of Saskatchewan Students' Union. The team elected to serve our undergraduate student body includes:

**Vice President Student Affairs**

Allen Lewis is a young 35 and  $\frac{3}{4}$  year old retired trucker, who graduated high school way back in 2001. Since then, Allen has driven over a million KM through most provinces and states, hauled oversized loads, became a trucking supervisor for a local warehousing company, and then a truck driver instructor. During their time as an instructor, Allen achieved a goal of getting out of debt, and this empowered them to start thinking about life goals, which very quickly included coming to University of Saskatchewan, and ultimately joining the USSU.

Allen has completed the first year of university, and is excited to get to work as the VP of Student affairs to help students navigate much of the non-academic side of university life, and be aware of the services the USSU provides.

**Vice President Academic Affairs**

Carlos Munoz Pimentel is USSU's new VP Academic Affairs. He is going into his fourth year of Political Studies. He moved to Canada, eleven years ago, from Colombia. He has been here so long now that he claims his English has far surpassed his Spanish. A fun fact about him is that he has had grey hairs since he was six months old. His main focus this year in the USSU is to further promote scholarships and Open Educational Resources, as well as making sure students are aware of their Rights and Responsibilities at the University.

**Vice President Finance and Operations**

Jamie Bell is happy to be taking the position of Vice President Operations and Finance for the USSU. As a management student at the Edwards School of Business and advocate for a diverse and vibrant community, he is dedicated to facilitating campus club programming. Outside of his academic work, he is the Vice President of the Saskatoon Opera Association, Publicity Coordinator of the Saskatoon Chamber Singers, and past secretary for the Saskatoon Youth Orchestra Inc. Jamie plans to use this experience to develop budget and event planning templates to allow campus groups to create community focused events and to incorporate Indigenous ways of doing into club governance.

**President**

Regan Ratt-Misponas comes from a resilient, Nehiyaw family based in Pinehouse Lake, Saskatchewan. His mother is a residential school survivor who

went on to get her degree in Social Work, and his father never made it past Grade 8, but has a diploma, degree, masters, and Ph.D. in living off the land in the northern part of the province. Regan came to the University of Saskatchewan, changing his degree three times, while developing a strong connection to the amazing student community at the U of S.

Regan will focus his efforts on ensuring the USSU remains a leader in advocating for students first, being transparent and consistently communicating with undergraduate students, connecting with students throughout the university, and decolonizing the structures that have historically not been welcoming to all people.

As it has always been, our continued vision is that the USSU remains “the recognized leader in enhancing the student experience.” Our USSU executive hopes to ensure the University of Saskatchewan continues to be a place where all students feel safe, welcomed, valued, respected, challenged academically, and healthy as they study at this university.



University of Saskatchewan Graduate Students' Association

### **University Council Report - May 2019**

The Graduate Student's Association welcomes a new executive team who will be representing and advocating for the graduate students at the University of Saskatchewan from May 2019 to April 2020. The new executive team is made up as follows:

**President:** Mery Mendoza

**Vice-President Finance and Operations:** Wajih Alam

**Vice-President Student Affairs:** Alejandra Fonseca

**Vice-President External:** Chiamaka Ezekwesili

On behalf of the new executive team, we are deeply honored to represent graduate students at this institution and look forward to working with our partners around campus. According to the university statistics of 2017/2018, graduate students represent 16.7% of the student population, which play a key role, mainly in the research and reputation of the University. Most of our students have collaborations and partnerships with universities around the world that help strengthen our university's collaborative ties with the global society. We will continue to provide the necessary tools and resources to achieve the academic and professional excellence of our students. Concurrently, we will foster a diverse and equitable environment so that they have a positive experience in our institution. Consequently, for this academic year, the representatives of the Graduate Students Association will focus on two main areas:

## **1. Enhancing the resources that support student health**

Stress affects the life of our graduate students and it is something serious and real. At times, it becomes very difficult for us to recognize how dangerous stress can be to our mental health. We also often cannot distinguish when others are struggling with mental health issues such as depression and anxiety which affects university life. In fact, our graduate students feel very overwhelmed by a combination of financial and professional pressures, resulting in lack of sleep and social life. Those pressures can vary from doing research, teaching classes, collecting data, taking courses, writing reports/theses/papers, concerns about visa status, tuition, etc. Therefore, it is very important for us to know how to recognize and address signs of mental illness, to understand where to turn for help, and to work to avoid stigmatization while promoting wellness. The Graduate Student's Association will continue its efforts to promote positive mental health, increasing the available resources that can help to identify when students are at risk and helping them to get support from our university and society.

## **2. enhancing and improving opportunities that already exist for a better student-supervisor relationship**

The student-supervisor relationship is the core of the academic success of all graduate students and has been discussed previously. The Graduate Student's Association has previously initiated a student-supervisor agreement that specifies the roles and responsibilities of both student and supervisor, which will help students to communicate better, and recognize mutual responsibilities while increasing their chances of success at the university. We aim at enhancing and improving availability of resources to support the unique relationship between students and their supervisors.

We look forward to working with members of the University throughout our tenure this year. Together, we can improve the academic experience of our students on campus as well as prepare them for a successful career.

**AGENDA ITEM NO: 8.1**

**UNIVERSITY COUNCIL  
NOMINATIONS COMMITTEE  
REQUEST FOR DECISION**

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**PRESENTED BY:** Pamela Downe, Chair,  
Nominations committee of Council

**DATE OF MEETING:** May 23, 2018

**SUBJECT:** **Nominations for the Review Committee for the President**  
**DECISION REQUESTED:**

*It is recommended: That Council approve the nominations of the four members of the General Academic Assembly (GAA) to the Review Committee for the President effective immediately.*

**DISCUSSION SUMMARY:**

The nominations committee is providing nominations for selection by Council of the faculty representatives on the committee for the review of the president. President Stoicheff has indicated his wish to be considered for a second term.

The membership of the review committee for the president is as follows:

- Chair - Chair of the Board
- Two members of the Board selected by the Board
- One member of the Senate selected by Senate Nominations Committee
- Two Deans or Executive Directors of schools, appointed by the Deans
- Four members of the GAA selected by Council
- Two students, one who is President of the USSU and one who is President of the GSA

The committee includes four members of the GAA chosen by Council.

**PRESIDENT'S REVIEW COMMITTEE GAA NOMINATIONS:**

Tara Kahan	Department of Chemistry
Dean McNeill	Department of Music
Nazeem Muhajarine	Community Health & Epidemiology
Lori Bradford	SENS

UNIVERSITY COUNCIL  
NOMINATIONS COMMITTEE  
REQUEST FOR DECISION

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**PRESENTED BY:** Pamela Downe, Chair,  
Nominations committee of Council

**DATE OF MEETING:** May 23, 2018

**SUBJECT:** **Nominations to the Senate Review Committee for the Conflict of Interest Policy**

**DECISION REQUESTED:**

*It is recommended: That Council approve the nominations of the two Council members to the Senate conflict of interest policy review committee, effective immediately.*

**DISCUSSION SUMMARY:**

The nominations committee is providing nominations for selection by Council of the faculty representatives to the Senate Conflict of Interest Policy Review Committee (CIPRC).

The CIPRC is a joint committee constituting representatives from the Board of Governors, University Senate, and University Council. The Committee's mandate is to review Conflict of Interest policy in the broader context of similar policies at other U15 universities and to submit a report to the Board of Governors and with suggested revisions. The committee intends to complete its work by April 2020.

**SENATE CIPRC COUNCIL MEMBER NOMINATIONS**

Jason MacLean	College of Law
Chris Willenborg	College of Agriculture & Bioresources

**ATTACHMENTS**

1. CIPRC terms of reference

## **Conflict of Interest Policy Review Committee – Terms of Reference**

The *University of Saskatchewan Act, 1995* lists the following among the powers of the University Senate:

### Section 23

The senate may:

- o) recommend to the board or the council any matters or things that the senate considers necessary to promote the interests of the university or to carry out the purposes of this Act...
- t) do any other thing that the senate considers necessary, incidental or conducive to exercising its powers, to promoting the best interests of the university or to meeting the purposes of this Act.

In the context of these statutory provisions, the Senate has initiated a review of the university's conflict of interest policies. This document contains the terms of reference for the committee charged with conducting that review.

### 1. Membership

The committee shall be composed of:

- Two members of the Senate elected by the Senate
- Two members of the Board of Governors appointed by the Board of Governors
- Two members of University Council elected by University Council
- One person from outside the university with policy expertise
- The University Secretary, non-voting

In making their appointments, the governing bodies are asked to consider their appointees' experience or understanding of issues of conflict of interest, risk management and/or policy formation.

### 2. Term

The term of a member on this committee shall begin upon the filling of member positions and will end upon completion of the work of the committee.

### 3. Chair

The chairperson shall be selected by and from among the membership of the committee

### 4. Meetings

Meetings will be held at the call of the chair with the assistance of the Office of the University Secretary.

A quorum for meetings will be one member from each of the governing bodies plus the external person.

#### 4. Responsibilities and Powers

The responsibilities of the committee will be as follows:

- To examine a sample of conflict of interest policies from other U15 universities.
- To present an interim report to the Senate which will include the criteria the committee has adopted to guide the review.
- To determine which University of Saskatchewan policies, including any relevant major college, school or departmental policies, touching on conflict of interest in addition to the Conflict of Interest Policy, the Gift Acceptance Policy and the Responsible Conduct of Research Policy should be within the scope of the review.
- To attempt to achieve consensus in making decisions or formulating recommendations.
- To review the selected policies, and to formulate recommendations for any revision to be submitted to the Board of Governors.
- To report to the three governing bodies on the results of the review, including the substance of any recommendations to the Board of Governors for revision of any of the policies reviewed.
- To develop an inventory of written conflict of interest policies covering the university or one or more of its academic or administrative units.
- To observe any obligations concerning privacy or confidentiality established in law or in governing university policies.

The committee may:

- Gather information on conflict of interest issues from sources within or outside the university.
- Consult with any persons for their advice and opinion on any or all of the policies being reviewed.
- Communicate with the governing bodies at any point in the process through their representatives on the committee.
- Request assistance from the Office of the University Secretary in carrying out any of its responsibilities.

#### 4. Timelines

The committee shall make all reasonable efforts to observe the following timelines:

- October 2019 – presentation of interim report including review criteria to Senate
- April 2020 – presentation of final report including any recommendations to Senate

UNIVERSITY COUNCIL  
NOMINATIONS COMMITTEE  
REQUEST FOR DECISION

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**PRESENTED BY:** Pamela Downe, Chair,  
Nominations committee of Council

**DATE OF MEETING:** May 23, 2018

**SUBJECT:** Council Committee Nominations for 2019/20

**DECISION REQUESTED:**

*It is recommended:*

*That Council approve the nominations to University Council committees, and Collective Agreement committees for 2019/20, as outlined in the attached list.*

**DISCUSSION SUMMARY:**

Each year, the nominations committee reviews the membership list of Council committees, those committees constituted under the Faculty Association Collective Agreement, and other university-level committees and submits a list of nominees to Council for consideration of appointment. The attached report contains this year's nominees to Council. In addition to meeting throughout the year as required, the committee met on April 12 and May 8, 2019 specifically to consider membership vacancies due to member rotation at the end of the academic year.

In conducting its work, the committee considers the skills and experience of nominees that in the committee's judgment would best apply to the committee, consulting as necessary. In keeping with its terms of reference to attempt to solicit nominations widely from the Council and the General Academic Assembly, each spring the committee issues a call for nominees to all deans and department heads, and posts an ad in *On Campus News*, inviting volunteers to serve. The committee attempts to include individuals who are broadly representative of disciplines across campus. To the extent possible, the committee considers equity in representation and balance among members. In recommending committee chairs, the committee considers experience, leadership, continuity and commitment as key attributes of chair nominees and equity in gender representation across committee chairs. Council committee chairs are nominated for one-year terms.

**ATTACHED:** 2019/20 List of committees and members

Council Committee Membership List 2019-2020

**CHAIR OF COUNCIL**

Jay Wilson

Curriculum Studies

2020

## ACADEMIC PROGRAMS COMMITTEE

- Reviews and approves curriculum changes from all college; recommends major curriculum changes to Council; oversees policies relating to students and academic programs.
- Membership comprises 11 members of the GAA, at least 5 of whom will be elected members of Council; at least 1 member from the GAA is to have some expertise in financial analysis; 1 sessional lecturer

### Council Members

Ryan Brook	Animal and Poultry Science	2021
Roy Dobson	Pharmacy and Nutrition	2020
Reza Fotohui	Mechanical Engineering	2022
Lorin Elias	Psychology	2021
Susan Detmer (Chair)	Veterinary Pathology	2020
Shelley Spurr	Nursing	2020

### General Academic Assembly Members

Michael Cottrell	Educational Administration	2020
Angela Kalinowski	History	2020
Alison Oates	Kinesiology	2022
Jeremy Rayner	Johnson Shoyama Graduate School of Public Policy	2021

### Sessional Lecturer

VACANT		2020
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### Other Members

Patti McDougall	(Provost Designate) Vice-Provost, Teaching, Learning, and Student Experience (ex officio)
Russell Isinger	University Registrar (ex officio)
Lucy Vuong	(VP Finance designate) FSD – Budget and Special Projects (ex officio)
Carlos Munoz Pimentel	USSU designate
Chiamaka Ezekwesili	GSA designate

### Resource Members

Alison Pickrell	Assistant Vice-Provost, Strategic Enrolment Management
John Rigby	Associate Provost, Institutional Planning and Assessment
CeCe Baptiste	Financial Analyst, Institutional Planning and Assessment
Amanda Storey	Committee Secretary – Office of the University Secretary

## GOVERNANCE COMMITTEE

- Reviews Council bylaws including committee terms of reference; develops policies relating to student academic appeals and conduct.
- Membership comprises the Council chair, chair of planning and priorities committee, chair of the academic programs committee, to include three elected members of Council; presidents designate.

### Council Members

Stephen Urquhart (chair)	Department of Chemistry	2020
Chelsea Willness	Edwards School of Business	2022
Mark Boland	Physics and Engineering Physics	2022

### Ex officio Members

Jay Wilson	Chair, Council
Beth Bilson	University Secretary
Ken Wilson	Chair, Planning and Priorities Committee
Susan Detmer	Chair, Academic Programs Committee

### Other Members

Tamara Larre	President's designate	2020
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### Student Guests

Regan Ratt-Misponas	USSU President
Naheda Sahtout	GSA Representative

### Resource Members

Jacque Thomarat	Committee Secretary – Office of the University Secretary
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## PLANNING AND PRIORITIES COMMITTEE

- Reviewing and advising Council and the university administration on planning, budgeting, and academic priorities.
- Membership comprises 11 members of the GAA, at least 6 of whom will be elected members of Council; at least 1 member from the GAA is to have some expertise in financial analysis; 1 sessional lecturer; 1 dean

### Council Members

Terry Wotherspoon	Sociology	2022
David Burgess	Education	2022
Lynn Lemisko	Educational Foundations	2021
Darrell Mousseau	Psychiatry	2020
Alec Aitken	Geography and Planning	2022
Louise Racine	Nursing	2020
Ken Wilson (chair)	Biology	2021

### General Academic Assembly Members

Angela Bedard-Haughn	Soil Science	2020
Maxym Chaban	Economics	2020
Marie Lovrod	English	2021
Keith Da Silva	Dentistry	2019

### Dean

Keith Willoughby	Dean, Edwards School of Business	2020
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### Sessional Lecturer

Anita Ogurlu	Womens and Gender Studies	2020
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### Other Members

Tony Vannelli	Provost and Vice-President Academic (ex officio)
TBD	(VP Research representative) (ex officio)
Greg Fowler	VP Finance and Resources (ex officio)
Jacqueline Ottmann	Vice-Provost Indigneous Engagement (ex officio)
Jamie Bell	USSU designate
Mery Mendoza	GSA designate

### Resource Members

John Rigby	Associate Provost, Institutional Planning and Assessment
Jennifer Beck	Director, Resource Allocation and Planning, IPA
Troy Harkot	Director, Institutional Effectiveness
Shari Baraniuk	Chief Information Officer (CIO) and AVP, Information and Communciations Technology
Jacque Thomarat	Committee Secretary, Office of the University Secretary

## SCHOLARSHIPS AND AWARDS COMMITTEE

- Grants awards, scholarships and bursaries which are open to students of more than one college or school, advises Council on scholarship and awards policies and issues.
- Membership comprises 9 members of the GAA, at least 3 of whom are elected members of Council

### Council Members

Matthew Neufeld	History	2022
Ramji Khandelwal	Biochemistry	2021
Tracie Risling (chair)	Nursing	2020

### General Academic Assembly Members

Julia Jamison	Drama	2022
Janet Okoko	Educational Administration	2022
Michael MacGregor	Psychology	2020
Emer O'Hagan	Philosophy	2021
Darrin Oehlerking	Music	2022
Som Niyogi	Biology	2022

### Other Members

Alison Pickrell	Assistant Vice-provost, Strategic Enrolment Management (ex officio)
Trever Crowe	Interim Dean, Graduate and Postdoctoral Studies (ex officio)
Debra Pozega Osburn	Vice-President University Relations (ex officio, non-voting)
Graeme Joseph	Team Lead, Aboriginal Students' Centre
Carlos Munoz Pimentel	USSU designate
Mohamad Wajih Alam	GSA designate

### Resource Members

Heather Lukey	Director, Graduate Awards and Scholarships
Shandi Boser	Manager, Donation and Trusts Services
Russell Isinger	Registrar
Salome van Rensburg	Committee Secretary

## TEACHING, LEARNING AND ACADEMIC RESOURCES COMMITTEE

- Reviews and advises on pedagogical issues, support services for teaching and learning, Aboriginal teaching and learning, and policy issues on teaching, learning and academic resources.
- Membership comprises 11 members of the GAA, at least 5 of whom will be members of Council; includes 1 sessional lecturer.

### Council Members

Vince Bruni-Bossio (chair)	Management and Marketing	2020
Paul Jones	Toxicology	2022
Jo Ann Murphy	Library	2020
Petros Papagerakis	Dentistry	2020
Jaris Swidrovich	Pharmacy and Nutrition	2021

### General Academic Assembly Members

Loleen Berdahl	Political Studies	2022
Jorden Cummings	Psychology	2021
Kathleen James-Cavan	English	
Gail MacKay	Curriculum Studies	2021
Sean Maw	College of Engineering	2020
Manar Angrini	Biology	2019

Carlos Munoz Pimentel	USSU Designate
Alejandra Fonseca	GSA Designate

### Ex-officio (voting)

Patti McDougall	Vice-Provost, Teaching, Learning and Student Experience
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### Sessional

TBD	2020
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### Resource Members

Shari Baraniuk	Chief Information Officer, Information and Comm.Technology
Rachel Sarjeant-Jenkins	(designate for) Dean, University Library
Cheri Spooner	Director, Distance Education Unit
Nancy Turner	Director, Teaching and Learning Enhancement
Chad Collier	Director, ICT Academic and Research Technologies
Candace Wasacase-Lafferty	Director, Indigenous Initiatives
Salome van Rensburg	Committee Secretary

### Associate Members

Associate members are administrative and technical staff with valuable expertise and experience, who receive committee agendas and can attend TLARC meetings on request or at their initiative.

Kate Langrell	Copyright Coordinator
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## COLLECTIVE AGREEMENT COMMITTEES 2019-20

### UNIVERSITY REVIEW COMMITTEE

Reviews college recommendations for awards of tenure, renewals of probation, and promotions to professor; reviews and approves college standards for promotion and tenure. This committee is mandated by the **Collective Agreement (15.8.4)**:

**15.8.4 University Review Committee. The University shall have a review committee to consider tenure and other matters specifically assigned to this committee in the Agreement. The University Review Committee shall be made up of nine tenured or continuing employees plus the Vice-President Academic and Provost who shall be chair. The nine employees shall be nominated to this committee by the Nominations Committee of Council and approved by Council with the length of their term specified so as to ensure a reasonable turnover of membership. Employees shall not be nominated for membership if they have served on the University Review Committee in the previous three years or if they have agreed to serve on a College review committee in that academic year. In addition to those members mentioned above, two nominees of the Association shall serve as observers on the University Review Committee with voice, but without vote.**

Jim Basinger (chair)	Vice-Provost, Faculty Relations	
Marcel D'Eon	Community Health and Epidemiology	2021
Moira Day	Drama	2020
Mark Carter	Law	2020
Ravindra Chibbar	Plant Sciences	2020
Laurie Hellsten	Educational Psychology & Special Education	2020
Michael Bradley	Physics and Engineering Physics	2021
Lorraine Holtslander	Nursing	2021
Louise Humbert	Kinesiology	2021
Dwight Makaroff	Computer Science	2021
Anna Okapiak	Committee Secretary - Faculty Relations Officer	

**PROMOTIONS APPEAL PANEL**

From this roster, the members are chosen for Promotion Appeal Committees (promotion appeals), Sabbatical Leave Appeal Committee (sabbatical appeals), and for the President’s Review Committee (salary review appeals). This panel is mandated by Collective Agreement (16.3.5.1):

**16.3.5.1 Appeal Panel. An Appeal Panel of forty-eight employees drawn from the membership of the General Academic Assembly shall be named by the Nominations Committee of Council and approved by Council, with length of term specified so as to ensure a reasonable turnover of membership. Additional members may be chosen, if necessary, to staff appeal committees. Membership shall be restricted to tenured faculty who are not members of the University Review Committee and who have not served on the University Review Committee in the previous three years. The following criteria shall govern the selection of the Panel:**

- a) The Nominations Committee of Council shall strive to achieve a gender balance based on the overall membership of the General Academic Assembly;
- b) The Nominations Committee of Council shall strive to achieve representation from a wide range of disciplinary areas based on the faculty complement in each College.

Members of the Appeal Panel shall not serve on more than one of the committees hearing appeals promotion (Article 16.3.5), sabbatical leaves (Article 20.3) or salary review (Article 17.3.5).

**16.3.5.2 Promotions Appeal Panel. The Promotions Appeals Panel shall consist of those members of the Appeal Panel who hold the rank of Professor.**

**To June 30, 2022**

Karen Lawson	Psychology
Dirk de Boer	Geography and Planning
Mark Olver	Psychology
Phil Chilibeck	Kinesiology
Tamara Larre	Law
Sina Adl	Soil Science
Lisa Vargo	English
Jaswant Singh	Veterinary Biomedical Sciences
Angela Bedard-Haughn	Soil Sciences
Ryan Walker	Geography and Planning
Bram Noble	Geography and Planning

**To June 30, 2021**

Jim Waldram	Anthropology and Archaeology
Leslie Howe	Philosophy
Rob Pywell	Physics and Engineering Physics
Ken Coates	Johnson-Shoyama School of Public Policy
Angela Bowen	Nursing
Ralph Deters	Computer Science
Sabine Banniza	Plant Sciences
Ekaterina Dadachova	Pharmacy and Nutrition
Stephen Foley	Chemistry

Anh Dinh  
Chris Zhang  
Nazmi Sari  
Emer O'Hagan  
John Gordon  
Neil Chilton  
David Mycota

**To June 30, 2020**

Cindy Peternelj-Taylor  
Janet Hill  
Claire Card  
Marcus Hecker  
Vikram Misra  
Alexander Ervin  
Dwayne Brenna  
Kirsten Bett  
Bev Brenna  
Valery Chirkov  
Jerzy Szpunar  
Michael Plaxton  
Barb Phillips  
Jim Handy  
Jeremy Rayner  
Verna St. Denis  
Nadeem Jamali  
Keith Walker  
Robert Hudson

Electrical and Computer Engineering  
Mechanical Engineering  
Economics  
Philosophy  
Medicine  
Biology  
Educational Psychology and Special Education

Nursing  
Veterinary Microbiology  
Large Animal Clinical Sciences  
School of Environment and Sustainability  
Veterinary Microbiology  
Archaeology and Anthropology  
Drama  
Plant Sciences  
Curriculum Studies  
Psychology  
Mechanical Engineering  
Law  
Management and Marketing  
History  
Johnson Shoyama Graduate School of Public Policy  
Educational Foundations  
Computer Science  
Education  
Philosophy

## **RENEWALS AND TENURE APPEAL COMMITTEE**

**15.8.5.2** The committee shall consist of twelve tenured or continuing status faculty members: nine employees and three senior administrators, selected from amongst Associate Deans, Vice-Deans, Deans, Executive Directors, and/or vice-Provosts. Members will be selected by the Nominations Committee of Council and will serve a three year term. The Nominations Committee of Council shall strive to achieve a gender balance based on the overall membership of the General Academic assembly, and representation from a wide range of disciplinary areas based on the faculty complement in each College. Each year three new employees and one new senior administrator will be appointed to serve on the committee. Each year the chair of the committee shall be selected by mutual agreement between the Association and the Employer from amongst the committee members. Members may not serve as members of the University Review Committee during their term. A vacancy created by the resignation of a member will be filled by the Nominations Committee of Council for the remaining period of the term of that member.

### **GAA Members**

Winona Wheeler	Indigenous Studies	2022
Sylvia Abonyi	Community Health and Epidimology	2022
Tom Yates	Soil Science	2022
Sherif Faried	Electrical and Computer Engineering	2020
Alison Norlen	Art and Art History	2020
Xulin Guo	Geography and Planning	2020
Ralph Deters	Computer Science	2021
Roy Dobson	Pharmacy and Nutrition	2021
Maureen Reed	School of Environment and Sustainability	2021

### **Senior Administrators**

TBD		2022
Chad London	Dean, College of Kinesiology	2020
Jack Gray	Vice-Dean Research, Scholarly, and Artistic Work, College of Arts and Science	2021

## OTHER COMMITTEES 2018-19

### RECREATION AND ATHLETICS ADVISORY COUNCIL

- Recommends on the recreation and athletic fees charged to students and reviews reports on expenditures. Committee includes 3 faculty members (at least 2 of whom are not members of the College of Kinesiology). Members may serve a maximum of two consecutive terms.

Noelle Rohatinsky	Nursing	2020
Angela Lieverse	Archaeology and Anthropology	2020
Dwight Makaroff	Computer Science	2021

### JOINT COMMITTEE ON CHAIRS AND PROFESSORSHIPS

- Brings the approving bodies of Council and the Board of Governors to a joint table to ensure the academic and financial concerns regarding chairs and professorships can be addressed simultaneously.

Jim Bassinger (chair)	Vice-Provost Faculty Relations
TBD	(VP Research designate)
Beth Bilson	University Secretary
Terry Summers	Controller
Debra Pozega-Osburn	Vice-President, University Relations
Grant Devine	Board of Governors representative
Jane Alcorn	Research, scholarly and artistic work committee of Council
John Gjevre	Council Member
Jacque Zinkowski	Committee Secretary – Faculty Relations Officer

### POLICY OVERSIGHT COMMITTEE

- Advises on the development and approval of university-level policies and procedures

Charles Smith	STM	2020
Marcel D'Eon	Community Health and Epidemiology	2020

**AGENDA ITEM NO: 8.4**

**UNIVERSITY COUNCIL  
NOMINATIONS COMMITTEE  
REQUEST FOR DECISION**

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**PRESENTED BY:** Stephen Urquhart, vice-chair,  
Nominations committee of Council

**DATE OF MEETING:** May 23, 2018

**SUBJECT:** **Nomination of the vice-chair of University Council for 2019/20**

**DECISION REQUESTED:**

*It is recommended: That Council approve the nomination of Dr. Pamela Downe to the position of vice-chair of University Council for 2019/20, effective July 1, 2019.*

**DISCUSSION SUMMARY:**

The nominations committee has recommended to the chair of Council, Dr. Jay Wilson, and he has agreed that Dr. Pamela Downe, associate professor in the Department of Archeology & Anthropology, be nominated for the position of vice-chair of University Council.

The nominations committee considered this nomination in camera at its meeting on May 8, 2019 while Dr. Downe recused herself from the meeting. Due to the conflict, the motion is being presented by the vice-chair of the nominations committee, Dr. Stephen Urquhart.

The vice-chair of Council is not to be a member of any committees of Council other than the coordinating committee. Dr. Downe is currently a member of the governance committee, and chair of the nominations committee. She has resigned from her position on the governance committee effective June 30, 2019. If Dr. Downe's nomination to the position of vice-chair of Council is successful, she will resign as a member and chair of the nominations committee also effective June 30, 2019.

**UNIVERSITY COUNCIL  
NOMINATIONS COMMITTEE  
REQUEST FOR DECISION**

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**PRESENTED BY:** Stephen Urquhart, vice-chair,  
Nominations committee of Council

**DATE OF MEETING:** May 23, 2018

**SUBJECT:** **Nominations for the Research, Scholarly and Artistic Works  
(RSAW) Committee of Council for 2019/20**

**DECISION REQUESTED:** *It is recommended:*

*That Council approve the nominations of the members and the  
chair of RSAW for 2019/20 effective July 1, 2019.*

**DISCUSSION SUMMARY:**

The nominations committee recommends the 2019/20 membership of RSAW, and the nomination of Dr. Jon Bath, professor in Art and Art History, to the position of chair of the RSAW committee.

The nominations committee considered this nomination of Dr. Jim Waldram as a member of the RSAW committee at its meeting on April 12, 2019. Dr. Pamela Downe, chair of the nominations committee, recused herself from chairing the meeting at that point in time, and the vice-chair took over chairing. Due to this conflict, the motion to recommend Dr. Waldram's nomination as member of RSAW is being presented by the vice-chair of the nominations committee, Dr. Stephen Urquhart.

## RESEARCH, SCHOLARLY AND ARTISTIC WORK COMMITTEE

- Reviews and advises Council on issues related to research, scholarly and artistic work including advising on research grant policies and the establishment of research centres.
- Memberships comprises 9 members of the GAA, at least 3 of whom will be elected members of Council; 2 of the 9 members will be assistant or associate deans with responsibility for research

### Council Members

Gordon Sarty	Psychology	2022
Rainer Dick	Physics and Engineering Physics	2020
Phil Woods	Associate Dean (Research), Nursing	2022
Cheryl Waldner	Large Animal Clinical Sciences	2021

### General Academic Assembly Members

Jane Alcorn	Assoc. Dean Research, Pharm. & Nutrition	2021
Jon Bath (Chair)	Art and Art History	2021
Sarah Buhler	Law	2021
John Farthing	Kinesiology	To Dec. 31 2019
Lori Bradford	School of Environment and Sustainability	Jan. 1, 2019 to June 30, 2022
Jim Waldram	Archaeology and Anthropology	2022

### Other Members

Karen Chad	Vice-President Research (ex officio)
Trever Crowe	Interim Dean, Graduate and Postdoctoral Studies (ex officio)
Carlos Munoz Pimentel	USSU designate
Mohamad Wajih Alam	GSA designate

### Resource Members

Dena McMartin	Director of Research Services and Assistant Vice-president Research
Laura Zink	Director, Strategic Research Initiatives
Amanda Storey	Committee Secretary, Office of the University Secretary

**UNIVERSITY COUNCIL  
ACADEMIC PROGRAMS COMMITTEE  
REQUEST FOR DECISION**

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**PRESENTED BY:** Roy Dobson, chair, Academic Programs Committee

**DATE OF MEETING:** May 23, 2019

**SUBJECT:** Bachelor of Science Kinesiology/Bachelor of Education  
Combined Program

**DECISION REQUESTED:** *It is recommended:*

*That Council approve the proposed changes to Bachelor of Science Kinesiology/Bachelor of Education combined program, effective May 2020.*

**PURPOSE:**

University Council is responsible for changes that degree programs that include a change to the qualifications for admission. Decisions regarding changes to admissions qualifications also require confirmation at University Senate.

**DISCUSSION SUMMARY:**

The College of Kinesiology and the College of Education are proposing changes to their current combined program. Currently students intent on teaching Physical Education at the secondary level are required to complete three years of study within the College of Kinesiology before applying for admission to the College of Education. This model of admission is challenging, as the College of Kinesiology is highly competitive (admissions average in the range of 84% or higher), and difficult for some students striving to teach Physical Education to gain admission to Kinesiology. Both both colleges are finding that, although there are 25 seats allocated for students in the combined program, enrolment is usually significantly lower.

With the proposed changes, applicants entering the combined program must meet the admissions requirements for the College of Kinesiology, though they are being admitted concurrently into the College of Education and the College of Kinesiology. This is a change from the current posted requirements for admission to the College of Education, and will, therefore, require approval at Council and confirmation at Senate.

The remaining changes proposed adjust the program requirements so as to ensure students enroll in courses in the College of Education from the start of their time in

the combined program. This will ensure that this combined program route more closely parallels other B.Ed. program routes.

The proposed changes also see a reduction of 3cu for the combined program, with an increase in the number of Education credit units, and a reduction in the number of credit units from Arts and Science and ensure that students are engaged in both Education and Kinesiology courses throughout their 5-year program.

**FURTHER ACTION REQUIRED:**

The changes to the qualifications for admission to the Bachelor of Education component of the combined program will require confirmation by University Senate at its October 2019 meeting,

**ATTACHMENT:**

**1. Proposal for Academic/Curricular Change – Bachelor of Science Kinesiology/Bachelor of Education Combined Program**



## Proposal for Academic or Curricular Change

### PROPOSAL IDENTIFICATION

**Title:** Bachelor of Science Kinesiology/Bachelor of Education Combined Program Curricular Change

**Degree(s):** Bachelor of Science Kinesiology and Bachelor of Education

**Field(s) of Specialization:** Physical Education

**Level(s) of Concentration:** Undergraduate

**Degree College:** College of Kinesiology and College of Education

**Contact Person(s):**

- College of Education: Dr. Dawn C. Wallin, 966-7560; dawn.wallin@usask.ca
- College of Kinesiology: Dr. Kent Kowalski, 966-1079; kent.kowalski@usask.ca

**Proposed Date of Implementation:** May, 2020/2021 (202005)

### PROPOSAL DOCUMENT

#### 1. Academic Justification - Describe why the program would be a useful addition to the university, from an academic programming perspective.

This program is a revision or a new iteration of the existing Combined Bachelor of Science Kinesiology/Bachelor of Education Program. The current 168 credit unit program is designed to be completed in five years plus a Spring and Summer session. Currently, students apply to the College of Kinesiology for three years of study and, after completing the necessary prerequisite courses, students must re-apply to the College of Education to complete two additional years of coursework. Unfortunately, given the highly competitive nature of admission to the College of Kinesiology (admission average in the range of 84% or higher), it is very difficult for some students striving to teach Physical Education at the secondary level to gain admission into Kinesiology, which is the first step in entering the current Combined program. Only those students who complete three years in Kinesiology can then apply to the College of Education to finish the Combined program requirements. Although we have approximately 25 seats available for students in the Combined program, we have realized an enrolment of only 11 students in some years.

The Admissions process will now be a one-time admission with students admitted to the College of Education as the home college even though students will be considered to be students of both colleges during their time in the program. The proposed revisions will allow students to apply to the integrated program in Year 1. This change will offer some sense of security for students. They will know that they are accepted into the program for the entire time frame as College of Education and College of Kinesiology students to ensure they can (and will) pursue this path to reach their goal. It will also allow the Colleges of Education and Kinesiology to meet our enrolment target of 30 students per year for this program route. Since students will now be applying to a separate pool for this specific program route, we anticipate these changes will allow us to meet our enrolment target in 2020-2021 and on.

In order to teach Physical Education at the secondary level, students must either pursue this program route or apply to the direct entry program with a completed Bachelor of Science in Kinesiology degree. As such, the teaching area of Physical Education is currently undersubscribed at the Secondary level.

**b. Giving consideration to strategic objectives, specify how the new program fits the university signature areas and/or integrated plan areas, and/or the college/school, and/or department plans.**

This program prepares prospective teachers of Physical Education for secondary school contexts. To that end, the program revisions meet the objectives of the College of Kinesiology in its efforts to provide programming for specializations in Physical Education, Health and Wellness, and the objectives of the College of Education for teacher preparation.

**c. Is there a particular student demographic this program is targeted towards and, if so, what is that target? (e.g., Aboriginal, mature, international, returning)**

The target audience is individuals who are interested in becoming educators with a specialization in Physical Education, Health and Wellness at the secondary level. The program is a direct entry model from high school, but also targets upper year transfer students.

**d. What are the most similar competing programs in Saskatchewan, and in Canada? How is this program different?**

This is not a new program. The program changes proposed here, if approved, will eventually replace the existing Combined program as new students are admitted into the program. Students in the current program will complete the existing program requirements. Therefore, there is no competing program at the University of Saskatchewan. There exists a competing program at the University of Regina that prepares Physical Education teachers primarily for Regina and southern Saskatchewan. Given the need for secondary Physical Education teachers, and the reputation of the USask Kinesiology program, the market for this program is strong, and USask graduates from the program are usually employed by the end of their program in Saskatoon schools, in the province, and beyond.

## **2. Admissions**

**a. What are the admissions requirements of this program?**

For the current Combined Program, applicants apply to the College of Kinesiology for Year 1. There is no change to the Admission requirements; they remain the same as they are now for students entering Year 1 of the Combined Program (i.e., applicants must meet admission requirements for the College of Kinesiology). The admission requirements outlined below remain applicable to students entering directly from high school and applying as post-secondary transfer students.

Admission requirements will include:

**1. Required high school classes:**

- Biology 30
- Chemistry 30 or Physics 30
- Foundations of Mathematics 30 or Pre-Calculus 30

**Transfer students (with 18 transferable credits) must meet these pre-requisite requirements.**

## 2. Required admission average:

- **Regular admission: 70%**  
All applicants will be ranked by admission average and spaces will be offered to the top applicants.
- **Transfer admission: 60%**  
All applicants will be ranked by admission average and spaces will be offered to the top applicants.

## 3. English proficiency

Applicants whose first language is not English, may have to prove [proficiency in English](#) before admission.

### Special (Mature) Admission:

- Proof of age (21 or older).
- A written submission demonstrating capacity to undertake university-level studies.
- Transcripts of any secondary or post-secondary coursework.
- Less than 18 credit units of transferable post-secondary coursework.
- Résumé.
- Proficiency in English.

### Selection Criteria:

- **Regular Admission: Academic record – 100% weighting**
  - Competitive ranked admission (top down average) is in place to manage enrolment in college.
  - Physical Education (PE) 30 may be used in the calculation of the five subject high school average if including it advantages the applicant.
  - PE 20 can be used in the calculation of the of the five subject high school admission average if the student has not taken PE 30; however, PE 30 must be taken in semester 2.
- **Special (Mature) Admission: Special admission package – 100% weighting**
  - Applicants are admitted at the discretion of the college. The admission decision is based on the applicant's written submission and demonstrated academic potential.

### Categories of Applicants:

- **Regular Admission**
  - Admission is based on successful completion of secondary level standing with a minimum overall average of 70% in the required subjects; or admission is based on the successful completion of at least 18 credit units of transferable university-level coursework at a recognized and/or accredited post-secondary institution, with an average of at least 60%.
- **Special (Mature) Admission**
  - Special (Mature) Admission is available to applicants who do not qualify for Regular Admission. Applicants must be 21 years of age or older by the first day of classes, be entering their first-year of study, and have attempted or completed less than 18 credit units of transferable university-level coursework. Applicants must submit a special admission

package including proof of age, a written request for Special (Mature) Admission that demonstrates reasonable probability of academic success and a summary of work and personal experience since leaving school. Academic transcripts must be submitted if any Grade 12 or post-secondary courses have been completed.

- **Indigenous Equity Admission**

- One first-year seat is designated for admission for direct and transfer entry in the Combined Kin/Ed Program for students of Canadian Indigenous descent. Students are required to see an academic advisor in the College of Kinesiology or the College of Education and provide proof of Indigenous ancestry. Students who have self-declared are eligible to be considered for admission if they have an admission average of 75% or higher OR if they fall within 5% of the minimum average admitted to the Combined Kin/Ed Program.

### **3. Description of the program**

#### **a. What are the curricular objectives, and how are these accomplished?**

The general objectives of the program route include the development of graduates with specialized expertise in the area of Physical Education, Health and Wellness who are able to:

- Engage and communicate as professionals in respectful, mutually supportive, and equitable ways;
- Employ strategies and technologies to create inclusive learning environments for Physical Education, Health and Wellness;
- Develop lesson plans, units of study, and year plans for Physical Education, Health and Wellness that incorporate Saskatchewan curricula and learning outcomes that are appropriate to diverse learners.
- Intentionally select and use instructional strategies in Physical Education, Health and Wellness classes that support learner growth as social, intellectual, physical, and spiritual beings;
- Intentionally select and use assessment strategies of, as, and for learning for courses related to Physical Education, Health and Wellness.
- Make educational decisions based on knowledge of teacher professional codes of conduct, educational policy, and law.
- Demonstrate understanding of Canada's colonial history and its impact on the contemporary relationships and educational experiences of First Nations, Métis, Inuit, newcomer, and settler societies;
- Embed the spirit and practice of reconciliation in educational efforts, and;
- Articulate and define one's own educational perspectives, strengths, and worldview, while demonstrating mutual respect for the diverse perspectives, strengths, and worldviews of others and their communities.

#### **b. Describe the modes of delivery, experiential learning opportunities, and general teaching philosophy relevant to the programming. Where appropriate, include information about whether this program is being delivered in a distributed format.**

The new program will be delivered similarly to what is currently delivered. Most courses are delivered in a traditional face-to-face format. Some courses are activity courses in which students are engaged in physical activities about which they are learning. Some courses have been developed for online or blended environments. Some courses are field experience courses that take place in schools or community organizations to provide the opportunity to develop teaching and/or coaching expertise. Some courses

allow for the opportunity to study or work in schools abroad. The philosophy of the program, and for teaching, is one that blends academic coursework with relevant, engaging field experiences during which students enact the instructional, curricular and assessment strategies for learning in professional contexts that support their field of expertise in Physical Education, Health and Wellness. Students in the program will receive opportunities to practice their learning in rural, First Nations, urban and potentially international school contexts, across different grade levels, paired with mentor teachers with experience in the field of study.

**c. Provide an overview of the curriculum mapping.**

Please see Appendix A for course design that compares the current program to the proposed program. Currently, students complete the majority of the Bachelor of Science Kinesiology degree prior to applying to the College of Education and enrolling in Education-specific courses. The major difference that would be enacted with this change includes a move towards an integrated program approach. Students will apply to the program for their first year and engage in coursework in both the College of Education and the College of Kinesiology during all five years of the program. They would begin with most courses focusing on developing their specialization in Kinesiology with one or two education courses per year in years one to three, as well as a two-week school field experience. As they complete more of their Kinesiology courses, there is a gradual increase in the number of Education courses by the end of the program as teacher candidates develop their teaching ability in their areas of expertise. In all years of study, there is some inclusion of coursework from both colleges. Both colleges agree that we will be able to build a stronger sense of professional community across our colleges. We will also support the development of students' identities as teachers of Physical Education as they learn concurrently to develop their area of specialization with how to teach that area of specialization.

The essential program differences between the current and proposed program include the following:

- It reduces the program length from 168 credit units to 165 credit units. It would increase the number of Education credit units from 54 to 60; the number of Kinesiology credit units would remain the same at 69, and; the number of credit units of other courses (e.g., Arts and Science) has been reduced from 45 to 36;
- It more accurately parallels the credit units of other Bachelor of Education program routes and strengthens the Education portion of the program;
- It eliminates 2-credit unit KINA (Kinesiology Activity) courses in favour of 3-credit unit KIN courses;
- It reduces coursework that is not directly tied to teacher certification in order to make room for either more coursework that specializes in the Teaching Area of Physical Education, or Education; and,
- It significantly reduces program electives in favour of required coursework focusing on areas deemed to be essential for prospective teachers who specialize in Physical Education, Health and Wellness.

Education course changes include:

- The addition of four Education courses:
  - EFDT 101.3: Introduction to Education;
  - ECUR 165.3: Introduction to Teaching in Secondary Schools;
  - EPSE 202.3: Psychological Foundations of Teaching and Learning (equivalent to the current EPSE 302.3);
  - ECUR 265: Teaching for Reconciliation in the K to 12 Curricular or EFDT 265.3: Foundations for First Nations, Métis, and Inuit Teaching and Learning; and,

- EPSE 348.3: Assessing Learning in the Classroom.

These courses currently exist in the Education Direct Entry Program, and were not part of the Combined Kin/Ed program (except that EPSE 202.3 is equivalent to the existing EPSE 302.3: Situated Learners: Contexts of Learning and Development). These additions provide the opportunity to more closely parallel the Education coursework from other program routes. These courses have been introduced by eliminating six credit units of Education electives from year four and eliminating one three-credit unit unrestricted elective.

- The addition of field course opportunities that were not available previously:
  - EDST 213.0: Student Teaching in Rural and First Nations Schools; (two-week placement in a rural or First Nations school);
  - EXPR 423.3/EXPR 425.12 (alternate practica for 10 weeks in a Saskatchewan school and then 6 weeks in a community based education site);
  - EXPR 424.3/EXPR 425.12 (alternate practica for 10 weeks in a Saskatchewan school and then 6 weeks in an international school site).

These additions provide the opportunity to more closely parallel the Education coursework from the Direct Entry Program route and provide some alternative field-based teaching possibilities for students. It does not add course credits to the program. Given the introduction of the field experience EDST 213.0 in second year, the College of Education is replacing the field experience EDST 321.3: Field Experience Learning in Contexts with KIN 451.3: Community Service Learning in a School Setting which was designed as a field experience in a school setting focused on physical activity and nutrition, and currently is an elective option.

The main changes to Kinesiology course requirements are as follows:

- The required KIN courses have increased from 42 credit units to 51 credit units.
- KIN 232.3: Physical Activity in Society will replace KIN 223.3: Contemporary Health Issues.
  - KIN 232.3 is now a requirement for the Exercise and Sport Studies route in the College of Kinesiology, so this replacement will make the requirement consistent for both programs. In addition, because of the large number of credit units in the overall program, there was a goal to, at minimum, not increase the overall KIN credit unit requirements (i.e., 69 credit units). The addition of new upper-level required course (e.g., KIN 321, KIN 451) without any deletions would have resulted in an overall increase in Kinesiology course credit units. KIN 223 is not required for the Exercise and Sport Studies route in the College of Kinesiology.
- KIN 321.3: Prevention and Care of Sports, Recreational and School Injuries and KIN 451.3: Community Services Learning in a School Setting are added as required KIN courses.
  - Because of the direct focus on and application to the school setting in both KIN 321 and KIN 451 they were deemed to be desirable courses for the Combined Program.
- KIN 306.3: Introduction to Indigenous Wellness is added as a required KIN course to replace INDG 107.3: Introduction to Canadian Indigenous Studies.
  - KIN 306.3 is now a requirement for the Exercise and Sport Studies route in the College of Kinesiology, so this replacement would make that requirement consistent for both degree programs.

- The Restricted KIN Elective course requirement decreased from 9 credit units to 0 credit units.
  - This change is to accommodate the inclusion of KIN 306, KIN 321, and KIN 451 as required KIN courses without adding to the total number of KIN credit units.
- The Unrestricted KIN Elective course requirement decreased from 3 credit units to 0 credit units.
- The Outside Required course requirement decreased from 27 credit units to 21 credit units.
  - To accommodate the addition of KIN 306 to the list of required KIN courses, as well as to reduce the number of overall credit units for the program (i.e., the Social Sciences/Humanities 3 credit unit requirement was removed).
- The Applied Kinesiology/Kinesiology Activity course requirement remains at 18 credit units:
  - KIN 150.3: How Body Moves I has been retained.
  - KIN 250.3: How the Body Moves II will replace KIN 281.3: Fitness Foundations for Life.
  - Four KIN Activity 3-credit-unit course electives have been added.

The reduction in Arts and Science courses includes the following:

- INDG 107.3: Introduction to Canadian Indigenous Studies, which will be replaced by KIN 306.3: Introduction to Indigenous Wellness in Year 3; and,
- 3-6 credit units of external elective(s), depending on student's choice of Teaching Area 2.

None of these courses are required for teacher certification, and their elimination helps to support the reduction in credit units in the program from 168 to 165. There remain 30-33 credit units of Arts and Science coursework, 3 credit units of Medicine coursework (i.e., ACB 221), and possibly 3 credit units of Agriculture and Bioresources coursework (i.e., PLSC 214.3) in the proposed program change.

**d. Identify where the opportunities for synthesis, analysis, application, critical thinking, problem solving are, and other relevant identifiers.**

This is not a new program. The focus remains the same in that students apply the understandings and knowledge they gain in their specialization of Physical Education, Health and Wellness to field-based opportunities in schools where they use problem-solving, critical and creative thinking in their work with children on curricular outcomes, instruction and assessment.

**e. Explain the comprehensive breadth of the program.**

This is not a new program. The breadth of the program remains the same, just distributed in a more integrated fashion in the new design. We believe the new design will be more comprehensive as students will learn about their area of specialization at the same time as they are developing their identities as professional educators. There will be a more holistic emphasis on developing the learner concurrently as a specialist and a teacher.

**f. Referring to the university "Learning Charter", explain how the 5 learning goals are addressed, and what degree attributes and skills will be acquired by graduates of the program.**

This is not a new program. The learning goals remain the same. The skills of the graduates are listed in the Description of the Program (3a) and will not be repeated here.

**g. Describe how students can enter this program from other programs (program transferability).**

Through the admissions process, students are able to enter the program as upper year transfer students. In addition to the application form, the required pre-requisite high school subjects, and minimum admission average are required.

If students wish to leave this new revised program to pursue only a Bachelor of Science in Kinesiology or only a Bachelor of Education degree, they will have to apply to transfer to the Kinesiology program or the Education program. It is not possible to achieve only one of the two degrees through this program.

**h. Specify the criteria that will be used to evaluate whether the program is a success within a timeframe clearly specified by the proponents in the proposal.**

This is not a new program. The program is currently successful as we have a steady number of applicants and graduates each year who are employed in the K-12 school system as well as in other community or business contexts where they combine their teaching skills with their specialist knowledge in Physical Education, Health and Wellness. We determine success if we are able to graduate a cohort of 25-30 students annually.

**i. If applicable, is accreditation or certification available, and if so how will the program meet professional standard criteria. Specify in the budget below any costs that may be associated.**

The program is designed to meet Saskatchewan Professional Teacher Regulatory Board (SPTRB) standards for teacher certification in the province of Saskatchewan. There are no additional costs associated with this as the application to be certified is a responsibility of students at the end of the program.

**4. Consultation**

**a. Describe how the program relates to existing programs in the department, in the college or school, and with other colleges. Establish where students from other programs may benefit from courses in this program. Does the proposed program lead into other programs offered at the university or elsewhere?**

This is a program redesign. Students who are currently enrolled will complete existing program requirements. New admits will begin the program with the new revised program requirements. Given that most of the courses are existing courses, and all new courses are being redesigned to better serve existing programs, there will not be difficulty with students being able to access required courses. Typically, students from other programs are not able to register for Education courses. Students from other programs may be able to register for Kinesiology courses if there are seats available and if students have the necessary pre-requisite courses.

**b. List units that were consulted formally, and provide a summary of how consultation was conducted and how concerns that were raised in consultations have been addressed. Attach the relevant communication in an appendix.**

College of Arts and Science  
See Appendix B.

**c. Provide evidence of consultation with the University Library to ensure that appropriate library resources are available.**

Given that this is a redesign and not a new program, there was no need to consult with the Library as all resources are currently available.

**d. List other pertinent consultations and evidence of support, if applicable (e.g., professional associations, accreditation bodies, potential employers, etc.)**

N/A. This is not a new program, and partners have been very supportive of the Combined program.

**5. Budget**

**a. How many instructors will participate in teaching, advising and other activities related to core program delivery (not including distribution/ breadth requirements or electives)? (estimate the percentage time for each person).**

This is not a new program. The number remains similar to the other program, but in fact, there are fewer credit units in this program, reduced from 168 to 165. In addition, the six 2-credit-unit KINA courses will be replaced by four, 3-credit-unit KIN (Kinesiology Activity) courses.

**b. What courses or programs are being eliminated in order to provide time to teach the additional courses?**

The current Combined Kin/Ed program will be phased out and replaced with the revised integrated Kin/Ed program.

**c. How are the teaching assignments of each unit and instructor affected by this proposal?**

Given the size of the annual cohort (30 students), it is anticipated that the Kin/Ed students will funnel into the regular larger class sizes of the first and second year Education courses. The College of Education has already been planning for this with its targeted enrolment planning, and therefore these students will be absorbed into the first and second year courses with no additional teaching assignments necessary. Currently, students looking to complete Kinesiology degree requirements are absorbed into courses for other program routes. With the new program, it is likely that sections of KIN 150, KIN 250, and KIN 451 will be added, to accommodate the increased number of Combined program students. However, these additions will allow more students in both Kinesiology and the Combined program to access these high demand courses, which would already be beneficial to accommodate current enrolment growth in Kinesiology. Upper year courses in Education are already taught in cohorts for Combined Kinesiology students unless numbers are low enough to incorporate them into existing courses. To that end, there will be no great changes to programming for either college as this is not a new program and will not seriously impact current enrolment planning.

**d. Describe budget allocations and how the unit resources are reallocated to accommodate this proposal. (Unit administrative support, space issues, class room availability, studio/practice rooms laboratory/clinical or other instructional space requirements).**

This is not a new program. No reallocations are anticipated.

**e. If this program is to be offered in a distributed context, please describe the costs associated with this approach of delivery and how these costs will be covered.**

N/A

**f. If this is an interdisciplinary program, please indicate whether there is a pool of resources available from other colleges involved in the program.**

Both colleges are working together with central administration to determine how the RCM model will work for an integrated program model. TABBS Joint Program Analysis is attached. See Appendix C.

**g. What scholarships will students be able to apply for, and how many? What other provisions are being provided for student financial aid and to promote accessibility of the program?**

This is no different from what currently exists. Terms of Reference for some awards may need to be updated so entering students are eligible to apply.

**h. What is the program tuition? Will the program utilize a special tuition model or standard tuition categories? (The approval authority for tuition is the Board of Governors).**

Standard tuition that currently exists applies.

**i. What are the estimated costs of program delivery, based on the total time commitment estimates provided? (Use TABBS information, as provided by the College/School financial officer)**

No different from what currently exists except that the program is now 3 credit units shorter.

**j. What is the enrolment target for the program? How many years to reach this target? What is the minimum enrolment, below which the program ceases to be feasible? What is the maximum enrolment, given the limitations of the resources allocated to the program?**

The target is 30 students. We can reach the target immediately as there are many students desiring to get into the program.

**k. What are the total expected revenues at the target enrolment level, separated into core program delivery and distribution/breadth requirements or electives? What portion of this expected revenue can be thought of as incremental (or new) revenue?**

This is not a new program and, as such, new revenue is not anticipated.

**l. At what enrolment number will this program be independently sustainable? If this enrolment number is higher than the enrolment target, where will the resources come from to sustain the program, and what commitments define the supply of those resources?**

The program is currently sustainable. Students are either placed in their own cohort or absorbed into the larger direct entry program for the College of Education.

**m. Proponents are required to clearly explain the total incremental costs of the program. This is to be expressed as: (i) total cost of resources needed to deliver the program: (ii) existing resources (including in-kind and tagged as such) applied against the total cost: and (iii) a listing of those resource costs that will require additional funding (including new in-kind support).**

This is a revision to the program, not a new program. Costs are already sustainable and there are no incremental costs.

- n. List all new funding sources and amounts (including in-kind) and the anticipated contribution of each to offsetting increment program costs. Please identify if any indicated funding is contingent on subsequent approval by a funding authority and/or future conditions. Also indicate under what conditions the program is expected to be cost neutral. The proponents should also indicated any anticipated surpluses/deficits associated with the new program

N/A

**College Statements (Kinesiology and Education): Appendix D**

Please provide here or attach to the online portal, a statement from the College which contains the following:

- Recommendation from the College regarding the program
- Description of the College process used to arrive at that recommendation
- Summary of issues that the College discussed and how they were resolved

**Related Documentation**

At the online portal, attach any related documentation which is relevant to this proposal to the online portal, such as:

- Excerpts from the College Plan and Planning Parameters
- SPR recommendations
- Relevant sections of the College plan
- Accreditation review recommendations
- Letters of support
- Memos of consultation: Appendix B

It is particularly important for Council committees to know if a curriculum changes are being made in response to College Plans and Planning Parameters, review recommendations or accreditation recommendations.

**Consultation Forms** At the online portal, attach the following forms, as required

**Required for all submissions:**

- Consultation with the Registrar form: Appendix E

**Required for all new courses:**

- Course proposal forms N/A
- OR Calendar-draft list of new and revised courses Appendix F

**Required if resources needed:**

- Information Technology Requirements form N/A
- Library Requirements form N/A
- Physical Resource Requirements form N/A
- Budget Consultation form N/A

## Appendix A: Program Design

Legend: Kinesiology (Green); Education (Purple); Arts and Science (Blue). Changes between programs (Yellow)

### Current Program

Year One	Credits
KIN 121.3, KIN 122.3, KIN 150.3	9
BIOL 120.3, BIOL 224.3, Math 104.3 or Math 110.3, ENG 1XX.3, ENG 1XX.3, SS/H elective (.3), INDG (.3)	21
<b>Spring After Year One</b>	
Two of KIN 231.3, KIN 225.3, KIN 226.3	6
<b>Year Two</b>	
KIN 225.3 or KIN 226.3 or KIN 231.3; KIN 222.3; KIN 240.3, Kin 281.3;	16
KINA 200.2, KINA 211.2	12
ACB 221.3, STAT 245.3 or PLSC 214.3 or PSY 233.3, Teaching Area 2(.3), Teaching Area 2 (.3)	
<b>Spring After Year Two</b>	
KIN 320.3	3
<b>Year Three</b>	
KIN 223.3, KIN 322.3, KIN 341.3, KIN 380.3, KIN elective (.3), KIN elective (.3)	24
KINA 210.2, KINA 235.2, KINA elective (.2)	
Teaching Area 2(.3), Teaching Area 2 (.3), Teaching Area 2 (.3)	9
<b>Spring After Year Three</b>	
Open or completing coursework not completed in previous years	
<b>Year Four</b>	
KIN elective (.3) or Education elective (.3)	3
ECUR 320.3, ECUR 325.3, ECUR 357.3, ECUR XXX.3 (TA 2 Methods), EFDT 301.3, EPSE 302.3; EFDT 315.3, EDST 321.3, EDST 322.3	27
<b>Spring After Year Four</b>	
KINA elective (.2), KIN elective (.3)	5
unrestricted elective (.3) (KIN, EDUC, A & S)	3
<b>Year Five</b>	
KIN 423.3, KIN 432.3	6
EPSE 390.3, EADM/ECUR/EPSE/EFDT 411.3, EXPR 422.15	24
Standard First Aid & CPR-C	
<b>Total Credit Units: 168</b>	69
	54
	45

### Proposed Program

Year One	Credits
KIN 121.3, KIN 122.3, KIN 150.3, KIN 250.3	12
EFDT 101.3, ECUR 165.3	6
BIOL 120.3, BIOL 224.3, Math 104.3 or Math 110.3, ENG 1XX.3	12
<b>Spring After Year One</b>	
Two of KIN 231.3, KIN 232.3, KIN 225.3, KIN 226.3	6
<b>Year Two</b>	
KIN 225.3 or KIN 232.3; KIN 226.3 or KIN 231.3; KIN 222.3; KIN 240.3, KIN XXX.3 or alternative to replace KIN 281.3	15
EPSE 202.3	3
ACB 221.3, ENG 1XX.3, STAT 245.3 or PLSC 214.3 or PSY 233.3, Teaching Area 2(.3), Teaching Area 2 (.3)	15
<b>Spring After Year Two</b>	
KIN 320.3	3
EDST 213.0	
<b>Year Three</b>	
KIN XXX.3 or alternative to replace KINA 211.2; KIN 322.3, KIN 341.3, KIN 380.3, KIN 321.3, KIN 306.3	18
ECUR 265.3 or EFDT 265.3	3
Teaching Area 2(.3), Teaching Area 2 (.3), Teaching Area 2 (.3)	9
<b>Spring After Year Three</b>	
KIN 451.3 (replaces EDST 321.3)	3
<b>Year Four</b>	
KIN XXX.3 or alternative to replace KINA 210.2	3
ECUR 320.3, ECUR 325.3, ECUR 357.3, ECUR XXX.3 (TA 2 Methods), EFDT 301.3, EPSE 348.3; EFDT 315.3, EDST 322.3, EPSE 390.3	27
<b>Spring After Year Four (Open)</b>	
<b>Year Five</b>	
KIN 423.3, KIN 432.3, KIN XXX.3 or alternative to replace KINA 235.2	9
EADM/ECUR/EPSE/EFDT 411.3, EXPR 422.15 or EXPR 423.3 plus EXPR 425.12 or EXPR 424.3 plus EXPR 425.12	21
Standard First Aid & CPR-C	
<b>Total Credit Units: 165</b>	69
	60
	36

## Appendix B: Consultation with the College of Arts and Science

*A consultation meeting with the College of Arts and Science was held on March 21, 2019 between Chad London from the College of Kinesiology, Gordon DesBrisay from the College of Arts and Science, and Michelle Prytula from the College of Education. Discussed were the need for a separate entrance pathway for the combined Kin/Ed. Degree, current enrollment numbers, the challenges in the field regarding the low enrolments and the potential for increased enrolments with the creation of a new pathway. Also discussed was the repatriated courses, the addition of an additional English course, and other elements of the joint degree program. Dr. DesBrisay understood the need for the program changes and separate entrance pathway and was going to take the information back to his team, and indicated that he would contact the Deans if there were any questions or other concerns.*

An email from Dr. DesBrisay is included below.

**From:** "DesBrisay, Gordon" <[gordon.desbrisay@usask.ca](mailto:gordon.desbrisay@usask.ca)>  
**Date:** March 21, 2019 at 4:28:40 PM MDT  
**To:** "Prytula, Michelle" <[michelle.prytula@usask.ca](mailto:michelle.prytula@usask.ca)>, "London, Chad" <[chad.london@usask.ca](mailto:chad.london@usask.ca)>  
**Cc:** "Reader, Carol" <[carol.reader@usask.ca](mailto:carol.reader@usask.ca)>, "Davenport, Amanda" <[amanda.davenport@usask.ca](mailto:amanda.davenport@usask.ca)>, "Bonham-Smith, Peta" <[peta.bonhams@usask.ca](mailto:peta.bonhams@usask.ca)>, "Ellis, Tom" <[thomas.ellis@usask.ca](mailto:thomas.ellis@usask.ca)>, "Wilson, Kate" <[kate.wilson@usask.ca](mailto:kate.wilson@usask.ca)>, "Gillis, Barbara" <[barb.gillis@usask.ca](mailto:barb.gillis@usask.ca)>, "Adams, Toryn" <[toryn.adams@usask.ca](mailto:toryn.adams@usask.ca)>  
**Subject:** Kin/Ed and Arts and Science

Hi Michelle and Chad,

Thanks for the meeting this morning and for carefully setting out your plans for revising the Kin/Ed program, and for considering how this might impact Arts and Science.

Peta, Barb, Tom and I have discussed the matter, and we are pleased to offer the support of Arts and Science. If you need a letter to that effect, I'll be glad to provide one.

Best wishes,

Gordon

*Gordon DesBrisay, Ph.D.*

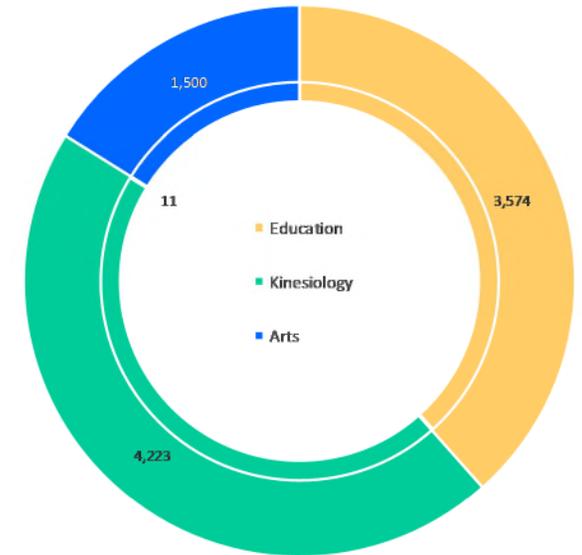
Vice-Dean, Academic  
& Associate Professor of History  
College of Arts and Science  
University of Saskatchewan  
9 Campus Drive  
Saskatoon, SK S7N 5A5  
Tel: (306) 966-2644  
Email: [gordon.desbrisay@usask.ca](mailto:gordon.desbrisay@usask.ca)

## Appendix C: TABBS Joint Program Analysis

### TABBS Joint Program Analysis (Based on model to inform 2019/20 allocations)

		47%	53%	0%	Workings	Notes
		Education	Kinesiology	Arts		
Unrestricted provincial operating grant	FLE teaching activity	\$521	\$899	\$391	\$1,303 per FLE	Grant times 30% divided by total weighted FLE
	Student Headcount	\$395	\$446		\$841 per student	Grant times 10% divided by total weighted student headcount
	Qualifications awarded	\$941	\$941		\$4,706 per qualification	Grant times 10% divided by total weighted qualifications divided by 5yrs to apportion the amount over the life of the program
Tuition	Enrolment allocations	\$822	\$927			Based on proposed program
	Instruction allocations	\$1,932	\$2,204	\$1,109		Based on proposed program
Indirect Costs	Student Support	\$1,049	\$1,182		\$2,231 per student	Student support cost bin (after ISCAP) divided by student headcount
	Graduate Support					Not applicable
	Faculty/Staff Support					Costs only need to be modelled if additional faculty/instructors are required for the program
	Research Support					Not applicable
	Occupancy Support					Costs only need to be modelled if additional faculty/instructors are required for the program
	General Support					Costs only need to be modelled if additional faculty/instructors are required for the program

### Net TABBS Impact to Units



TABBS Net Impact	Education	Kinesiology	Arts	Total
	\$3,563	\$4,234	\$1,500	\$9,296
	38.3%	45.5%	16.1%	100.0%

50/50 figures	Education	Kinesiology	Arts
	3,574	4,223	1,500
	-11	11	

Unweighted 3 CUE	Current				
	Year	Education	Kinesiology	Arts	Total
	1	0	9	21	30
	2	0	22	12	34
	3	0	27	9	36
	4	27	0	3	30
	5	27	11	0	38
		54	69	45	168

Unweighted 3 CUE	Proposed				
	Year	Education	Kinesiology	Arts	Total
	1	6	12	12	30
	2	3	21	15	39
	3	3	21	9	33
	4	27	6	0	33
	5	21	9	0	30
		60	69	36	165

Tuition Rate	Current			
	2018/19 (3 cu)	\$644.10	\$638.70	\$615.90
Year	Education	Kinesiology	Arts	Total
1	\$ -	\$ 1,916	\$ 4,311	\$ 6,227
2	\$ -	\$ 4,684	\$ 2,464	\$ 7,147
3	\$ -	\$ 5,748	\$ 1,848	\$ 7,596
4	\$ 5,797	\$ -	\$ 616	\$ 6,413
5	\$ 5,797	\$ 2,342	\$ -	\$ 8,139
<b>Average (5yr)</b>	<b>\$ 2,319</b>	<b>\$ 2,938</b>	<b>\$ 1,848</b>	<b>\$ 7,104</b>
Enrolment	\$ 835	\$ 941	\$ -	\$ 1,776
Instruction	\$ 1,739	\$ 2,204	\$ 1,386	\$ 5,328
<b>Average Tuition</b>	<b>\$ 2,574</b>	<b>\$ 3,145</b>	<b>\$ 1,386</b>	<b>\$ 7,104</b>

Tuition Rate	Proposed			
	2018/19 (3 cu)	\$644.10	\$638.70	\$615.90
Year	Education	Kinesiology	Arts	Total
1	\$ 1,288	\$ 2,555	\$ 2,464	\$ 6,307
2	\$ 644	\$ 4,471	\$ 3,080	\$ 8,195
3	\$ 644	\$ 4,471	\$ 1,848	\$ 6,963
4	\$ 5,797	\$ 1,277	\$ -	\$ 7,074
5	\$ 4,509	\$ 1,916	\$ -	\$ 6,425
<b>Average (5yr)</b>	<b>\$ 2,576</b>	<b>\$ 2,938</b>	<b>\$ 1,478</b>	<b>\$ 6,993</b>
Enrolment	\$ 822	\$ 927	\$ -	\$ 1,748
Instruction	\$ 1,932	\$ 2,204	\$ 1,109	\$ 5,244
<b>Average Tuition</b>	<b>\$ 2,754</b>	<b>\$ 3,130</b>	<b>\$ 1,109</b>	<b>\$ 6,993</b>

Average weighting      1.0            1.5            1.25

Weighted 3 CUE	1.0	1.5	1.25
	0.00	13.50	26.25
	0.00	33.00	15.00
	0.00	40.50	11.25
	27.00	0.00	3.75
	27.00	16.50	0.00

<b>Average weighted 3 CUE over 5 yr period</b>	10.80	20.70	11.25	<b>42.75</b>
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<b>Average weighted FLE over 5 yr period</b>	0.36	0.69	0.38	<b>1.43</b>
--	------	------	------	-------------

Average weighting      1.0            1.5            1.25

Weighted 3 CUE	1.0	1.5	1.25
	6.00	18.00	15.00
	3.00	31.50	18.75
	3.00	31.50	11.25
	27.00	9.00	0.00
	21.00	13.50	0.00

<b>Average weighted 3 CUE over 5 yr period</b>	12.00	20.70	9.00	<b>41.70</b>
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<b>Average weighted FLE over 5 yr period</b>	0.40	0.69	0.30	<b>1.39</b>
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## Appendix D: College Statements



March 11, 2019

Academic Programs Committee of University Council  
Office of the University Secretary  
University of Saskatchewan  
E290 Administration Building  
105 Administration Place  
Saskatoon, SK S7N 5A2

To Whom It May Concern:

I am writing to express my full support of the proposed curricular changes to the Bachelor of Science Kinesiology/Bachelor of Education Combined program as outlined in the curriculum documentation. This collaborative program of the College of Education and College of Kinesiology has a longstanding record of success in providing a high quality program that meets the needs of students and employers. With the proposed changes to the combined program, the success of the program will be further enhanced.

The shift to a program that will allow students to apply to both the B.Sc.(KIN) and B.Ed. concurrently will improve accessibility to prospective students that are striving to teach physical education at the secondary level. For several years, the enrolment target of approximately 25 seats has not been met. The existing admission process requires students to be accepted initially into kinesiology, and subsequently into education. Shifting to a model where students are concurrently enrolled in both programs will remove a significant barrier for prospective students.

Further, the integration of education and kinesiology courses throughout the full duration of the program will give students a more sustained learning path in each discipline, with opportunities to bridge their passions for kinesiology and education throughout their studies. The creative curricular changes being proposed have come about through extensive discussions and a significant amount of rigorous work by both colleges.

This combined program is an important offering in our province and is highly valued by employers and the community. The proposed changes outlined in this proposal are critical to continuing to improve a program with a solid reputation. We look forward to ongoing collaborations with the College of Education and others on campus to deliver this important program.

Sincerely,

Chad London, Ph.D.



# UNIVERSITY OF SASKATCHEWAN

Office of the Dean  
College of Education  
28 Campus Drive  
Saskatoon SK S7N 0X1

March 12, 2019

To whom it may concern,

Please accept this letter in support of the academic and curricular change for the Combined Kinesiology/Education (Kin/Ed) undergraduate program proposed through the College of Kinesiology and the College of Education.

I fully support this proposal for academic and curricular change of the Kin/Ed program. The changes in the Kin/Ed program are in line with the College of Education's priority to respond to the field in deliberate and impactful ways. Throughout the past few years, the College has committed to listening to the needs of partner and stakeholder groups, and to responding accordingly. The call for changes in the Kin/Ed program is another such example. The need for a separate entry pathway into the Kin/Ed program will support an increase in the number of Kin/Ed teachers, much needed throughout provincial and First Nations schools. Without these changes, the current program's entry pathway is a barrier to meeting the demands of the field.

In addition to meeting the needs of partners, the Kin/Ed program is directly aligned with the College of Education's strategic plan in the following areas: an increase in multi-disciplinary programming, an enriching of discipline, and a program design that meets the diverse needs of the field and of partners.

The College of Education strives to advance its reputation locally as a valued partner in education, and globally as a premier institution for teaching and research. At the college, we realize that our reputation rests on the collaborative and interdisciplinary efforts we make to engage in the work we do with Indigenous, local, and international communities. This program is an important part of that work.

The College of Education is well-positioned to offer the academic components of this program, while the financial structures within the RCM model will support its ongoing sustainability. Specifically, having already offered a Kin/Ed program, the College has both the experience and the structures to support students within the program, regardless of program stage. The College of Education has also sustained a strong working relationship with the College of Kinesiology, which is necessary to support the ongoing maintenance of the program. Lastly, the College's strong connections to the field will ensure support for the practicum components of the program, offered in years two, three and four.

It is for these reasons, among others, that the proposal for the academic and curricular change for the Combined Kinesiology/Education program has my full support. Please contact me if you have further questions.

Respectfully,

Michelle Prytula  
Dean, College of Education

## Appendix E: Consultation with the Registrar Form

## Consultation with the Registrar Form

This form is to be completed by the Registrar (or his/her designate) during an in-person consultation with the faculty member responsible for the proposal. Please consider the questions on this form prior to the meeting.

### Section 1: New Degree / Diploma / Certificate Information or Renaming of Existing

1 Is this a new degree, diploma, or certificate?

Yes  No

Is an existing degree, diploma, or certificate being renamed?

Yes  No

If you've answered NO to each of the previous two questions, please continue on to the next section.

2 What is the name of the new degree, diploma, or certificate?

3 What is the credential of this new degree, diploma, or certificate? [Example - D.M.D. = Doctor of Dental Medicine]

4 If you have renamed an existing degree, diploma, or certificate, what is the current name?

5 Does this new or renamed degree / diploma / certificate require completion of degree level courses or non-degree level courses, thus implying the attainment of either a degree level or non-degree level standard of achievement?

6 If this is a new degree level certificate, can a student take it at the same time as pursuing another degree level program?

Yes  No

7 If YES, a student attribute will be created and used to track students who are in this certificate alongside another program. The attribute code will be:

8 Which College is responsible for the awarding of this degree, diploma, or certificate?

9 Is there more than one program to fulfill the requirements for this degree, diploma, or certificate? If yes, please list these programs.

10 Are there any new majors, minors, or concentrations associated with this new degree / diploma / certificate? Please list the name(s) and whether it is a major, minor, or concentration, along with the sponsoring department.

One major is required on all programs [4 characters for code and 30 characters for description]

11 If this is a new graduate degree, is it thesis-based, course-based, or project-based?

## Section 2: New / Revised Program for Existing or New Degree / Diploma / Certificate Information

1 Is this a new program?

Is an existing program being revised?

If you've answered NO to each of the previous two questions, please continue on to the next section.

Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>

2 If YES, what degree, diploma, or certificate does this new/revised program meet requirements for?

Bachelor of Science in Kinesiology [BSCKIN] and Bachelor of Education [BED] - currently exist in student system

3 What is the name of this new/revised program?

Bachelor of Science in Kinesiology / Bachelor of Education - Combined Program

Suggested new program codes/descriptions of:

KINBED [Bach of Sc Kin - Bach of Educ]

BEDKIN [Bach of Educ - Bach of Sc Kin]

4 What other program(s) currently exist that will also meet the requirements for this same degree(s)?

Bachelor of Science in Kinesiology / Bachelor of Education Combined Program - currently exist in student system as EDKI [Bach of Educ - Bach of Sc Kin] and KIED [Bach of Sc Kin - Bach of Educ]

5 What College/Department is the academic authority for this program?

Kinesiology / Kinesiology (Dean's Office) for KIED and Education / Education (Dean's Office) for EDKI

6 Is this a replacement for a current program?

Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
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7 If YES, will students in the current program complete that program or be grandfathered?

Students in current program will complete that program

8 If this is a new graduate program, is it thesis-based, course-based, or project-based?

Program length is being reduced from 168 credit units to 165 credit units; increase the number of Education credits from 54 to 60; number of Kinesiology credits remain the same at 69; number of credit units of other courses reduces from 45 to 36 credit units.

**Section 3: Mobility**

Mobility is the ability to move freely from one jurisdiction to another and to gain entry into an academic institution or to participate in a learning experience without undue obstacles or hindrances.

1 Does the proposed degree, program, major, minor, concentration, or course involve mobility?

Yes  No

If yes, choose one of the following?

Domestic Mobility (both jurisdictions are within Canada)


International Mobility (one jurisdiction is outside of Canada)

2 Please indicate the mobility type (refer to Nomenclature for definitions).

Joint Program


Joint Degree

Dual Degree


Professional Internship Program

Faculty-Led Course Abroad

Term Abroad Program


3 The U of S enters into partnerships or agreements with external partners for the above mobility types in order to allow students collaborative opportunities for research, studies, or activities. Has an agreement been signed?

Yes  No

4 Please state the full name of the agreement that the U of S is entering into.

5 What is the name of the external partner?

6 What is the jurisdiction for the external partner?

#### Section 4: New / Revised Major, Minor, or Concentration for Existing Degree Information (Undergraduate)

- 1 Is this a new or revised major, minor, or concentration attached to an existing degree program?  
If you've answered NO, please continue on to the next section.

Yes  No  Revised

For program leading to BED degree:

- Existing major of PED [Physical Education Studies]
- Existing minors of BIOL [Biology], CHEM [Chemistry], DRAM [Drama], ENLA [English Language Arts], INDG [Indigenous Studies], MATH [Mathematics], MOLA [Modern Languages], PHYS [Physics], SSST [Social Sciences Social Studies], VIAR [Visual Arts]

For program leading to BSCKIN degree:

- Existing major of PED [Physical Education Studies]
- Existing minors of BIOL [Biology], CHEM [Chemistry], DRAM [Drama], ENLA [English Language Arts], INDG [Indigenous Studies], MATH [Mathematics], MOLA [Modern Languages], PHYS [Physics], SSST [Social Sciences Social Studies], VIAR [Visual Arts]

- 2 If YES, please specify whether it is a major, minor, or concentration. If it is more than one, please fill out a separate form for each.

- 3 What is the name of this new / revised major, minor, or concentration?

- 4 Which department is the authority for this major, minor, or concentration? If this is a cross-College relationship, please state the Jurisdictional College and the Adopting College.

5

- Which current program(s), degree(s), and/or program type(s) is this new / revised major, minor, or concentration attached to?

**Section 5: New / Revised Disciplinary Area for Existing Degree Information (Graduate)**

1 Is this a new or revised disciplinary area attached to an existing graduate degree program?

Yes  No  Revised

If you've answered NO, please continue on to the next section.

2 If YES, what is the name of this new / revised disciplinary area?

3 Which Department / School is the authority for this new / revised disciplinary area? (NOTE - if this disciplinary area is being offered by multiple departments see question below.)

4 Which multiple Departments / Schools are the authority for this new / revised disciplinary area?

4a Of the multiple Departments / Schools who are the authority for this new / revised disciplinary area and what allocation percentage is assigned to each? (Note - must be whole numbers and must equal 100.)

4b

Of the multiple Departments / Schools who is the primary department? The primary department specifies which department / school policies will be followed in academic matters (ex. late adds, re-read policies, or academic misconduct). If no department / school is considered the primary, please indicate that. (In normal circumstances, a department / school with a greater percentage of responsibility - see question above - will be designated the primary department.)

5 Which current program(s) and / or degree(s) is this new / revised disciplinary area attached to?

### Section 6: New College / School / Center / Department or Renaming of Existing

1 Is this a new college, school, center, or department?

Is an existing college, school, center, or department being renamed?

Is an existing college, school, center, or department being deleted?

If you've answered NO to each of the previous two questions, please continue on to the next section.

Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>

2 What is the name of the new (or renamed) college, school, center, or department?

3 If you have renamed an existing college, school, center, or department, what is the current name?

4 What is the effective term of this new (renamed) college, school, center, or department?

5 Will any programs be created, changed, or moved to a new authority, removed, relabelled?

6 Will any courses be created, changed, or moved to a new authority, removed, relabelled?

7 Are there any ceremonial consequences for Convocation (ie. New degree hood, adjustment to parchments, etc.)?

**Section 7: Course Information - as per current set-up**

1 Is there a new subject area(s) of course offering proposed for this new degree? If so, what is the subject area(s) and the suggested four (4) character abbreviation(s) to be used in course listings?

2

If there is a new subject area(s) of offerings what College / Department is the academic authority for this new subject area?

3 Have the subject area identifier and course number(s) for new and revised courses been cleared by the Registrar?

4 Does the program timetable use standard class time slots, terms, and sessions?

Yes  No

If NO, please describe.

5 Does this program, due to pedagogical reasons, require any special space or type of rooms?

Yes  No

If YES, please describe.

**NOTE:** Please remember to submit a new "Course Creation Form" for every new course required for this new program / major. Attached completed "Course Creation Forms" to this document would be helpful.

## Section 8: Admissions, Recruitment, and Quota Information

- 1 Will students apply on-line? If not, how will they apply?  
Yes - returning student application for old program
- 2 What term(s) can students be admitted to?  
05, 07 & 09
- 3 Does this impact enrollment?  
Target is 30 students
- 4 How should Marketing and Student Recruitment handle initial inquiries about this proposal before official approval?
- 5 Can classes towards this program be taken at the same time as another program?
- 6 What is the application deadline?  
Feb 15 and Mar 1 for documents
- 7 What are the admission qualifications? (IE. High school transcript required, grade 12 standing, minimum average, any required courses, etc.)  
Same as KI
- 8 What is the selection criteria? (IE. If only average then 100% weighting; if other factors such as interview, essay, etc. what is the weighting of each of these in the admission decision.)  
100% average ranked
- 9 What are the admission categories and admit types? (IE. High school students and transfer students or one group? Special admission? Aboriginal equity program?)  
High school, transfer, special admission, aboriginal equity
- 10 What is the application process? (IE. Online application and supplemental information (required checklist items) through the Admissions Office or sent to the College/Department?)  
Through Admissions and consult with both Colleges
- 11 Who makes the admission decision? (IE. Admissions Office or College/Department/Other?)  
Colleges
- 12 Letter of acceptance - are there any special requirements for communication to newly admitted students?  
Possibly - will be discussed further
- 13 Will the standard application fee apply?  
Yes
- 14 Will all applicants be charged the fee or will current, active students be exempt?  
Current, active students will be exempt

15 Are international students admissible to this program?

Yes

Admissions details are as per proposal document. The key change is the move from a two-step admission process to a one-step admission process (students will apply and be accepted to the combined program which means they're accepted to both Colleges) instead of the current two-step admission process (students apply and are accepted to the College of KI and later apply and are accepted to the College of ED). Applicants will continue to meet the Kinesiology admission requirements upon admission to the program, no additional admission requirements will be required for admission to the College of Education. Since the student information systems can assign only one college and one credential, students will appear with a program that has the College of Education attached. Students in this combined program will need to be pulled into reports for both the Colleges of Education and Kinesiology and recorded in census day and headcount information accordingly.

**Section 9: Government Loan Information - as per current set-up**

NOTE: Federal / provincial government loan programs require students to be full-time in order to be eligible for funding. The University of Saskatchewan defines full-time as enrollment in a minimum of 9 credit units (operational) in the fall and/or winter term(s) depending on the length of the loan.

1 If this is a change to an existing program, will the program change have any impact on student loan eligibility?

2 If this is a new program, do you intend that students be eligible for student loans?

**Section 10: Convocation Information (only for new degrees) - not applicable**

1 Are there any 'ceremonial consequences' of this proposal (ie. New degree hood, special convocation, etc.)?

2 If YES, has the Office of the University Secretary been notified?

3 When is the first class expected to graduate?

4

What is the maximum number of students you anticipate/project will graduate per year (please consider the next 5-10 years)?

**Section 11: Schedule of Implementation Information**

1 What is the start term?

202005 [May 2020]

2 Are students required to do anything prior to the above date (in addition to applying for admission)?

Yes  No 

If YES, what and by what date?

**Section 12: Registration Information - as per current set-up**

1 What year in program is appropriate for this program (NA or a numeric year)?

(General rule = NA for programs and categories of students not working toward a degree level qualification.)

2 Will students register themselves?

Yes  No 

If YES, what priority group should they be in?

**Section 13: Academic History Information - as per current set-up**

1 Will instructors submit grades through self-serve?

Yes  No 

2 Who will approve grades (Department Head, Assistant Dean, etc.)?

**Section 14: T2202 Information (tax form) - as per current set-up**

1 Should classes count towards T2202s?

Yes  No **Section 15: Awards Information - as per current set-up**

1 Will terms of reference for existing awards need to be amended?

Yes  No 

2 If this is a new undergraduate program, will students in this program be eligible for College-specific awards?

**Section 16: Government of Saskatchewan Graduate Retention (Tax) Program - as per current set-up**

1 Will this program qualify for the Government of Saskatchewan graduate retention (tax) program? Yes  No

To qualify the program must meet the following requirements:

- be equivalent to at least 6 months of full-time study, and
- result in a certificate, diploma, or undergraduate degree.

**Section 17: Program Termination**

1 Is this a program termination? Yes  No

If yes, what is the name of the program?

EDKI [Bach of Educ - Bach of Sc Kin] and KIED [Bach of Sc Kin - Bach of Educ]

2 What is the effective date of this termination?

202005 [May 2020] for students accepted to the KIED portion  
202209 [September 2022] for students accepted to the EDKI portion

3 Will there be any courses closed as a result of this termination? Yes  No

If yes, what courses?

4 Are there currently any students enrolled in the program? Yes  No

If yes, will they be able to complete the program?

Students will be allowed to complete the program

5 If not, what alternate arrangements are being made for these students?

6 When do you expect the last student to complete this program? Yes  No

27 active students in the Bach of Educ - Bach of Sc Kin program  
34 active students in the Bach of Sc Kin - Bach of Educ program  
June 2025 - anticipate last student will complete the programs of EDKI and KIED

7 Is there mobility associated with this program termination? Yes  No

If yes, please select one of the following mobility activity types.

- Dual Degree Program
- Joint Degree Program
- Internship Abroad Program
- Term Abroad Program
- Taught Abroad Course
- Student Exchange Program

<input type="checkbox"/>

Partnership agreements, coordinated by the International Office, are signed for these types of mobility activities. Has the International Office been informed of this program termination?

Yes  No

Section 18: Proposed Tuition and Student Fees Information - as per current set-up

1 How will tuition be assessed?

- Standard Undergraduate per credit
- Standard Graduate per credit
- Standard Graduate per term
- Non standard per credit\*
- Non standard per term\*
- Other \*
- Program Based\*

\* See attached documents for further details

2 If fees are per credit, do they conform to existing categories for per credit tuition? If YES, what category or rate?

3 If program based tuition, how will it be assessed? By credit unit? By term? Elsehow?

4 Does proponent's proposal contain detailed information regarding requested tuition?

Yes  No

If NO, please describe.

5 What is IPA's recommendation regarding tuition assessment? When is it expected to receive approval?

6 IPA Additional comments?

7 Will students outside the program be allowed to take the classes?

8 If YES, what should they be assessed? (This is especially important for program based.)

9 Do standard student fee assessment criteria apply (full-time, part-time, on-campus versus off-campus)?

10 Do standard cancellation fee rules apply?

11 Are there any additional fees (e.g. materials, excursion)? If yes, see NOTE below.

12 Are you moving from one tuition code (TC) to another tuition code?

Yes  No

If YES, from which tuition code to which tuition code?

13 Are international students admissible to the program? If yes, will they pay the international tuition differential?

Yes - as per current set-up (they pay the differential)

NOTE: Please remember to submit a completed "Application for New Fee or Fee Change Form" for every new course with additional fees.

Section 19: TLSE - Information Dissemination (internal for TLSE use only)

- |   |     |                                     |    |                          |
|---|-----|-------------------------------------|----|--------------------------|
| 1 Has TLSE, Marketing and Student Recruitment, been informed about this new / revised program?  | Yes | <input type="checkbox"/>            | No | <input type="checkbox"/> |
| 2 Has TLSE, Admissions, been informed about this new / revised program?   | Yes | <input type="checkbox"/>            | No | <input type="checkbox"/> |
| 3 Has TLSE, Student Finance and Awards, been informed about this new / revised program?   | Yes | <input type="checkbox"/>            | No | <input type="checkbox"/> |
| 4 Has CGPS been informed about this new / revised program?  | Yes | <input type="checkbox"/>            | No | <input type="checkbox"/> |
| 5 Has TLSE, Transfer Credit, been informed about any new / revised courses?   | Yes | <input type="checkbox"/>            | No | <input type="checkbox"/> |
| 6 Has ICT-Data Services been informed about this new or revised degree / program / major / minor / concentration?   | Yes | <input type="checkbox"/>            | No | <input type="checkbox"/> |
| 7 Has the Library been informed about this new / revised program?   | Yes | <input type="checkbox"/>            | No | <input type="checkbox"/> |
| 8 Has ISA been informed of the CIP code for new degree / program / major?   | Yes | <input type="checkbox"/>            | No | <input type="checkbox"/> |
| 9 Has Room Scheduling/Scheduling Hub/Senior Coordinator of Scheduling been informed of unique space requirements for the new courses and/or informed of program, course, college, and department changes? | Yes | <input type="checkbox"/>            | No | <input type="checkbox"/> |
| 10 Has the Convocation Coordinator been notified of a new degree?   | Yes | <input type="checkbox"/>            | No | <input type="checkbox"/> |
| 11 What is the highest level of financial approval required for this submission? Check all that apply.  |     |                                     |    |                          |
| a. None - as it has no financial implications   |     | <input type="checkbox"/>            |    |                          |
| <u>OR</u>   |     |                                     |    |                          |
| b. Fee Review Committee   |     | <input type="checkbox"/>            |    |                          |
| c. Institutional Planning and Assessment (IPA)  |     | <input type="checkbox"/>            |    |                          |
| d. Provost's Committee on Integrated Planning (PCIP)  |     | <input type="checkbox"/>            |    |                          |
| e. Board of Governors   |     | <input type="checkbox"/>            |    |                          |
| f. Other (Senate)   |     | <input checked="" type="checkbox"/> |    |                          |

SIGNED

Date: April 11, 19

Registrar (Russell Isinger): Russell Isinger

College / Department Representative(s): Dawn Waller [Signature]

IPA Representative(s): [Signature]

## Appendix F: Course and Program Catalogue Entries

### Combined Bachelor of Science Kinesiology/Bachelor of Education Program Course and Program Catalogue Draft

Standard First Aid and CPR-C are required by all students.

#### Year 1 (30 credit units)

- BIOL 120.3 The Nature of Life
- BIOL 224.3 Animal Body Systems
- EFDT 101.3 Introduction to Education
- ECUR 165.3 Introduction to Teaching in Secondary Schools
- KIN 121.3 Functional Basis of Physical Activity
- KIN 122.3 Social Behavioral Foundations of Physical Activity
- KIN 150.3 How Body Moves I
- KIN 250.3: How the Body Moves II
- MATH 104.3 Elementary Calculus or MATH 110.3 Calculus I

Choose 3 English (junior level) credit units from the following:

- ENG — 100-Level

#### Spring Term (after Year 1) (6 credit units)

Choose 6 credit units from the following:

- KIN 225.3 Introductory Exercise Physiology I
- KIN 226.3 Introductory Exercise Physiology II
- KIN 231.3 Social Psychological Foundations of Physical Activity
- KIN 232.3 Physical Activity in Society

#### Year 2 (33 credit units)

- ACB 221.3 Gross Anatomy
- EPSE 202.3 Psychological Foundations of Teaching and Learning
- KIN 225.3 Introductory Exercise Physiology I or KIN 232.3 Physical Activity in Society
- KIN 226.3 Introductory Exercise Physiology II or KIN 231.3 Social Psychological Foundations of Physical Activity
- KIN 222.3 Biomechanics I
- KIN 240.3 Pedagogy in Physical Activity Setting I Theory

Choose 3 English (junior level) credit units from the following:

- ENG — 100-Level

Choose 3 Kinesiology Activity credit units from the following:

- KIN – 200-level, 300-level, 400-level

Choose 3 credit units from the following:

- STAT 245.3 Introduction to Statistical Methods
- PLSC 214.3 Statistical Methods
- PSY 233.3 Statistical Methods in Behavioural Sciences

Choose 6 Teaching Area 2 credit units:

- For information about what classes may count towards Teaching Area 2, please see the Bachelor of Education (B.Ed.) Secondary – Teaching Area 2 list.

\*It is recommended that students contact an academic advisor in the College of Education for assistance with choosing courses for this teaching area.

### **Spring Term (after Year 2) (3 credit units)**

- EDST 213.0 Student Teaching in Rural and First Nations Schools
- KIN 320.3 Physical Growth and Development of Children

### **Year 3 (30 credit units)**

- EFDT 265.3 Foundations for First Nations Metis and Inuit Teaching and Learning or ECUR 265.3 Teaching for Reconciliation in the K to 12 Curricula
- KIN 306.3: Introduction to Indigenous Wellness
- KIN 321.3 Prevention and Care of Sports Recreational and School Injuries
- KIN 322.3 Motor Learning and Control
- KIN 341.3 Pedagogy in Physical Activity Setting II Practice
- KIN 380.3 Research Methods in Kinesiology

Choose 3 Kinesiology Activity credit units from the following:

- KIN – 200-level, 300-level, 400-level

Choose 9 Teaching Area 2 credit units:

- For information about what classes may count towards Teaching Area 2, please see the Bachelor of Education (B.Ed.) Secondary – Teaching Area 2 list.

\*It is recommended that students contact an academic advisor in the College of Education for assistance with choosing courses for this teaching area.

### **Spring Term (after Year 3) (3 credit units)**

- KIN 451.3: Community Service Learning in a School Setting

### **Year 4 (30 credit units)**

- EFDT 301.3 Educator Identity in Contexts Anti Oppressive and Ethical Beginnings
- EFDT 315.3 Pedagogies of Place Context Based Learning Secondary
- ECUR 320.3 Literacy Across the Secondary Curriculum
- ECUR 325.3 Relational Curriculum Making in the Secondary Context
- ECUR 357.3 Methods in Secondary Physical Education
- EPSE 348.3 Assessing Learning in the Classroom
- EPSE 390.3 Exceptional Learners
- EDST 322.3 Field Experience Relational Curriculum Making in Practice Planning Adapting and Assessing

Choose 3 Education methods credit units (Teaching Area 2) from the following:

- EART 331.3 Methods in Secondary Visual Art
- ECUR 318.3 Methods in Secondary Mathematics
- ECUR 326.3 Methods for Teaching Science in Secondary School
- ECUR 349.3 Methods in Middle Years and Secondary Drama
- ECUR 362.3 Introduction to Principles and Practices of Second Language Teaching
- ECUR 379.3 Introductory Methods in Secondary English Language Arts
- ECUR 386.3 Methods in Secondary Social Studies

Choose 3 Kinesiology Activity credit units from the following:

- KIN – 200-level, 300-level, 400-level

## **Year 5 (30 credit units)**

### **Term 1**

Choose an Extended Practicum option from the following:

- EXPR 422.15 Professional Extended Practicum
- EXPR 423.3 Alternative Field Experiences Practicum I Adult Learning and Community Based Educational Settings and EXPR 425.12 Alternative Field Experiences Practicum II Saskatchewan Schools
- EXPR 424.3 Alternative Field Experiences Practicum I International Opportunities and EXPR 425.12 Alternative Field Experiences Practicum II Saskatchewan Schools

### **Term 2**

- EADM 303.3 Education in Society Structures Systems and Stakeholders
- KIN 423.3 Adapted Physical Activity
- KIN 432.3 Ethics and Values in Sport and Physical Activity

Complete one of the following:

- EADM 411.3 Inquiry Project and Community Learning Field Experience
- ECUR 411.3 Inquiry Project and Community Learning Field Experience
- EFDT 411.3 Inquiry Project and Community Learning Field Experience
- EPSE 411.3 Inquiry Project and Community Learning Field Experience

Choose 3 Kinesiology Activity credit units from the following:

- KIN – 200-level, 300-level, 400-level

**Combined Bachelor of Science Kinesiology/Bachelor of Education Program**  
**Course and Program Catalogue**  
**Mark-up (changes in red)**

~~This five-year program is designed for students who intend to teach Physical Education at the Secondary level. Students enroll in the College of Kinesiology and apply for admission to the College of Education at the end of Year 3; admission is limited to approximately 25 students. For admission information, please visit [admissions.usask.ca](http://admissions.usask.ca).~~

~~Applicants interested in a career in teaching secondary physical education must register in the first-year courses common to all routes in the College of Kinesiology, and must take INDG 107 and 3 credit units in social sciences or humanities. In the second and third year, interested students should follow the outline for the 5-year combined degree in Kinesiology and Education. Students registered in the College of Kinesiology are eligible to apply for entrance into the combined program if they have completed a minimum of 95 credit units that includes the following courses: ACB 221; BIOL 120 and BIOL 224; ENG 110 or choose two courses from ENG 111, ENG 112, or ENG 114; KIN 121, KIN 122, KIN 150, KIN 222, KIN 223, KIN 225, KIN 226, KIN 231, KIN 240, KIN 281, KIN 320, KIN 322, KIN 341, KIN 380 and KIN elective (3 credit units) (choose from KIN 232, KIN 233, KIN 255, KIN 321, KIN 334, KIN 381, KIN 425, KIN 428, KIN 431, KIN 442, or KIN 451); KINA 200, KINA 210, KINA 211, KINA 235; MATH 104 (or MATH 110); INDG 107 and 3 credit units in social sciences or humanities; and STAT 245 or PLSC 214 or PSY 233 and 15 credit units in a second teaching area.~~

The ~~Bachelor of Science Kinesiology/Bachelor of Education~~ ~~B.Sc.(Kin.)/B.Ed. e~~Combined Program ~~degree~~ is a designated ~~165~~ **168** credit-unit, five-year ~~(plus one Spring and Summer Session)~~ undergraduate program. This five-year program is designed for students who intend to teach Physical Education at the Secondary level. At the end of the program, graduates will receive B.Sc.(Kin) and B.Ed. degrees.

For admission information, please visit [admissions.usask.ca](http://admissions.usask.ca).

### **Field Experiences**

Note: All teacher candidates must complete a Criminal Record Check (CRC) with Vulnerable Sector search before they can participate in any field experience. Field experiences may occur anywhere in Saskatchewan and due to limited Saskatoon placement opportunities, a local practicum may not be possible on request.

### **Pre-Extended Practicum Field Experience**

Pre-extended practicum field experience involves exploratory, practical experience in a partner school. Teacher candidates will be expected to carry out course assignments in their assigned school, engage in volunteer in-school activities wherever possible, observe, teach small and large groups and facilitate learning activities under the guidance of collaborating teachers, faculty members, and field experience coordinators. Teacher candidates are placed with teachers holding a Saskatchewan Teaching Certificate in a school using provincial curricula and organized under the Education Act. Teacher candidates will be assigned a partner school within commuting

distance of Saskatoon, and must complete pre-extended practicum field study experiences by June 30 prior to the extended practicum commencing the fall of that same year.

### **Extended Practicum**

The extended practicum involves one term of teaching experience, approximately 16 weeks in length.

The extended practicum may be required of teacher candidates in centers not within commuting distance of Saskatoon. During the extended practicum, teacher candidates are placed with teachers holding a Saskatchewan Teaching Certificate in a school using the provincial curriculum and organized under the Education Act. In order to support province-wide enthusiasm for teacher candidates in School Division contexts as well as schools in First Nations communities, the College of Education has developed partnership opportunities in diverse locations and looks forward to the learning these opportunities provide as well as the energy and innovation our teacher candidates will extend. A limited number of special requests are considered each year related to rural or urban placements that relate to exceptional circumstances (with financial responsibilities not considered as criteria for requests). Outside of these circumstances, placement preferences related to location are not guaranteed.

Before extended practicum registration, teacher candidates must have obtained an Education Weighted Average and an External Weighted Average of 60%. In addition, teacher candidates in the Secondary option must have a minimum average of 60% in each of Teaching Areas I and II.

To be eligible for the extended practicum, teacher candidates must have completed all external courses, all Education pre-extended practicum courses and the student teaching experience by June 30 prior to the extended practicum commencement.

Specific dates are posted in the online Course Offerings.

-----

**Standard First Aid and CPR-C are required by all students.**

### **Year 1 (30 credit units)**

- [BIOL 120.3](#) The Nature of Life
- [BIOL 224.3](#) Animal Body Systems
- [EFDT 101.3](#) Introduction to Education
- [ECUR 165.3](#) Introduction to Teaching in Secondary Schools
- [KIN 121.3](#) Functional Basis of Physical Activity
- [KIN 122.3](#) Social Behavioral Foundations of Physical Activity
- [KIN 150.3](#) How Body Moves I
- [KIN 250.3](#): How the Body Moves II
- [MATH 104.3](#) Elementary Calculus or [MATH 110.3](#) Calculus I

**Choose 6 3 English (junior level) credit units from the following:**

- [ENG — 100-Level](#)

**Choose 3 credit units of Social Sciences or Humanities:**

**Humanities**

- ~~[CHIN — 100 Level, 200 Level, 300 Level, 400 Level](#)~~
- ~~[CLAS — 100 Level, 200 Level, 300 Level, 400 Level](#)~~
- ~~[CMRS — 100 Level, 200 Level, 300 Level, 400 Level](#)~~
- ~~[CREE — 100 Level, 200 Level, 300 Level, 400 Level](#)~~
- ~~[ENG — 100 Level, 200 Level, 300 Level, 400 Level](#)~~
- ~~[FREN — 100 Level, 200 Level, 300 Level, 400 Level](#)~~
- ~~[GERM — 100 Level, 200 Level, 300 Level, 400 Level](#)~~
- ~~[GRK — 100 Level, 200 Level, 300 Level, 400 Level](#)~~
- ~~[HEB — 100 Level, 200 Level, 300 Level, 400 Level](#)~~
- ~~[HIST — 100 Level, 200 Level, 300 Level, 400 Level](#)~~
- ~~[HNDI — 100 Level, 200 Level, 300 Level, 400 Level](#)~~
- ~~[INCC — 100 Level, 200 Level, 300 Level, 400 Level](#)~~
- ~~[INTS — 100 Level, 200 Level, 300 Level, 400 Level](#)~~
- ~~[JPNS — 100 Level, 200 Level, 300 Level, 400 Level](#)~~
- ~~[LATN — 100 Level, 200 Level, 300 Level, 400 Level](#)~~
- ~~[LIT — 100 Level, 200 Level, 300 Level, 400 Level](#)~~
- ~~[PHIL — 100 Level, 200 Level, 300 Level, 400 Level](#)~~
- ~~[RLST — 100 Level, 200 Level, 300 Level, 400 Level](#)~~
- ~~[RUSS — 100 Level, 200 Level, 300 Level, 400 Level](#)~~
- ~~[SNSK — 100 Level, 200 Level, 300 Level, 400 Level](#)~~
- ~~[SPAN — 100 Level, 200 Level, 300 Level, 400 Level](#)~~
- ~~[UKR — 100 Level, 200 Level, 300 Level, 400 Level](#)~~
- ~~[WGST — 100 Level, 200 Level, 300 Level, 400 Level](#)~~
- ~~Certain WGST courses may be considered a Humanities and/or Social Science. Refer to the Class Search.~~
- ~~[CLAS 103.3](#) Medical Terminology, [CLAS 104.3](#) Classical Myths, [CLAS 105.3](#) Classical Roots of English, and [CLAS 106.3](#) may not be used to fulfill the Humanities Requirement.~~

**Social Sciences**

- ~~[ANTH — 100 Level, 200 Level, 300 Level, 400 Level](#)~~
- ~~[ARCH — 100 Level, 200 Level, 300 Level, 400 Level](#)~~
- ~~[ECON — 100 Level, 200 Level, 300 Level, 400 Level](#)~~
- ~~[GEOG 130.3](#) Environment Health and Planning~~
- ~~[INDG — 100 Level, 200 Level, 300 Level, 400 Level](#)~~
- ~~[IS — 100 Level, 200 Level, 300 Level, 400 Level](#)~~

- ~~LING — 100 Level, 200 Level, 300 Level, 400 Level~~
- ~~PLAN — 100 Level, 200 Level, 300 Level, 400 Level~~
- ~~POLS — 100 Level, 200 Level, 300 Level, 400 Level~~
- ~~PSY — 100 Level, 200 Level, 300 Level, 400 Level~~
- ~~SOC — 100 Level, 200 Level, 300 Level, 400 Level~~
- ~~SOSC — 100 Level, 200 Level, 300 Level, 400 Level~~
- ~~WGST — 100 Level, 200 Level, 300 Level, 400 Level~~

- Any senior level social science course, provided the prerequisite is met. Please note that certain GEOG courses are considered Science courses. Refer to the Class Search.
- Statistics courses in social sciences are not accepted for credit toward the Social Science Requirement (eg. ECON 204, PSY 233 and PSY 234, SOC 225 and SOC 325).
- Certain WGST courses may be considered a Humanities and/or Social Science. Refer to the Class Search.

### **Choose 3 Indigenous Studies credit units from the following:**

- ~~COMM 347.3 Aboriginal Business in Canada~~
- ~~INDG 107.3 Introduction to Canadian Indigenous Studies or equivalent~~
- ~~SOC 203.3 Race and Ethnic Relations in Canada~~
- ~~SOC 219.3 Indigenous Peoples and Justice in Canada~~
- ~~SOC 341.3 Institutional Racism and Indigenous People~~

### **Spring Term (after Year 1) (6 credit units)**

#### **Choose 6 credit units from the following:**

- KIN 225.3 Introductory Exercise Physiology I
- KIN 226.3 Introductory Exercise Physiology II
- KIN 231.3 Social Psychological Foundations of Physical Activity
- KIN 232.3 Physical Activity in Society

### **Year 2 (34-33 credit units)**

- [ACB 221.3](#) Gross Anatomy
- EPSE 202.3 Psychological Foundations of Teaching and Learning
- [KIN 222.3](#) Biomechanics I
- [KIN 225.3](#) Introductory Exercise Physiology I or KIN 232.3 Physical Activity in Society
- [KIN 226.3](#) Introductory Exercise Physiology II or KIN 231.3 Social Psychological Foundations of Physical Activity
- ~~[KIN 231.3](#) Social Psychological Foundations of Physical Activity~~
- [KIN 240.3](#) Pedagogy in Physical Activity Setting I Theory
- ~~[KIN 281.3](#) Fitness Foundations for Life~~
- ~~[KINA 200.2](#) How Body Moves Projectiles and Implements or [KIN 250.3](#) How the Body Moves II~~
- ~~[KINA 211.2](#) Aquatics~~

**Choose 3 credit units from the following:**

- [STAT 245.3](#) Introduction to Statistical Methods ~~or~~
- [PLSC 214.3](#) Statistical Methods ~~or~~
- [PSY 233.3](#) Statistical Methods in Behavioural Sciences

**Choose 3 English (junior level) credit units from the following:**

- [ENG — 100-Level](#)

**Choose 3 Kinesiology Activity credit units from the following:**

- KIN – 200-level, 300-level, 400-level

**Outside Electives - Teaching Area 2 (6 credit units)**

For information about what classes may count towards Teaching Area 2, please see the [Bachelor of Education \(B.Ed.\) Secondary – Teaching Area 2 list](#).

\*It is recommended that students contact an academic advisor in the College of Education for assistance with choosing courses for this teaching area.

**Spring Term (after Year 2) (3 credit units)**

- EDST 213.0 Student Teaching in Rural and First Nations Schools
- KIN 320.3 Physical Growth and Development of Children

**Year 3 (36 30 credit units)**

- EFDT 265.3 Foundations for First Nations Metis and Inuit Teaching and Learning or ECUR 265.3 Teaching for Reconciliation in the K to 12 Curricula
- KIN 306.3: Introduction to Indigenous Wellness
- ~~KIN 223.3 Contemporary Health Issues~~
- ~~KIN 320.3 Physical Growth and Development of Children~~
- KIN 321.3 Prevention and Care of Sports Recreational and School Injuries
- [KIN 322.3](#) Motor Learning and Control
- [KIN 341.3](#) Pedagogy in Physical Activity Setting II Practice
- [KIN 380.3](#) Research Methods in Kinesiology
- ~~KINA 210.2 Introduction to Fundamentals of Movement and Rhythm~~
- ~~KINA 235.2 Track and Field~~

**Choose 2 credit units from the following:**

- ~~KINA — 200-Level, 300-Level, 400-Level~~

**Choose 3 Kinesiology Activity credit units from the following:**

- KIN – 200-level, 300-level, 400-level

**~~Choose 6 credit units from the following:~~**

- ~~• [KIN 232.3](#) Physical Activity in Society~~
- ~~• [KIN 233.3](#) History of Sport and Physical Education in Canada~~
- ~~• [KIN 255.3](#) Program Planning and Design for Leisure and Sport~~
- ~~• [KIN 321.3](#) Prevention and Care of Sports Recreational and School Injuries~~
- ~~• [KIN 334.3](#) Theory of Coaching~~
- ~~• [KIN 381.3](#) Adult Fitness and Exercise Management I~~
- ~~• [KIN 425.3](#) Physiology of Exercise~~
- ~~• [KIN 428.3](#) Nutrition Drugs and Physical Activity~~
- ~~• [KIN 431.3](#) Mental Training for Sport and Physical Activity~~
- ~~• [KIN 442.3](#) Biomechanics II~~
- ~~• [KIN 451.3](#) Community Service Learning in a School Setting~~
- ~~• [KIN 498.3](#) Special Topics~~

**Outside Electives - Teaching Area 2 (9 credit units)**

For information about what classes may count towards Teaching Area 2, please see the [Bachelor of Education \(B.Ed.\) Secondary – Teaching Area 2 list](#).

\*It is recommended that students contact an academic advisor in the College of Education for assistance with choosing courses for this teaching area.

**Spring Term (after Year 3) (3 credit units)**

- KIN 451.3: Community Service Learning in a School Setting

**Year 4 (30 credit units)**

- [ECUR 320.3](#) Literacy Across the Secondary Curriculum
- [ECUR 325.3](#) Relational Curriculum Making in the Secondary Context
- [ECUR 357.3](#) Methods in Secondary Physical Education
- ~~• [EDST 321.3](#) Field Experience Learning in Contexts~~
- [EDST 322.3](#) Field Experience Relational Curriculum Making in Practice Planning Adapting and Assessing
- [EFDT 301.3](#) Educator Identity in Contexts Anti Oppressive and Ethical Beginnings
- [EFDT 315.3](#) Pedagogies of Place Context Based Learning Secondary
- ~~• [EPSE 302.3](#) Situated Learners Contexts of Learning and Development~~
- EPSE 348.3 Assessing Learning in the Classroom
- EPSE 390.3 Exceptional Learners

**Choose 3 Education methods credit units (Teaching Area 2) from the following:**

- EART 331.3 Methods in Secondary Visual Art
- ECUR 318.3 Methods in Secondary Mathematics
- ECUR 326.3 Methods for Teaching Science in Secondary School
- ECUR 349.3 Methods in Middle Years and Secondary Drama
- ECUR 362.3 Introduction to Principles and Practices of Second Language Teaching
- ECUR 379.3 Introductory Methods in Secondary English Language Arts
- ECUR 386.3 Methods in Secondary Social Studies

**~~Choose 9 credit units from the following:~~**

- ~~EADM — 100-Level, 200-Level, 300-Level, 400-Level~~
- ~~ECUR — 100-Level, 200-Level, 300-Level, 400-Level~~
- ~~EFDT — 100-Level, 200-Level, 300-Level, 400-Level~~
- ~~EPSE — 100-Level, 200-Level, 300-Level, 400-Level~~
- ~~ETAD — 100-Level, 200-Level, 300-Level, 400-Level~~
- [KIN 451.3](#) Community Service Learning in a School Setting

**Choose 3 Kinesiology Activity credit units from the following:**

- KIN – 200-level, 300-level, 400-level

**Year 5 (30 credit units)**

**Term 1**

**Extended Practicum**

**Choose an Extended Practicum option from the following:**

- [EXPR 422.15](#) Professional Extended Practicum
- **OR**
- [EXPR 423.3](#) Alternative Field Experiences Practicum I Adult Learning and Community Based Educational Settings **AND** [EXPR 425.12](#) Alternative Field Experiences Practicum II Saskatchewan Schools
- **OR**
- [EXPR 424.3](#) Alternative Field Experiences Practicum I International Opportunities **AND** [EXPR 425.12](#) Alternative Field Experiences Practicum II Saskatchewan Schools

**Term 2**

- [EADM 303.3](#) Education in Society Structures Systems and Stakeholders
- ~~[EPSE 390.3](#) Exceptional Learners~~
- [KIN 423.3](#) Adapted Physical Activity
- [KIN 432.3](#) Ethics and Values in Sport and Physical Activity

**Complete one of the following:**

- [EADM 411.3](#) Inquiry Project and Community Learning Field Experience
- [ECUR 411.3](#) Inquiry Project and Community Learning Field Experience
- [EFDT 411.3](#) Inquiry Project and Community Learning Field Experience
- [EPSE 411.3](#) Inquiry Project and Community Learning Field Experience

**Choose 3 Kinesiology Activity credit units from the following:**

- KIN – 200-level, 300-level, 400-level

**~~Spring and Summer Session (after Fourth or Fifth Year) (8 credit units)~~**

**~~Choose 3 credit units from the following:~~**

- ~~• 100 Level to 400 Level unrestricted electives~~

**~~Choose 2 credit units from the following:~~**

- ~~• KINA – 200-Level, 300-Level, 400-Level~~

**~~Choose 3 credit units from the following:~~**

- ~~• KIN 232.3 Physical Activity in Society~~
- ~~• KIN 233.3 History of Sport and Physical Education in Canada~~
- ~~• KIN 255.3 Program Planning and Design for Leisure and Sport~~
- ~~• KIN 321.3 Prevention and Care of Sports Recreational and School Injuries~~
- ~~• KIN 334.3 Theory of Coaching~~
- ~~• KIN 381.3 Adult Fitness and Exercise Management I~~
- ~~• KIN 425.3 Physiology of Exercise~~
- ~~• KIN 428.3 Nutrition Drugs and Physical Activity~~
- ~~• KIN 431.3 Mental Training for Sport and Physical Activity~~
- ~~• KIN 442.3 Biomechanics II~~
- ~~• KIN 451.3 Community Service Learning in a School Setting~~
- ~~• KIN 498.3 Special Topics~~

**UNIVERSITY COUNCIL  
ACADEMIC PROGRAMS COMMITTEE  
REPORT FOR INFORMATION**

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**PRESENTED BY:** Roy Dobson; chair, Academic Programs Committee

**DATE OF MEETING:** May 23, 2019

**SUBJECT:** **Bachelor of Science (B.Sc.) in Hydrology and termination of the Bachelor of Science (B.Sc) in Environmental Earth Science**

**COUNCIL ACTION:** **For Information Only**

**SUMMARY:**

Council has delegated to the Academic Programs Committee the ability to approve the addition or deletion of a new field of study for which an approved template exists. The College of Arts and Science has approved templates for all undergraduate degree programs.

The College of Arts and Science has proposed a transformation of the existing B.Sc. program in Environmental Earth Science to a B.Sc. program in Hydrology. This change will impact both the honours and four-year degree programs.

The change will ensure that the degree offering will focus on departmental strengths in water science and geomatics, will ensure that the undergraduate programs in environmental science are sufficiently differentiated from other programs offered within the college, and will ensure curricula meets the knowledge standards for professional geoscience accreditation in the province.

The new program in Hydrology will follow the newly approved College of Arts and Science program template, approved by University Council last year. The new template includes an Indigenous Learning Requirement, and this requirement is reflected in the program requirements for the B.Sc. in Hydrology.

Students enrolled in the existing program will be allowed to complete the current program or to switch to the new program. No new students will be admitted to the B.Sc in Environmental Earth Science with the B.Sc. in Hydrology in place.

The Academic Programs Committee reviewed the proposal for the B.Sc. program in Hydrology and termination for the B.Sc program in Environmental Earth Science at its March 27, 2019 meeting and approved both the new program and the termination of the existing program at its April 17, 2019 meeting. These changes will be effective May 2020.

**ATTACHMENTS:**

- 1. Introduction of Major in Hydrology to replace existing Major in Environmental Earth Science (including the Program Termination Form)**

 UNIVERSITY OF SASKATCHEWAN	<b>Proposal for Academic or Curricular Change</b>
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## PROPOSAL IDENTIFICATION

**Title of proposal: Introduction of Major in Hydrology to replace existing Major in Environmental Earth Sciences**

Degree(s): Bachelor of Science

Field(s) of Specialization: Hydrology

Level(s) of Concentration: Honours, Four-year

Option(s): Cooperative Education Option

Degree College: Arts and Science

Contact person(s) (name, telephone, fax, e-mail):

Alec Aitken ([alec.aitken@usask.ca](mailto:alec.aitken@usask.ca))

Krystopher Chutko ([krys.chutko@usask.ca](mailto:krys.chutko@usask.ca))

Bram Noble ([b.noble@usask.ca](mailto:b.noble@usask.ca))

Department of Geography and Planning  
306-966-4907

Proposed date of implementation: May 2020

The purpose of this proposal is to transform the existing B.Sc. Honours and Four-year programs in **Environmental Earth Sciences** into B.Sc. Honours and Four-year programs in **Hydrology**. (Replacement program.)

The motivation for proposing these changes is: 1) to create undergraduate programs that focus on departmental strengths in water science and geomatics; 2) to differentiate the undergraduate programs in environmental science offered by the department from “soft rock” (i.e., sedimentary rocks, stratigraphy, geochemistry, petroleum geology) geoscience programs offered by the Department of Geological Sciences; and 3) to ensure that the new curricula will meet the knowledge standards for professional geoscience accreditation in the Province of Saskatchewan.

We have mapped the proposed programs to the new B.Sc. program templates approved by the College of Arts and Science in March 14, 2018, and by Council on April 19, 2018. The new curricula demand student engagement with the full suite of hydrology courses offered by the department. There is increased emphasis on quantitative skills (e.g., field and laboratory methods, multivariate and spatial statistics, data visualization) and social sciences perspectives related to water security. The proposed 4-year Major BSc in Hydrology satisfies the knowledge standards for professional geoscience accreditation nation-wide. The proposed Honours BSc in Hydrology is intended to provide a rigorous program of study for students intending to pursue graduate research in physical hydrology (see accompanying NOI for the MSc and PhD in Hydrology). Both programs retain the strength of interdisciplinary training.

Students will be admitted to the College of Arts and Science following the current requirements, and may choose this major. (No special application or admissions requirements.)

#### Demand for the Programs

In terms of employability of program graduates, there is a growing demand for highly trained water security researchers and professionals with disciplinary (e.g., physical hydrology) or interdisciplinary expertise. For example, our Global Water Futures Director has been informed by the President of the Saskatchewan Water Security Agency of their need for highly trained hydrologists (physical hydrologists, water quality hydrologists and ecohydrologists). Graduates of the current B.Sc. programs in Environmental Earth Sciences have secured meaningful employment in variety of public and private sector organizations with responsibilities to assess the quantity and quality of surface and ground waters. These employers include private environmental consulting firms, extractive industries (e.g., mining), public water utilities, the Saskatchewan Ministry of Environment, Environment and Climate Change Canada, as well as research assistant positions in water security at the University of Saskatchewan. We anticipate similar employment opportunities to be available to the graduates of the proposed programs.

The present B.Sc. programs in Environmental Earth Sciences have sustained an enrolment of ~ 40 declared Majors in this decade; the graduating cohort varies between 6-8 students each year. We anticipate sustaining this level of enrolment in the new program, but aspire to increase student enrolment as the demand for highly trained hydrologists increases in the future. Ensuring that program graduates are eligible for professional accreditation increases their employability.

#### Fit with the University Vision

The Department of Geography and Planning shares the University's mission to achieve excellence in the scholarly activities of teaching, discovering, preserving, and applying knowledge. The department has earned a well-deserved reputation for teaching excellence with multiple recipients of the Master Teacher Award, the College of Arts and Science Teaching Excellence Award, and the USSU Teaching Excellence Award represented in the current faculty complement. The University's *interest in and need for* a B.Sc. program in Hydrology is to further develop and promote a subject of academic pre-eminence, to improve program visibility, to leverage undergraduate research opportunities available through GIWS, GWF, CRCs, industrial chairs and CFI investments, and to develop a pool of highly qualified undergraduate

students capable of pursuing graduate research in physical hydrology, thus enhancing recruitment of graduate students to the department. These ambitions align well with the University Plan 2025 as we propose to empower students to confront one of humanity's greatest challenges – to ensure everyone has a sustainable supply of safe water. Water Security is one of the six signature areas of the university. As a discipline, Geography and Planning plays a leadership role in hydrology on campus, and plays a collaborative role in providing hydrology training within interdisciplinary water security programming.

In addition to the Indigenous Learning Requirement which will be part of all Arts & Science programs starting in 2020-2021, the proposed program will support the University's goals of Indigenization at the individual course level through the development of new, or, where applicable, continued development of inclusive curricula. This will be achieved through the integration of faculty research on Indigenous issues into teaching, including the use and acknowledgement of data sets generated on First Nation lands, the development of field trips or other experiential learning opportunities in local First Nations communities, and through the involvement of First Nations Elders in teaching topics related to water quality and quantity. The Department also continues to pursue its goal of hiring First Nations instructors.

### Relationships with Other Programs

There are presently eight undergraduate programs with an environmental science focus offered at the University of Saskatchewan: in the College of Arts and Science, the B.Sc. programs in Environmental Biology, Environmental Earth Sciences, and Toxicology, as well as the B.A. & Sc. program in Environment and Society; in the College of Agriculture and Bioresources, the B.S.A. program in Environmental Science and the B.Sc. program in Renewable Resource Management; and in the College of Engineering, the B. E. Program in Environmental Engineering. Two of these programs, the B.Sc. in Environmental Earth Sciences and the B.A. & Sc. in Environment and Society, are offered by the Department of Geography & Planning. The department also offers a popular Minor in Water Science. Elements of water quality are explored in several of these programs, notably Toxicology and Environmental Engineering, while knowledge related to water quantity and source water protection is explored in Geography and Planning courses. Our proposed programs will increase the visibility of these course offerings to undergraduate students.

The proposed programs retain a core of foundational science (100-level and 200-level courses): biology, chemistry, geology, mathematics, physics, and statistics. The retention of these courses contributes to the rigorous multi-disciplinary training offered through the proposed programs and are required elements of the professionally accredited environmental geoscience curricula in the Province of Saskatchewan (see Environmental Geoscience U of S course list available at <https://www.apegs.ca/Portal/Pages/canadian-geoscience-graduates>).

### Impact on the Department

Faculty in the department are already committed to teaching in support of the current B.Sc. programs in Environmental Earth Sciences (GEOG 120, 222, 225, 233, 235, 290,302, 322, 323, 325, 328, 333, 335, 351, 386, 390, 423, 427, 490; PLAN 329), so no change is needed to support the Hydrology program instead. Experiential learning opportunities (e.g., FYRE, field excursions, environmental modelling in geomatics) will continue to be an important element of our undergraduate programs.

### Resources

The Department of Geography and Planning currently possesses the necessary human, financial and infrastructure resources to offer the proposed B.Sc. in Hydrology. We have secured support from contributing departments (i.e., Chemistry, Computer Science, Geological Sciences, Soil Science) for continued delivery of core and cognate courses that support the proposed programs. The proposed

program in Hydrology has no unusual components, and so Student Information Systems has advised Geography and Planning that this change will have negligible impact on their workload.



**Program(s) to be deleted: Environmental Earth Sciences – Bachelor of Science Honours  
and Double Honours**

**Effective date of termination: May 2020**

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**1. List reasons for termination and describe the background leading to this decision.**

The department of Geography and Planning is proposing to replace the existing major in Environmental Earth Sciences (EES) with a related major in Hydrology. Revising and renaming the existing programs will have benefits for students, most of whom graduate from the EES program with the same skill set as graduates from a Hydrology program, but are not always being considered for employment in that area due to the name of their degree.

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**2. Technical information.**

2.1 Courses offered in the program and faculty resources required for these courses.

All courses will be offered in the new Hydrology program.

2.2 Other resources (staff, technology, physical resources, etc) used for this program.

There are no positions or other resources used by this program that will not be used for the new program.

2.3 Courses to be deleted, if any.

None.

2.4 Number of students presently enrolled.

42 students are currently enrolled (Data from uView)

2.5 Number of students enrolled and graduated over the last five years.

Enrollment

2013-14: 39

2014-15: 36

2015-16: 45

2016-17: 55

2017-18: 45

Graduates

2014: 7  
2015: 5  
2016: 8  
2017: 5  
2018: 13

Data from uView.

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### **3. Impact of the termination.**

#### Internal

3.1 What if any impact will this termination have on undergraduate and graduate students? How will they be advised to complete their programs?

Existing students will be allowed to complete the current program, or they may choose to switch to the new program. No impact on graduate students.

3.2 What impact will this termination have on faculty and teaching assignments?

None. All courses will continue to be offered.

3.3 Will this termination affect other programs, departments or colleges?

A small number of courses from other departments (in Arts and Science) which were restricted electives in the EES program will be required in the Hydrology program. Courses from other colleges that were restricted electives in EES remain as restricted electives in Hydrology. All affected departments have been consulted, and are in support of the revision.

3.4 If courses are also to be deleted, will these deletions affect any other programs?

N/A

3.5 Is it likely, or appropriate, that another department or college will develop a program to replace this one?

Hydrology program is the replacement for EES.

3.6 Is it likely, or appropriate, that another department or college will develop courses to replace the ones deleted?

N/A

3.7 Describe any impact on research projects.

None.

3.8 Will this deletion affect resource areas such as library resources, physical facilities, and information technology?

No effect. New program will use same resources as old program.

3.9 Describe the budgetary implications of this deletion.

All resources used for EES will be redirected to the Hydrology program.

External

3.10 Describe any external impact (e.g. university reputation, accreditation, other institutions, high schools, community organizations, professional bodies).

Replacement program is expected to have a more positive effect on university profile than existing program, and graduates will have better employment opportunities.

3.11 Is it likely or appropriate that another educational institution will offer this program if it is deleted at the University of Saskatchewan?

Replacement program is being proposed concurrently.

Other

3.12 Are there any other relevant impacts or considerations?

No.

3.13 Please provide any statements or opinions received about this termination.

Please see consultation information, college statement, and response from the Planning and Priorities Committee.

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## **College Statement**

From Gordon DesBrisay, Vice Dean Academic

I am pleased to confirm that the College of Arts and Science supports replacement of the current Bachelor of Science program in Environmental Earth Sciences with a Bachelor of Science program in Hydrology.

The College of Arts and Science is working to provide innovative program options that meet student need and demand. The new program will allow students to work with our experts in water security, and to have their area of study more clearly represented by the name of the major. This will enhance their opportunities for future employment and admission to graduate schools.

The Academic Programs Committee (BSc) approved the proposal on January 15, 2019, as did the College Faculty Council on February 5, 2019.

## MEMO

**TO:** Dirk deBoer, Chair, Planning and Priorities Committee  
**FROM:** Bram Noble, Acting Head, Department of Geography & Planning  
**DATE:** 20 September 2018

### **Notice of Intent BSc, MSc, PhD Programs in Hydrology**

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Please find attached a notice of intent to establish BSc, MSc, and PhD degree programs in Hydrology.

The Department of Geography and Planning has a rich history of research and training in hydrology. Over the last decade, for example, we have graduated 48 Masters and PhD hydrology-trained students – all under the geography degree name tag. With the U of S emerging as a global leader in water security research, of which hydrology is a core component, now is the time to advance innovate, professionally-accredited, and clearly branded undergraduate and graduate training programs in this rapidly growing field.

The attached NOIs first present our case for undergraduate, professionally-accredited BSc Hydrology 4-year major and honours programs. The programs draw on our unique strengths in water science and geomatics and are a transformation of our existing accredited programs in Environmental Earth Sciences.

The second proposal is to reimagine and clearly brand graduate-level training in hydrology that we already offer through our Department. The proposed MSc and PhD Hydrology degree programs draw on decades of experience in hydrology graduate-level training and respond to the University's rapidly growing hydrology research environment, the continued demand for highly-trained hydrology graduates, and the recent increase in hydrology faculty complement.

Coupled with existing graduate-level interdisciplinary water security training in the School of Environment and Sustainability, and the potential for water resources engineering programming in the College of Engineering, we believe that establishing BSc, MSc, and PhD programs in Hydrology will advance the University of Saskatchewan's position to number one internationally in water science research.

Both NOIs were presented to Drs. Jay Famiglietti (Director, GIWS) and John Pomeroy (Director, GWF) at a Departmental faculty meeting on 7 September 2018. Both NOIs were unanimously approved.

Dr. Cherie Westbrook (Graduate Chair) and Dr. John Pomeroy (Tier I CRC and GWF Director) are available to present the attached NOIs on behalf of the Department of Geography and Planning. Should you have any questions or concerns, please do not hesitate to contact me.

I look forward to the committee's guidance and to moving forward to the next stage of program development and consultation.



Photo Credit: Isabelle Dubois, ArcticNet

# Notice of Intent for an Undergraduate Program in Hydrology

BSc 4-yr and BSc Honours

Department of Geography and Planning

14 September 2018

## 1. MOTIVATION

The world has entered an era of immense water-related threats. Water security faces unprecedented pressure from population growth and urbanization, unsustainable water uses and rapid environmental change. More than 80% of the world's population live in areas where human water security is threatened, which has triggered an increase in food prices, threatened government systems and caused political unrest. Many of these global issues are exemplified here in Canada. Two of the most expensive natural disasters in Canadian history occurred in the West because of extreme climate conditions; the 1999-2004 Prairie drought caused a \$5.8B drop in GDP while the Alberta government spent over \$5B to rebuild after the June 2013 flood. As articulated in the Global Water Futures proposal, the daunting, grand challenge facing the world is how do we best prepare for, mitigate, and manage uncertain water futures and inevitable water-related disasters? Finding solutions to complex water security problems requires that universities train future water researchers and professionals to understand system complexities and interdisciplinarity, and to flow easily between science and practice.

The Department of Geography and Planning at the University of Saskatchewan provides an environment for exploring the nature and diversity of the Earth and its people. Research and teaching activity in the department is concentrated in three overlapping domains: hydrology, earth and environmental systems; applied and scientific geomatics; and planning and management of the built and natural environment. Much of the research and teaching conducted by Geography and Planning faculty occurs the boundaries of these domains, is crosscutting, and is focused on integrative approaches to addressing scholarly and societal challenges and mobilizing knowledge.

The motivation for proposing these programs was: 1) to create undergraduate programs that focus on departmental strengths in water science and geomatics; 2) to differentiate the undergraduate programs in environmental science offered by the department from "soft rock" (i.e., sedimentary rocks, stratigraphy, geochemistry, petroleum geology) geoscience programs offered by the Department of Geological Sciences; and 3) to ensure that the new curricula will meet the knowledge standards for professional geoscience accreditation in the Province of Saskatchewan. The new program proposals represent a transformation of the current 4-year Major and Honours programs in Environmental Earth Sciences. We have mapped the proposed programs to the new B.Sc. program templates approved by the College of Arts and Science in May, 2018. The new curricula demand student engagement with the full suite of hydrology courses offered by the department. There is increased emphasis on quantitative skills (e.g., field and laboratory methods, multivariate and spatial statistics, data visualization) and social sciences perspectives related to water security. The proposed 4-year Major BSc in Hydrology satisfies the knowledge standards for professional geoscience accreditation nationwide. The proposed Honours BSc in Hydrology is intended to provide a rigorous program of study for students intending to pursue graduate research in physical hydrology (see accompanying NOI for the MSc and PhD in Hydrology). Both programs retain the strength of interdisciplinary training.

## 2. DEMAND

In terms of employability of program graduates, there is growing demand for highly trained water security researchers and professionals with disciplinary (e.g. hydrology) or interdisciplinary expertise. For example, our GWF Director has been informed by the President of the Saskatchewan Water Security Agency of their need for highly trained hydrologists (physical hydrologists, water quality hydrologists and ecohydrologists). Graduates of the current B.Sc. programs in Environmental Earth Sciences have secured meaningful employment in variety of public and private sector organizations with responsibilities to assess the quantity and quality of surface and ground waters. These employers include private environmental consulting firms, extractive industries (e.g.,

mining), public water utilities, the Saskatchewan Ministry of Environment, Environment and Climate Change Canada, as well as research assistant positions in water security at the University of Saskatchewan. We anticipate similar employment opportunities to be available to the graduates of the proposed programs.

The present B.Sc. programs in Environmental Earth Sciences have sustained an enrolment of ~ 40 declared Majors in this decade; the graduating cohort varies between 6-8 students each year. We anticipate sustaining this level of enrolment in the new programs but aspire to increase student enrolment as the demand for highly trained hydrologists increases in the future. Ensuring that program graduates are eligible for professional accreditation increases their employability.

### 3. FIT WITH UNIVERSITY VISION

The Department of Geography and Planning shares the University's mission to achieve excellence in the scholarly activities of teaching, discovering, preserving, and applying knowledge. The department has earned a well-deserved reputation for teaching excellence with multiple recipients of the Master Teacher Award, the College of Arts and Science Teaching Excellence Award, and the USSU Teaching Excellence Award represented in the current faculty complement. The University's *interest in and need for* a B.Sc. program in Hydrology is to further develop and promote a subject of academic pre-eminence, to improve program visibility, to leverage undergraduate research opportunities available through GIWS, GWF, CRCs, industrial chairs and CFI investments, and to develop a pool of highly qualified undergraduate students capable of pursuing graduate research in physical hydrology, thus enhancing recruitment of graduate students to the department. These ambitions align well with the University Plan 2025 as we propose to empower students to confront one of humanity's greatest challenges – to ensure everyone has a sustainable supply of safe water. Water Security is one of the six signature areas of the university. As a discipline, Geography and Planning plays a leadership role in hydrology on campus and plays a collaborative role in providing hydrology training within interdisciplinary water security programming.

### 4. RELATIONSHIP TO OTHER PROGRAMS

There are presently eight undergraduate programs with an environmental science focus offered at the University of Saskatchewan: in the College of Arts and Science, the B.Sc. programs in Environmental Biology, Environmental Earth Sciences, and Toxicology, as well as the B.A. & Sc. program in Environment and Society; in the College of Agriculture and Bioresources, the B.S.A. program in Environmental Science and the B.Sc. program in Renewable Resource Management; and in the College of Engineering, the B. E. Program in Environmental Engineering. Two of these programs, the B.Sc. in Environmental Earth Sciences and the B.A. & Sc. in Environment and Society, are offered by the Department of Geography & Planning. The department also offers a popular Minor in Water Science. Elements of water quality are explored in several of these programs, notably Toxicology and Environmental Engineering, while knowledge related to water quantity and source water protection is explored in Geography and Planning courses. Our proposed programs will increase the visibility of these course offerings to undergraduate students.

The proposed programs retain a core of foundational science (100-level and 200-level) courses: biology, chemistry, geology, mathematics, physics, and statistics. The retention of these courses contributes to the rigorous multi-disciplinary training offered through the proposed programs and are required elements of the professionally accredited environmental geoscience curricula in the Province of Saskatchewan (see Environmental Geoscience U of S course list available at <https://www.apegs.ca/Portal/Pages/canadian-geoscience-graduates>).

Approval of the proposed programs will necessitate the deletion of the present B.Sc. programs in Environmental Earth Sciences in order to avoid program duplication.

## **5. RESOURCE REQUIREMENTS**

Geography and Planning currently possesses the necessary human, financial and infrastructure resources to offer the proposed B.Sc. in Hydrology.

## **6. RISKS**

We propose an important recasting of the current B.Sc. programs in Environmental Earth Sciences to create the proposed B.Sc. programs in Hydrology: hydrology courses will constitute the core of the 4-year Major and Honours program, supported by a breadth of cognate courses in environmental science drawn from chemistry, geology and soil science. The department has been engaged in the delivery of the B.Sc. programs in Environmental Earth Sciences since 1993 with excellent support from contributing programs in geological sciences and soil science. We anticipate sustaining these inter-departmental and inter-college relationships in support of the proposed programs. The proposed changes present low risk to the success of the programs.

## **7. ANTICIPATED START DATE**

The anticipated start date for the program is May 2020. This the earliest date available to initiate delivery of programs complying with the new B.Sc. program templates approved by the College of Arts & Science. The proposed undergraduate programs have no unusual components and Student Information Systems has advised Geography and Planning that program creation will have negligible impact on their workload.



# Notice of Intent for a Graduate Program in Hydrology

MSc and PhD Hydrology

Department of Geography  
and Planning

14 September 2018

## 1. MOTIVATION

The world has entered an era of immense water-related threats. Water security faces unprecedented pressure from population growth and urbanization, unsustainable water use and rapid environmental change. More than 80% of the world's population live in areas where human water security is threatened, triggering an increase in food prices, limiting urban and economic expansion, and causing political unrest. Many of these global issues are exemplified here in Canada. Two of the most expensive natural disasters in Canadian history occurred in western provinces because of extreme climate conditions. The 1999-2004 Prairie drought caused a \$5.8B drop in GDP while the Alberta government spent over \$5B to rebuild after the June 2013 flood; the cost of the 2018 BC fires is expected to be substantial. As articulated in the Global Water Futures proposal, the daunting, grand challenge facing the world is, how do we best prepare for, mitigate, and manage uncertain water futures and inevitable water-related disasters? Finding solutions to complex water security problems requires that universities train future water researchers and professionals to navigate complex hydrological systems through interdisciplinarity, with an understanding of science principals and applied practice.

The University of Saskatchewan has a long history of excellence in water research, spanning over 50 years. The establishment of the \$30-million Global Institute for Water Security (GIWS) in 2011, and the \$140-million Global Water Futures (GWF) program in 2016 have helped secure our university's position as a premier destination for cold regions hydrology. Evidence is this is the university's recent global ranking as 2<sup>nd</sup> in water resources research. Although we have seen rapid growth in hydrology research, graduate students and water-related faculty, the degree programming at USask in water resources remains haphazard, which is difficult for interested potential students to navigate. Exceptions are the new professional [Master's of Water Security](#) program in the School for Environment and Sustainability. As well, there is the [NSERC CREATE for Water Security](#), which is simply an add-on to an existing degree program. The creation of MSc Hydrology and PhD Hydrology degrees, along with a new BSc Hydrology (see associated NOI) as a recruitment tool, will serve to further increase the University's international profile and impact in water resources generally, and in hydrology specifically.

## 2. DEMAND

GWF and GIWS are internationally recognized research programs with high student demand. There is particular demand for training in hydrology. Missing are the departmental programs under the umbrella of water security for students to obtain named degrees.

In terms of employability of program graduates, the provinces and territories across Canada have established water security as a focus for innovation. Saskatchewan, for example, has a *25-year Water Security Plan* that calls for sustainable water supply, protection of water resources, effective water governance and flood and drought damage. The other provinces and two of the territories have similar long-term plans. Concomitant with a Canadian and international focus on water, there is growing demand for highly trained water security researchers and professionals with disciplinary (e.g. hydrology) or interdisciplinary expertise. For example, our GWF Director has been told by the President of the Saskatchewan Water Security Agency of their need for highly trained hydrologists (physical hydrologists, water quality hydrologists and ecohydrologists), and also for mentorship of their planned new hires. The Government of Alberta has echoed Saskatchewan's request. Our Graduate Program Review in 2016-17 also highlighted the need to make our current focus on hydrology training clearly evident to prospective students and employers of our graduates.

### 3. FIT WITH UNIVERSITY VISION

The Department of Geography and Planning shares the University's mission to achieve excellence in the scholarly activities of teaching, discovering, preserving, and applying knowledge. Included amongst the values we hold as important in guiding our research are: excellence in scholarship; excellence and innovation in graduate student mentoring; integration and collaboration; connection with communities. The University's *interest in and need for* a MSc Hydrology and PhD Hydrology is to further develop and promote a subject of academic pre-eminence, improve visibility, increase external research funding, take full advantage of GIWS, GWF, CRCs, industrial chairs and CFI investments, enhance recruitment of graduate students, improve graduate student training, and serve the community. These ambitions align well with the University Plan 2025 as we propose to empower students to confront one of humanity's greatest challenges – to ensure everyone has a sustainable supply of safe water. Water security is one of the six signature areas of the university. Internationalization and Indigenization are supported through the global impact of water security. As a discipline, Geography and Planning plays a leadership role in hydrology on campus, and plays a collaborative role in providing hydrology training within interdisciplinary water security programming. Geography and planning also has a strong history of engaging with Indigenous Studies and with Indigenous communities to enhance local water security. Having a graduate degree program in Hydrology will also help ensure tighter research-teaching connections in one of the six signature areas of the university. Measurable benefits are stronger recruitment tool; and co-ordination of research, teaching, and learning in hydrology across campus.

### 4. RELATIONSHIP TO OTHER PROGRAMS

There is broad campus support for a GIWS/GWF umbrella to promote entry to a set of departmentally led water degree schemes. The focus is on flexibility for faculty and students to access resources within the suite of programs, and provide programs across the breadth of disciplines that make up the field of water security. The first of these programs to hold a 'water' title is the Master's of Water Security (MWS), developed in 2016 and offered by the School of Environment and Sustainability (SENS). Delivery of the MWS program involves contribution from Geography and Planning, including delivery of the hydrology course. The MWS is a project-based degree program and is interdisciplinary, aligning well with the SENS mission. Our proposed program will extend campus graduate program offerings in 'water' into the disciplinary, thesis-based realm.

The Department of Geography and Planning currently offers a graduate program in Geography, with options for MA, MSc or PhD degrees. Although we are proposing to create and rebrand something we already do, the research initiatives of our faculty are diverse. As outlined in our annual [Research Activity Report](#), faculty research is broadly focused on three domains: hydrology, earth and environmental systems; applied and scientific geomatics; planning and management of the built and natural environment. The graduate program in Geography will continue to service students with interests other than hydrology. We plan on co-learning for our Department's students; the proposed Hydrology and the existing Geography programs both require a common core course emphasizing the research process.

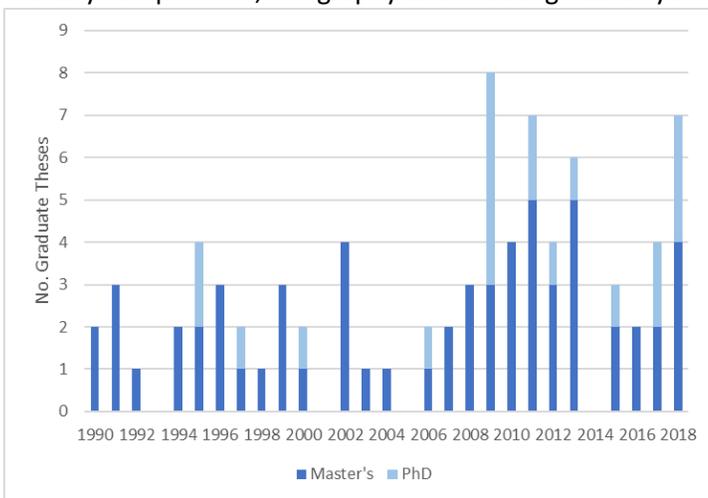
### 5. RESOURCE REQUIREMENTS

The Department of Geography and Planning currently possesses the human and financial resources to offer the MSc Hydrology and PhD Hydrology program for a start date of September 2019. That said, we anticipate that the demand for the program will continue to increase as GWF and GIWS expand. Faculty from other academic units may see a place for their students in this program. We anticipate needing additional program support within three years, should student interest in GWF/GIWS continue to increase as they have recently. Additional resources will be required in three areas:

- i) A planned requirement for the program is GEOG 827. In our current geography MSc and PhD programs this course is optional - although it is taken by ALL hydrology students. While we are planning for the regular tuition rate for the MSc and PhD hydrology programs, there is a \$1000 additional [fee](#) for GEOG 827, which currently exists, given that it is a field-based course and is held in Kananaskis Country, Alberta. The fee supports space requirements and field assistants. As enrollment increases, this fee may increase. It is already high. We will request financial resources to support increased demand for the course in the form of partially offsetting the course fee. This is a minor resource request.
- ii) We do anticipate an increase in enrollment given the recent addition of two new faculty to our own Department, and with the availability of a 'hydrology' degree program to other students and faculty engaged in GIWS and GWF. All of our current hydrology graduate students are funded through faculty research grants, with minor scholarship support provided by the Department. As enrollment increases, we will require minor increases in scholarship support for our top students.
- iii) Hydrology students in our Department currently spend most of their time in-program at Kananaskis, often travelling to Saskatoon for coursework. We are submitting a Capital Equipment request to the College of Arts & Science, and investing Departmental resources, to add video conferencing equipment to Kirk Hall such that we can engage students based at Kananaskis with the cohort of graduate students, as well as faculty and committee members, based here on Campus. This is a one-time investment.

## 6. RISKS

The MSc Hydrology and PhD Hydrology are new only in name. Naming these programs provides clarity but no risk. Geography and Planning has been graduating MSc and PhD students in hydrology for many years under the 'geography degree' name tag and with the support of our Centre for Hydrology (Figure 6.1). Over the past decade, our department had 48 graduate theses (4.8/year) in hydrology. Even in the years prior to the current faculty complement, Geography and Planning saw a hydrology thesis production rate of 1.8/year (31 theses



between 1990 and 2007). GWF funds have added several new faculty to the Department in the past 12 months whose research programs are in hydrology. Additions include two internationally renowned faculty - Dr. Jay Famiglietti (Director, GIWS) and Dr. Martyn Clark (world leader in hydrological modelling), each with research groups of 15+ trainees. Thus, the number of departmental graduate theses in hydrology will naturally increase into the foreseeable future.

Figure 1 - Geography graduate theses with 'hydrology' or 'water science' as the topic.

## 7. ANTICIPATED START DATE

The anticipated start date for the program is September 2019. The proposed graduate program has no unusual components and so Student Information Systems has advised Geography and Planning that program creation will have negligible impact on their work load.

TO: Dirk de Boer, Chair, Planning and Priorities Committee

FROM: Lorin Elias, Associate Dean Students

DATE: September 20, 2018

RE: Replacement of B.Sc. in Environmental Earth Sciences with B.Sc. in Hydrology and development of M.Sc. and Ph.D. in Hydrology

---

I am pleased to confirm that the College of Arts & Science supports the development of a Bachelor of Science program in Hydrology to replace the existing program in Environmental Earth Sciences. This proposal will allow our graduates to be properly recognized for the skill set that most graduates of the current program have already amassed, which will result in increased opportunities upon graduation.

The College is also supportive of the development of M.Sc. and Ph.D. programs in Hydrology. As stated in the notice of intent, students in the M.Sc. and Ph.D. programs in Geography are currently able to focus their studies in this area, and therefore attaching this name to the program will allow them to be properly recognized for their work, and have all of the consequent study and employment opportunities open to them upon graduation.

This is a welcome initiative, and I hope that Planning and Priorities will join us in supporting it.

Sincerely,



Lorin Elias  
Associate Dean, Student Affairs  
Professor, Department of Psychology  
228 Arts Building  
University of Saskatchewan

## Memorandum

**To:** Sandra Calver, Secretary, Planning and Priorities Committee of Council

**From:** Martha Smith, Acting Associate Dean, College of Graduate and Postdoctoral Studies

**Date:** September 20, 2018

**Re:** Proposal for a Master of Science and Doctor of Philosophy in Hydrology

---

The College of Graduate and Postdoctoral Studies supports, in principle, the creation of “Hydrology” as a field of study for existing Master of Science (M.Sc.) and Doctor of Philosophy (Ph.D.) programs in the Department of Geography and Planning. The introduction of Hydrology as an independent field of study would clarify the skills of graduates, and it is expected to enhance recruitment. Formalizing the Hydrology field of study is not expected to impact existing water security programming (i.e. the Master of Water Security program), as the M.Sc. and Ph.D. programs will focus heavily on research, while existing graduate programs focus on applied skills.

If you have any questions, please contact Kelly Clement at [kelly.clement@usask.ca](mailto:kelly.clement@usask.ca) or 306-966-2229.

:kc

## ***MEMORANDUM***

TO: John Pomeroy, director, Global Water Futures (GWF)  
Cherie Westbrook, graduate chair, Department of Geography and Planning  
Alec Aitken, faculty member and student academic advisor, Department of  
Geography and Planning

FROM: Ken Wilson, vice-chair, planning and priorities committee of Council

DATE: October 17, 2018

RE: **Planning and priorities committee response to the Notice of Intent for B.Sc.,  
M.Sc., and Ph.D. degree programs in Hydrology**

---

Thank you once again for attending the planning and priorities committee meeting on October 3, 2018, to present the notice of intent to offer B.Sc., M.Sc., and Ph.D. programs in Hydrology within the Department of Geography and Planning.

Members noted positively the growth potential of the program, the collaborative possibilities that exist with other units under a new model of program oversight, and the enhanced student recruitment and reputational benefits that the differentiation and branding of the Hydrology area will bring to the department, college, Global Water Futures, and the Global Institute for Water Security.

The following points are suggested for inclusion in the full program proposals:

- that there is no negative impact associated with the termination of the B.Sc. in Environmental Earth Sciences as the B.Sc. in Hydrology is a replacement program;
- the distinction between those graduate students in the SENS water programs versus those students attracted to the M.Sc. and Ph.D. in Hydrology;
- the funding possibilities that exist for the additional resources anticipated in the future to offer the graduate programs;
- recognition that the increased student enrolment will affect the demand of courses offered by cognate units.
- an indication of how Indigenization will be approached within the degree programs;

.../2

- a combined introduction to the program proposals;
- additional letters of support from SENS, the Department of Geological Sciences, the Department of Civil and Geological Engineering, the office of Vice-Provost, Indigenous Engagement, and the College of Agriculture and Bioresources.

I wish you the very best as you proceed to develop the full program proposals. Please do not hesitate to contact me if you have any questions.

Kind regards,



Ken Wilson

- c     Tony Vannelli, provost and vice-president academic  
       Kenneth Fox, chair, academic programs committee of Council  
       Martha Smith, associate dean, College of Graduate and Postdoctoral Studies (CGPS)  
       Bram Noble, acting head, Department of Geography and Planning  
       Alexis Dahl, program director, Programs Office, College of Arts and Science  
       Russell Isinger, registrar

## Catalogue Entry

Do you enjoy interdisciplinary work in the physical sciences focused on investigating issues related to water security? The Hydrology program might be the right fit for you! The interdisciplinary program in Hydrology is built on a core of foundation science (100-level and 200-level courses): biology, chemistry, geology, mathematics, physics, and statistics. These courses contribute to the rigorous multi-disciplinary training offered through these programs.

Program curricula demand student engagement with the full suite of hydrology courses offered by the Department of Geography and Planning, including social sciences perspectives related to water security. An important component of the program requirements is the acquisition of quantitative skills: field and laboratory methods, computing and data visualization, and multivariate and spatial statistics).

The B.Sc. in Hydrology programs are designed to meet the requirements for professional accreditation as Geoscientists-in-Training in the Province of Saskatchewan through the Association of Professional Engineers and Geoscientists of Saskatchewan (see Environmental Geoscience U of S course list available at <https://www.apegs.ca/Portal/Pages/canadian-geoscience-graduates>).

Note: Students declaring their Major in Hydrology are advised to complete the following suite of courses within the first 60 credit units of their programs: CHEM 112.3; EVSC 220.3; GEOG 120.3, 222.3, 225.3, 235.3, 290.3; GEOL 121.3; MATH 110.3, 116.3; PHYSICS 115.3; STAT 245.3 or PLSC 214.3.

## Residency Requirements in the Major

To receive a degree in Hydrology, students must complete at least two-thirds of the following coursework (to the nearest highest multiple of 3 credit units) from the University of Saskatchewan.

- Minimum requirements in Major Requirement C4.

See [Residency](#) for additional details

## [Bachelor of Science Four-year \(B.Sc. Four-year\) - Hydrology](#)

No more than 6 credit units from one subject may be used in Requirements C1, C2, and the Introductory Science Courses in C3.

### **C1 College Requirement (15 credit units)**

#### **English Language Writing (6 credit units)**

Choose **6 credit units** from the following:

- ANTH 302.3
- ANTH 310.3
- ANTH 405.3
- ANTH 421.3
- ENG 110.6
- ENG 111.3
- ENG 112.3
- ENG 113.3

- ENG 114.3
- ENG 120.3
- ENG 202.6
- ENG 203.3
- ENG 204.3
- ENG 253.6
- ENG 290.6
- ESL 116.3
- HIST 115.3
- HIST 125.3
- HIST 135.3
- HIST 145.3
- HIST 155.3
- INTS 203.3
- PHIL 115.3
- PHIL 120.3
- PHIL 133.3
- POLS 258.3
- POLS 323.3
- POLS 328.3
- POLS 422.3
- PSY 323.3
- PSY 355.3

### **Indigenous Learning (3 credit units)**

Choose **3 credit units** from the following:

- ANTH 202.3
- ANTH 480.3
- ARCH 350.3
- ENG 242.3
- ENG 335.3
- HIST 266.3
- INDG 107.3
- PLAN 445.3
- POLS 222.3

### **Quantitative Reasoning (6 credit units)**

- [MATH 110.3](#)
- [MATH 116.3](#)

### **C2 Breadth Requirement (6 credit units)**

Choose **6 credit units** from the following areas.

[Fine Arts](#)

[Humanities](#)

[Languages](#)

[Courses with No Program Type](#)

### **C3 Cognate Requirement (30 credit units)**

#### **Junior Course Requirements**

- [CHEM 112.3](#)
- [CHEM 115.3](#)
- [PHYS 115.3](#)
- [PHYS 117.3](#) or [PHYS 125.3](#)

#### **Senior Course Requirements**

- [GEOL 224.3](#)
- [GEOL 229.3](#)
- [GEOL 245.3](#)
- [GEOL 258.3](#)
- [STAT 245.3](#) or [PLSC 214.3](#)

Choose **3 credit units** from the following:

- [GEOG 333.3](#)
- [GEOG 386.3](#)
- [PLAN 329.3](#)

### **C4 Major Requirement (54 credit units)**

#### **Introduction to Earth Sciences (6 credit units)**

- [GEOG 120.3](#)
- [GEOL 121.3](#)

#### **Hydrology and Water Resources (21 credit units)**

- [GEOG 225.3](#)
- [GEOG 233.3](#)
- [GEOG 325.3](#)
- [GEOG 328.3](#)
- [GEOG 390.3](#)
- [GEOG 427.3](#)
- [CHEM 375.3](#)

#### **Field/Laboratory/Quantitative Skills (12 credit units)**

- [GEOG 222.3](#)
- [GEOG 290.3](#)

Choose **6 credit units** from the following:

- [CMPT 141.3](#)
- [GEOG 302.3](#)
- [GEOG 322.3](#)
- [GEOG 323.3](#)

### **Geomorphology/Environmental Science (9 credit units)**

- [EVSC 220.3](#)
- [GEOG 235.3](#)
- [GEOG 335.3](#)

### **Other Environmental Science (6 credit units)**

Choose **6 credit units** from the following:

- [BIOL 228.3](#)
- [BIOL 412.3](#)
- [EVSC 210.3](#)
- [EVSC 420.3](#)
- [GEOG 351.3](#)
- [GEOL 206.3](#)
- [GEOL 330.3](#)
- [GEOL 413.3](#)
- [SLSC 313.3](#)
- [SLSC 322.3](#)
- [TOX 301.3](#)

### **C5 Electives Requirement (15 credit units)**

Arts and Science courses, or those from other Colleges that have been approved for Arts and Science credit, to complete the requirements for 120 credit unit Four-year program, of which at least 66 credit units must be at the 200-level or higher.

### **[Bachelor of Science Honours \(B.Sc Honours\) - Hydrology](#)**

Students interested in entering an Honours program should consult advisors in the department concerned before registering for their second year. Of the 120 credit units required for the B.Sc. Honours degree, at least 66 credit units must be at the senior level. Application for admission to Honours is not considered until successful completion of at least 60 credit units with a Cumulative Weighted Average of at least 70% overall and at least 70% in the subject of Honours. For further details, please see the [Academic Information and Policies](#) section.

No more than 6 credit units from one subject may be used in Requirements C1, C2, and the Introductory Science Courses in C3.

### **C1 College Requirement (15 credit units)**

#### **English Language Writing (6 credit units)**

Choose **6 credit units** from the following:

- ANTH 302.3
- ANTH 310.3
- ANTH 405.3
- ANTH 421.3
- ENG 110.6

- ENG 111.3
- ENG 112.3
- ENG 113.3
- ENG 114.3
- ENG 120.3
- ENG 202.6
- ENG 203.3
- ENG 204.3
- ENG 253.6
- ENG 290.6
- ESL 116.3
- HIST 115.3
- HIST 125.3
- HIST 135.3
- HIST 145.3
- HIST 155.3
- INTS 203.3
- PHIL 115.3
- PHIL 120.3
- PHIL 133.3
- POLS 258.3
- POLS 323.3
- POLS 328.3
- POLS 422.3
- PSY 323.3
- PSY 355.3

**Indigenous Learning (3 credit units)**

Choose **3 credit units** from the following:

- ANTH 202.3
- ANTH 480.3
- ARCH 350.3
- ENG 242.3
- ENG 335.3
- HIST 266.3
- INDG 107.3
- PLAN 445.3
- POLS 222.3

**Quantitative Reasoning (6 credit units)**

- [MATH 110.3](#)
- [MATH 116.3](#)

## **C2 Breadth Requirement (6 credit units)**

Choose **6 credit units** from the following areas.

Fine Arts

Humanities

Languages

Courses with No Program Type

## **C3 Cognate Requirement (30 credit units)**

### **Junior Course Requirements**

- [CHEM 112.3](#)
- [CHEM 115.3](#)
- [PHYS 115.3](#)
- [PHYS 117.3](#) or [PHYS 125.3](#)

### **Senior Course Requirements**

- [GEOL 224.3](#)
- [GEOL 229.3](#)
- [GEOL 245.3](#)
- [GEOL 258.3](#)
- [STAT 245.3](#) or [PLSC 214.3](#)

Choose **3 credit units** from the following:

- [GEOG 333.3](#)
- [GEOG 386.3](#)
- [PLAN 329.3](#)

## **C4 Major Requirement (60 credit units)**

### **Introduction to Earth Sciences (6 credit units)**

- [GEOG 120.3](#)
- [GEOL 121.3](#)

### **Hydrology and Water Resources (21 credit units)**

- [GEOG 225.3](#)
- [GEOG 233.3](#)
- [GEOG 325.3](#)
- [GEOG 328.3](#)
- [GEOG 390.3](#)
- [GEOG 427.3](#)
- [CHEM 375.3](#)

**Field/Laboratory/Quantitative Skills (15 credit units)**

- [CMPT 141.3](#)
- [GEOG 222.3](#)
- [GEOG 290.3](#)
- [GEOG 302.3](#)
- [GEOG 323.3](#)

**Geomorphology/Environmental Science (9 credit units)**

- [EVSC 220.3](#)
- [GEOG 235.3](#)
- [GEOG 335.3](#)

**Technical Writing/Communication (3 credit units)**

- [GEOG 490.3](#)

**Other Environmental Science (6 credit units)**

Choose **6 credit units** from the following:

- [BIOL 228.3](#)
- [BIOL 412.3](#)
- [EVSC 210.3](#)
- [EVSC 420.3](#)
- [GEOG 322.3](#)
- [GEOG 351.3](#)
- [GEOL 206.3](#)
- [GEOL 330.3](#)
- [GEOL 413.3](#)
- [SLSC 313.3](#)
- [SLSC 322.3](#)
- [TOX 301.3](#)

**C5 Electives Requirement (9 credit units)**

Arts and Science courses, or those from other Colleges that have been approved for Arts and Science credit, to complete the requirements for 120 credit unit Four-year program, of which at least 66 credit units must be at the 200-level or higher.

## Record of Consultation

**From:** Alec Aitken <[alec.aitken@usask.ca](mailto:alec.aitken@usask.ca)>  
**Date:** Wednesday, October 17, 2018 at 3:28 PM  
**To:** "Palmer, David" <[dave.palmer@usask.ca](mailto:dave.palmer@usask.ca)>, "'kstanley@cs.usask.ca'" <[kstanley@cs.usask.ca](mailto:kstanley@cs.usask.ca)>, "Butler, Samuel" <[sam.butler@usask.ca](mailto:sam.butler@usask.ca)>, "Lindsay, Matt" <[matt.lindsay@usask.ca](mailto:matt.lindsay@usask.ca)>, "Van Rees, Ken" <[kcv903@mail.usask.ca](mailto:kcv903@mail.usask.ca)>  
**Cc:** "Noble, Bram" <[b.noble@usask.ca](mailto:b.noble@usask.ca)>, "Chutko, Krystopher" <[krys.chutko@usask.ca](mailto:krys.chutko@usask.ca)>  
**Subject:** New program proposal - B.Sc. in Hydrology

Dear colleagues,

The Department of Geography & Planning has submitted a Notice of Intent for a new program, a B.Sc. in Hydrology, to the Planning & Priorities Committee. We are proposing a transformation of the current B.Sc. programs (4-Year and Honours) in Environmental Earth Sciences. No new courses are being proposed to support this program proposal. We have mapped the proposed programs to the new B.Sc. program templates approved by the College of Arts and Science in May, 2018, and the professionally accredited environmental geoscience curricula in the Province of Saskatchewan approved by the Association of Professional Engineers and Geoscientists of Saskatchewan (APEGS). I am seeking your feedback on the proposals at your earliest possible convenience; a reply received on or before October 26 will be greatly appreciated. Thank you for your consideration in this matter.

Respectfully,

Alec Aitken  
Professor  
Department of Geography & Planning  
Program Advisor for the B.Sc. programs in Environmental Earth Sciences

---

### Geological Sciences:

**From:** Butler, Samuel  
**Sent:** Thursday, November 01, 2018 5:13 PM  
**To:** Aitken, Alec <[alec.aitken@usask.ca](mailto:alec.aitken@usask.ca)>; Lindsay, Matt <[matt.lindsay@usask.ca](mailto:matt.lindsay@usask.ca)>  
**Cc:** Chutko, Krystopher <[krys.chutko@usask.ca](mailto:krys.chutko@usask.ca)>  
**Subject:** RE: New program proposal - B.Sc. in Hydrology

Hi Alec, my apologies for not replying sooner. I confirm that I do not have concerns related to the proposed BSc in Hydrology.

Sam

**From:** Lindsay, Matt  
**Sent:** Thursday, November 01, 2018 5:20 PM  
**To:** Aitken, Alec <[alec.aitken@usask.ca](mailto:alec.aitken@usask.ca)>; Butler, Samuel <[sam.butler@usask.ca](mailto:sam.butler@usask.ca)>

**Cc:** Chutko, Krystopher <[krys.chutko@usask.ca](mailto:krys.chutko@usask.ca)>  
**Subject:** Re: New program proposal - B.Sc. in Hydrology

Hi Alec,

I reviewed the proposal and do not have any concerns. It seems that the program reflects the natural evolution of your faculty complement, which from the outside seems to have shifted more toward hydrology with GIWS/GWF hires. I am pleased to see the program aligns with APEGS eligibility requirements and that both foundational and optional geology courses are listed in the curriculum.

Best of luck with the proposal and the program,

Matt

**Matthew B.J. Lindsay, Ph.D.**

Associate Professor  
NSERC Industrial Research Chair  
Department of Geological Sciences  
University of Saskatchewan  
114 Science Place  
Saskatoon, SK, S7N 5E2, CANADA

T: +1 (306) 966-5693  
W: [www.mbjlindsay.ca](http://www.mbjlindsay.ca)

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**Soil Science:**

**From:** Van Rees, Ken  
**Sent:** Thursday, November 01, 2018 1:33 PM  
**To:** Aitken, Alec <[alec.aitken@usask.ca](mailto:alec.aitken@usask.ca)>  
**Subject:** Re: New program proposal - B.Sc. in Hydrology

Hi Alec

After receiving the feedback from the advisors in our program (Soil Science, RRM and Environmental Science) the Department of Soil Science fully supports your Notice of Intent for a new program in a B.Sc. in Hydrology. The courses from our programs will be able to accommodate these new students from this proposed program.

Cheers,  
Ken

Ken Van Rees, RPF  
Acting Head, Department of Soil Science  
Director, Centre for Northern Agroforestry and Afforestation  
51 Campus Drive

University of Saskatchewan  
Saskatoon, Saskatchewan  
Canada S7N 5A8  
phone [306 966 6853](tel:3069666853)  
[ken.vanrees@usask.ca](mailto:ken.vanrees@usask.ca)  
[www.saskagroforestry.ca](http://www.saskagroforestry.ca)  
[www.kenvanrees.com](http://www.kenvanrees.com)

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**Computer Science:**

From: Michael C. Horsch <[horsch@cs.usask.ca](mailto:horsch@cs.usask.ca)>  
Sent: Friday, October 26, 2018 4:04 PM  
To: Aitken, Alec <[alec.aitken@usask.ca](mailto:alec.aitken@usask.ca)>  
Cc: [kevin.stanley.usask@gmail.com](mailto:kevin.stanley.usask@gmail.com)  
Subject: Re: New program proposal - B.Sc. in Hydrology

Hi Alec. Kevin asked me to look at the proposal in my role as Undergrad Curriculum Chair.

We support the proposal and foresee nothing that causes us concern. Making CMPT 141/116 required in the Hydro Honours program will affect demand for our courses, but not enough to raise concerns.

I'd like to recommend that CMPT 141 should be the preferred option. CMPT 141 is available to Arts&Science students, but CMPT 116 is restricted to engineering students and a few other Science programs. Including it among the options is appropriate, so that students who have it already are not required to take another course.

I'd also like to suggest that it seems appropriate for any science program to require or recommend a CMPT course these days. Since it does not appear to be mentioned in the Hydrology BSc 4-Year program, perhaps your committee will reconsider, and list CMPT 141/116 either as a required course, or among a set of required cognate courses.

Mike

--

Michael C. Horsch  
Associate Professor  
Department of Computer Science  
University of Saskatchewan

---

**Chemistry:**

**From:** Palmer, David  
**Sent:** Thursday, October 18, 2018 9:31 AM  
**To:** Aitken, Alec <[alec.aitken@usask.ca](mailto:alec.aitken@usask.ca)>  
**Subject:** Re: New program proposal - B.Sc. in Hydrology  
**Importance:** High

Hi Alec,

It appears that this new program will have a small increase in chemistry requirements, in that Chemistry 375.3 will go from being optional to a required course. Given the current size of the program, we can accommodate this without difficulty. If you anticipate a significant increase in enrolment, it would affect us, but I think the effects would be positive. (A huge increase could be a problem for the laboratory offering of the course, but we can worry about that if it happens.)

We will be entering a phase of curriculum renewal beginning this year, and I expect our environmental chemistry offerings to be affected. We will make sure to consult with your program if that is the case. We are not in a position to lose any enrolment!

Thanks,

Dave

---

Dr. David R. J. Palmer  
Professor & Head of Chemistry  
University of Saskatchewan

<http://www.usask.ca/~Dave.Palmer>

---

**Association of Professional Engineers and Geoscientists of Saskatchewan:**

**From:** Kate MacLachlan <[KateM@apegs.ca](mailto:KateM@apegs.ca)>  
**Sent:** Wednesday, August 29, 2018 11:08 AM  
**To:** Aitken, Alec <[alec.aitken@usask.ca](mailto:alec.aitken@usask.ca)>  
**Subject:** Proposed UofS Hydrology Program

Hello Alec,

I have reviewed the content of the proposed UofS Hydrology Program that you sent me.

As laid out in the attached spreadsheet, it would meet the national academic standard for licensure as a geoscientist-in-training. Once you have finalized the program, if you would like it to be recognized by APEGS, it would have to be reviewed by the Academic Review Committee and we would have to create a list of acceptable courses like we have for the other geoscience programs.

As discussed in our recent phone call, all sections of the GKE (1A, 1B, 2A, 2B and 2C) would have to be met in order for the program to be acceptable for licensure. If the compulsory foundation geoscience courses (section 2A) are not included, it would not be considered a geoscience program and would not meet the requirements for licensure as a GIT anywhere in Canada.

Feel free to contact me if you need any additional information.

Regards, Kate

Kate MacLachlan, Ph.D., P.Geo. FGC. FEC (Hon)  
Director of Academic Review  
Association of Professional Engineers and Geoscientists of Saskatchewan  
300-4581 Parliament Ave.  
Regina, S4W 0G3  
(306) 525-9547  
Toll Free 1-800-500-9547  
[apegs.ca](http://apegs.ca)

*\*Please make an appointment before coming to the office to ensure that the appropriate staff member is available.*

**Office hours:** 8 a.m. to 5 p.m., Monday to Friday

(Exceptions: Closed statutory holidays, including Easter Monday and closed at 3 p.m. on December 24 and December 31)



**A P E G S**

*Association of Professional Engineers  
& Geoscientists of Saskatchewan*

## Appendix A - Course Catalogue Descriptions

### C1 Quantitative Reasoning

#### **MATH 110.3 — 1/2(3L-1.5P)**

##### **Calculus I**

Introduction to derivatives, limits, techniques of differentiation, maximum and minimum problems and other applications, implicit differentiation, anti-derivatives.

Prerequisite(s): Pre-Calculus 30 and a 60% score in the Math Placement Test; or Mathematics B30 and C30 and a 60% score in the Math Placement Test; or MATH 102 or MATH 104.

#### **MATH 116.3 — 1/2(3L-1.5P)**

##### **Calculus II**

Techniques of integration; the definite integral and simple differential equations with applications and numerical techniques; the theoretical foundations of limits, including the epsilon-delta formulation; continuity and differentiability; advanced curve sketching; inverse functions; inverse trigonometric functions.

Prerequisite(s): MATH 110.

### C3 Cognate Requirement

#### Junior Course Requirements

#### **CHEM 112.3 — 1/2(3L-3.5P)**

##### **General Chemistry I Structure Bonding and Properties of Materials**

Structure, bonding and properties of materials. Topics include atoms and molecules, bonding, molecular structure, intermolecular forces, states of matter, and properties of materials. The laboratory illustrates material covered in the lectures.

Prerequisite(s): Chemistry 30 or CHEM 90 or CHEM 100; and (Mathematics B30 or Foundations of Mathematics 30 or Pre-Calculus 30).

#### **CHEM 115.3 — 1/2(3L-3P)**

##### **General Chemistry II Chemical Processes**

Chemical reactions, including the rates and energetics of reactions and specific types of reactions. Topics include stoichiometry, chemical reactions, chemical kinetics, equilibrium, specific reactions, and thermodynamics.

Prerequisite(s): CHEM 111, 112 or 114.

#### **PHYS 115.3 — 1(3L-1.5P-1T)**

##### **Physics and the Universe**

Provides the first part of an introduction to physics. Topics include force, energy, momentum and collisions, torque and angular momentum, electric and magnetic fields, electric currents and circuits. Some applications of physics in technology and the health sciences are also discussed.

Prerequisite(s): Physics 30 or PHYS 90; and (Mathematics B30 and C30; or Foundations of Mathematics 30; or Pre-Calculus 30).

#### **PHYS 117.3 — 2(3L-1.5P-1T)**

##### **Physics for the Life Sciences**

Introduces students to aspects of physics which are of particular relevance for the health and life sciences. This course can be used as the second part of an introduction to physics. Topics include fluid mechanics, oscillations and waves, thermal physics, optics, quantum physics, and nuclear physics.

Emphasis is placed on bio-medical applications of physics.

Prerequisite(s): PHYS 115.

**PHYS 125.3 — 2(3L-1.5P-1T)****Physics and Technology**

Introduces students to aspects of physics with an emphasis on applications in technology and the physical sciences. This course can be used as the second part of an introduction to physics for students in the physical sciences or as a science elective for engineering students. Topics include fluid mechanics, oscillations and waves, temperature and ideal gas law, optics, special relativity, quantum physics, and nuclear physics.

Prerequisite(s): MATH 110 or 123; PHYS 115 or GE 124.

**Senior Course Requirements****GEOL 224.3 — 1(3L-3P)****Mineralogy**

Crystalline materials and their properties; crystal chemistry and chemical equilibria in natural systems; mineral properties and classification, and particularly rock-forming mineral groups; mineral genesis.

Prerequisite(s): GEOL 121; and PHYS 115 or PHYS 155; and CHEM 112 or CHEM 114; and MATH 110 or MATH 123.

**GEOL 229.3 — 2(3L)****Introductory Geochemistry**

An overview of geochemical theory and problem-solving techniques used by Earth Scientists to elucidate Earth system processes. Topics of discussion will include the origin of elements, stable and radiogenic isotopes, geochronology, thermodynamics, trace element partitioning in mineral fluid systems, weathering and aqueous geochemistry.

Prerequisite(s): GEOL 121; and CHEM 112; and MATH 110 or MATH 123.

**GEOL 245.3 — 1(3L-2P)****Introduction to Sedimentary Rocks**

Provides a general introduction to sedimentary rocks, sedimentary processes, and the depositional environments in which these rocks form. Stratigraphic concepts are introduced with specific reference to the relationship between sedimentary rock units. Laboratories focus on the identification of sedimentary rocks and structures in hand specimen.

Prerequisite(s): GEOL 121; and PHYS 115 or PHYS 155; and CHEM 112 or CHEM 114; and MATH 110 or MATH 123.

**GEOL 258.3 — 1(3L-3P)****Structural Geology**

An introduction to the structural features of rocks; including discussions of their origin and use. The description of folds, faults, and joints are emphasized, along with outcrop relationships of intrusive bodies. Other topics will include tectonics, orogeny, stratigraphic facing, and non-orogenic process, such as salt doming and glacial thrusting. Laboratories will introduce mapping techniques and the analysis of geological maps.

Prerequisite(s): GEOL 121; and PHYS 115 or PHYS 155; and CHEM 112 or CHEM 114; and MATH 110 or MATH 123

**GEOG 333.3 — 1/2(3L)****Global Climate Change**

Earth's climate is constantly changing in response to influences forced upon it by natural systems and human actions. It is expected that current and future climate changes will have a strong influence on human populations, society, and development. This course will describe how humans predict future climate changes and how we can mitigate or adapt to those changes. Major topics discussed in this course will focus on the politics and economics of climate change and how these can help, or hinder, our attempts to manage climate change. More direct attempts, through geoengineering and weather modification, will be addressed as well.

Prerequisite(s): GEOG 233 or permission of the instructor

**GEOG 386.3 — 1/2(3L)****Environmental Impact Assessment**

A practical and theoretical introduction to environmental and socioeconomic impact assessment. Emphasis is placed on the principles and characteristics of impact assessment as set out under Canadian and Saskatchewan guidelines and legislation, and on the lessons learned from selected case studies. Prerequisite(s): GEOG 280 or permission of the instructor.

**PLAN 329.3 — 1/2(3L)****Integrated Water Resource Planning**

The process and practice of planning for water resources in a Canadian context. A focus on water and land use policy and water governance structures including federal, provincial, First Nations and local scales of inquiry. Institutional arrangements affecting water management in Canada will be investigated. Topics will include integrated watershed management, watershed plan preparation, source water protection, alternative storm water and wastewater management, and access to safe drinking water. Prerequisite(s): GEOG 240 or GEOG 280, or permission of the instructor.

**PLSC 214.3 — 1/2(3L-2P)****Statistical Methods**

An introduction to statistical methods and their application to experiments. Includes probability, means and variances, "t" tests, analysis of variance, experimental designs, simple regression and correlation, and chi-square tests. The lab component provides an introduction to the data analysis functions of spreadsheet software. This class is designed for students in the biological sciences. This course will be conducted online with weekly laboratory sessions.

**STAT 245.3 — 1/2(3L-1P)****Introduction to Statistical Methods**

An introduction to basic statistical methods including frequency distributions, elementary probability, confidence intervals and tests of significance, analysis of variance, regression and correlation, contingency tables, goodness of fit.

Prerequisite(s): One of MATH 100, 104 (formerly 101), 110, 121, 123, 125, or STAT 103.

**C4 Major Requirement****1) Introduction to Earth Sciences****GEOG 120.3 — 1/2(3L-2P)****Introduction to Global Environmental Systems**

An introduction to the principles, processes and interactions in the earth's physical environment with a particular emphasis on the flow of energy and matter within global environmental systems. Topics include global radiation and energy balances, atmospheric and oceanic processes, the hydrological cycle, earth surface processes and biogeochemical cycling. Case studies are introduced to illustrate the interaction between human activity and the natural environment.

Note: A background in high school sciences at the 30-level is recommended.

**GEOL 121.3 — 1/2(3L-3P)****Earth Processes**

Exploration of the global and local-scale physical, chemical, and biological processes that have shaped the Earth's surface and interior through geologic time. Topics include Earth's structure and composition, plate tectonics, minerals, the rock cycle, weathering and erosion, volcanoes, earthquakes, mountain building, geologic time, geologic hazards, the hydrological cycle, the origin and use of energy, mineral and water resources, and other earth processes that impact humans. The laboratory component satisfies the requirements of students in Program Type C (B.Sc. programs).

**2) Hydrology and Water Resources**

**GEOG 225.3 — 1/2(3L-2P)****Hydrology of Canada**

The geographic distribution of hydrologic processes in Canada is examined. The types of processes and their rates of operation are related to regional physical environments. Prerequisite(s): 3 credit units of Science courses and 21 credit units of additional University course work.

Note: GEOG 120 is recommended.

**GEOG 233.3 — 1(3L)****Introduction to Weather and Climate**

An examination of the elements of weather and climate including the composition and thermal structure of the atmosphere; radiation and energy balances; global circulation; air masses; fronts and atmospheric disturbances; and climates of the world.

Prerequisite(s): 3 credit units of Science courses and 21 credit units of additional University course work.

Note: GEOG 120 is recommended.

**GEOG 325.3 — 1/2(3L)****Principles of Fluvial Systems**

Processes responsible for the spatial variability of available water resources are introduced and investigated analytically. Topics covered will provide an explanation of the patterns of precipitation, evaporation, infiltration, snowmelt and stream flow.

Prerequisite(s): GEOG 225; or 12 credit units in GEOL.

**GEOG 328.3 — 2(3L)****Groundwater Hydrology**

Groundwater is the largest source of readily accessible freshwater. This course provides a rigorous understanding of subsurface hydrological processes and covers fundamentals of subsurface flow and transport, emphasizing the role of groundwater and soil water in the hydrological cycle, and groundwater-surface water interactions.

Prerequisite(s): GEOG 225; or 12 credit units of GEOL.

**GEOG 390.3 — 1(L-P)****Methods in Hydrometeorology**

Introduces a variety of field and laboratory approaches, methodologies and techniques that find frequent application in physical geography. Field projects will be undertaken to collect data for analysis, evaluation and presentation. Permission of the department required.

Prerequisite(s): GEOG 290; and one of GEOG 225, GEOG 233, or GEOG 328.

**GEOG 427.3 — 1(3L-2T)****Advanced Hydrology**

Examines the physical principles governing hydrological processes. Topics covered include precipitation, interception, snow accumulation, snowmelt, evaporation, infiltration, groundwater movement, flood and drought frequency analysis and stream flow. Lectures and tutorials with hydrology instrumentation will be supplemented by problem solving assignments and an essay.

Prerequisite(s): One of MATH 110 or MATH 123 or MATH 125; one of EVSC 210 or PHYS 115 or GE 124; GEOG 225.

**CHEM 375.3 — 1/2(3L-3P)****Environmental Chemistry**

The disposal and treatment of waste materials will be discussed in terms of their effect on the gaseous and aqueous environments. A series of problems designed to illustrate the material covered in each topic will be assigned. The laboratory sessions are designed to give some understanding of how tests for environmental quality are carried out in the field and in the laboratory.

Prerequisite(s): CHEM 115.

### 3) Field/Laboratory/Quantitative Skills

#### **GEOG 222.3 — 1/2(3L-2P)**

##### **Introduction to Geomatics**

Introduction to the skills for reading maps, air photos and satellite images is provided, along with an introduction to computer-based cartography, image analysis and enhancement, and Geographic Information Systems.

Prerequisite(s): 3 credit units of Science courses and 21 credit units of additional University course work.

#### **GEOG 290.3 — 1(1L-4P-1T)**

##### **Field Methods and Laboratory Analysis**

An introduction to the principles and practice of navigation, topographic surveying, image analysis, and the sampling and analysis of sediments, water, and plant communities relevant to environmental science.

Prerequisite(s): 3 credit units of Science courses and 21 credit units of additional University course work.

Note: GEOG 120 is recommended.

#### **GEOG 302.3 — 1(3L-2P)**

##### **Quantitative Methods in Geography**

Content will focus on the use of statistics in geographical research and on their use in a spatial context in human and physical geography. Topics are covered in spatial and multivariate statistics. Weekly take-home labs and course content emphasize geographical subjects.

Prerequisite(s): STAT 244 or STAT 245.

#### **CMPT 141.3 — 1/2(3L-1.5P)**

##### **Introduction to Computer Science**

An introduction to computer science and problem solving using procedural programming. This course introduces the basic computer science and computer programming principles of algorithms, abstraction, encapsulation, variables, conditional branching, repetition, functions, recursion, and elementary data structures. These concepts are applied to problem solving applications such as data analysis and visualization, simulation, text processing, and image processing. The programming skills acquired in this course are applicable in all fields of study, the work-place, and personal projects.

Prerequisite(s): One of (Computer Science 30, CMPT 105, CMPT 140) and one of (Mathematics B30, Foundations of Mathematics 30, Pre-Calculus 30); or MATH 110 or MATH 123 (can be taken concurrently).

### 4) Geomorphology/Environmental Science

#### **GEOG 235.3 — 1(3L-2P)**

##### **Earth Processes and Natural Hazards A Canadian Perspective**

This interdisciplinary course explores the earth and atmospheric processes that are responsible for landform development and natural hazards, the regions in Canada most susceptible to natural disasters, and current developments in hazard forecasting and monitoring techniques. Students will explore through case studies the impacts of natural disasters on Canadian landscapes and people. Lastly, the course explores ways to lessen the impacts of natural disasters through risk perception, assessment, and preparedness, and mitigation strategies.

Prerequisite(s): GEOG 120 or GEOL 121 or permission of the instructor.

#### **GEOG 335.3 — 1/2(3L-2P)**

##### **Glacial Geomorphology**

Examines the role of continental and alpine glaciation in shaping Canadian landscapes throughout the Quaternary period. Topics include glaciology and glacier flow, glacial processes and landforms, Milankovitch cycles and Quaternary ice sheet dynamics in North America, and glacio-eustasy and glacio-isostasy.

Prerequisite(s): GEOG 235; or 12 credit units in GEOL, GEOE, EVSC, or SLSC.

**EVSC 220.3 — 1(3L)****Environmental Soil Science**

Focuses on soils as an integrator of a broad range of environmental processes and as a critical component in human induced environmental change. Major topics include the influence of the environment on soil formation and the physical, chemical, and microbial/biochemical soil processes of relevance to environmental science.

Prerequisite(s): AGRC 111 or 3 credit units GEOG or GEOL.

**5) Technical Writing/Communication****GEOG 490.3 — 1/2(2L-2T)****Selected Topics in Physical Geography**

Students will work on theoretical or practical research projects under the supervision of a faculty member. An outline of the project must be submitted to the course coordinator in the term preceding registration and be approved before Departmental permission will be granted. An oral presentation and written report submitted at the end of the project will be evaluated by a faculty committee. Permission of the department required. Prerequisite(s): One of GEOG 325, GEOG 328, GEOG 335, GEOG 351, GEOG 427 or GEOG 435; and GEOG 390.

Prerequisite(s) or Co-requisite(s): GEOG 302.

**6) 6 credit units of restricted electives:****BIOL 228.3 — 1/2(3L-3P)****An Introduction to Ecology and Ecosystems**

An introduction to ecological principles and the functioning of aquatic and terrestrial ecosystems. Community structure and dynamics, ecosystem production, populations, energy flow and material recycling will be considered.

Prerequisite(s): BIOL 108 or BIOL 121 or GEOG 120 or 6 credit units in GEOL.

**BIOL 412.3 — 1(3L-4P)****Limnology**

Introduction to the ecology of lakes. The biological, chemical and physical properties of lakes are examined at lake and watershed levels. Theoretical and applied topics, including human impacts (e.g., eutrophication, climate change, ultraviolet radiation, contaminants, and angling) are examined. Laboratories and field trips provide training in limnological techniques.

Prerequisite(s): BIOL 121, BIOL 228 (formerly BIOL 253) and CHEM 112; or permission of the instructor.

**EVSC 210.3 — 2(3L-3P)****Environmental Physics**

Essential physical concepts and processes (transport and storage of matter and energy) in the environment are introduced through applications and case-studies. Case studies include water cycles, natural and human-induced climate change, and the impact of human activity (industrial and agricultural) on the environment. Practicums are in the form of tutorials. Students will develop the essential ability to solve practical environmental problems through this course.

**EVSC 420.3 — 1(3L)****Environmental Fate and Transport of Toxic Substances**

In this lecture/practicum based course, students will learn how to construct a multi-media environmental model using freely available software. Students will be exposed to the fundamental theory of environmental fate modeling with a focus on how contaminant movement and transformation in the atmosphere, hydrosphere, biosphere and geosphere are incorporated into long term environmental fate models. The course is located in a computer lab and the emphasis is on practical construction, implementation and interpretation of fugacity based environmental fate models. Each lecture period consists of a brief theoretical overview followed by application and implementation of the equations into the student's fate model.

Prerequisite(s): MATH 104, 110 or 125; PHYS 115 or EVSC 210; successful completion of 60 credit units of university level courses.

### **GEOG 322.3 — 1/2(3L-2P)**

#### **Introduction to Geographic Information Systems**

Introduces students to the use of computer-based Geographic Information Systems for the management and analysis of spatial data for map production. Topics include vector and raster data structures, spatial data acquisition, geo-referencing, spatial interpolation, overlay analysis, and modelling. Students obtain practical experience with Geographical Information Systems through a series of exercises.

Prerequisite(s): GEOG 222; or 99 credit units of University course work; or permission of the instructor.

### **GEOG 351.3 — 1/2(3L)**

#### **Northern Environments**

A multidisciplinary study of the biophysical environments of the circumpolar North. Examines the processes operating at the Earth's surface and within the atmosphere and hydrosphere and their role in structuring northern ecosystems. Writing exercises and/or research projects will permit students with background preparation in the humanities, social sciences and the sciences to assess the impact of human activity on northern environments.

Prerequisite(s): 6 credit units in science; or permission of the instructor.

Note: GEOG 120 or NRTH 101 recommended.

### **GEOL 206.3 — 1(3L)**

#### **Earth Systems**

An introduction to Earth System Science, a concept that demonstrates the interrelationships between the Earth's landmasses, atmosphere, oceans and biosphere, and the role of humans in their interaction.

Topics discussed will include geochemical cycles and environmental change, both natural and anthropogenic.

Prerequisite(s): One course from GEOL 121, 122, GEOG 120 (formerly 111 or 112), BIOL 108, 120, 121, ARCH 112, CHEM 112, or PHYS 111 or 115, or permission of the department.

### **GEOL 330.3 — 2(3L)**

#### **Climate History**

Explores the record of climate variations preserved in recent earth materials, and the influence of these variations on contemporary societies. The focus will be on extreme periods, e.g., Pleistocene deglaciation, the Younger Dryas, 8.2ka event, Piorra Oscillation, Roman Warm Period, Dark Ages, Medieval Optimum, Little Ice Age, and 20th century warming.

Prerequisite(s): GEOL 206 or 229 or GEOG 233 or permission of the department.

### **GEOL 413.3 — 2(3L)**

#### **Aqueous Geochemistry**

An overview of theoretical and applied aspects of aqueous geochemistry. Topics include sampling and analysis of terrestrial waters, geochemical processes controlling water chemistry, and application of thermodynamic models to aqueous systems.

Prerequisite(s): GEOL 229, CHEM 115, and MATH 110; or permission of the department.

### **SLSC 313.3 — 1(3L)**

#### **Environmental Soil Chemistry**

The lectures and reading assignments cover the structural and chemical properties of major soil components and the principles of soil solution and surface chemistry. An emphasis is placed on environmentally relevant chemical reactions.

Prerequisite(s): CHEM 112 and one of CHEM 115 or CHEM 250; and EVSC 220 or SLSC 240.

**SLSC 322.3 — 1(3L-3P)****Environmental Soil Physics**

Combines theoretical and experimental elements aimed at providing understanding of the fundamental soil physical properties and processes, as well as the ability to solve practical problems related to agricultural and environmental problems. Topics include a discussion of the solid, liquid, and gaseous phases of the soil and the interactions between the phases, the movement of water, chemicals, air, and heat in soils, and the effects of these on plant growth and the environment. The laboratory involves the measurement of selected properties and their interpretation.

Prerequisite(s): EVSC 220 or SLSC 240.

**TOX 301.3 — 1/2(3L)****Environmental Toxicology**

A discussion of major environmental pollutants, their sources, interactions with atmospheric, terrestrial and aquatic systems, exposure of people, animals and other biota, and their dose-response relationships. Some of the physical and chemical changes induced in the environment by pollutants, contaminant fate and transport, and bioremediation are also discussed.

Prerequisite(s): BIOL 120 and 121 and CHEM 112.

Consultation with the Registrar Form

This form is to be completed by the Registrar (or his/her designate) during an in-person consultation with the faculty member responsible for the proposal. Please consider the questions on this form prior to the meeting.

Section 1: New Degree / Diploma / Certificate Information or Renaming of Existing

1 Is this a new degree, diploma, or certificate?

Yes  No

Is an existing degree, diploma, or certificate being renamed?

Yes  No

If you've answered NO to each of the previous two questions, please continue on to the next section.

2 What is the name of the new degree, diploma, or certificate?

3 What is the credential of this new degree, diploma, or certificate? [Example - D.M.D. = Doctor of Dental Medicine]

4 If you have renamed an existing degree, diploma, or certificate, what is the current name?

5 Does this new or renamed degree / diploma / certificate require completion of degree level courses or non-degree level courses, thus implying the attainment of either a degree level or non-degree level standard of achievement?

6 If this is a new degree level certificate, can a student take it at the same time as pursuing another degree level program?

Yes  No

7 If YES, a student attribute will be created and used to track students who are in this certificate alongside another program. The attribute code will be:

8 Which College is responsible for the awarding of this degree, diploma, or certificate?

9 Is there more than one program to fulfill the requirements for this degree, diploma, or certificate? If yes, please list these programs.

10 Are there any new majors, minors, or concentrations associated with this new degree / diploma / certificate? Please list the name(s) and whether it is a major, minor, or concentration, along with the sponsoring department.

One major is required on all programs [4 characters for code and 30 characters for description]

11 If this is a new graduate degree, is it thesis-based, course-based, or project-based?

Section 2: New / Revised Program for Existing or New Degree / Diploma / Certificate Information

1 Is this a new program?

Yes  No

Is an existing program being revised?

Yes  No

If you've answered NO to each of the previous two questions, please continue on to the next section.

2 If YES, what degree, diploma, or certificate does this new/revised program meet requirements for?

3 What is the name of this new/revised program?

4 What other program(s) currently exist that will also meet the requirements for this same degree(s)?

5 What College/Department is the academic authority for this program?

6 Is this a replacement for a current program?

Yes  No

7 If YES, will students in the current program complete that program or be grandfathered?

8 If this is a new graduate program, is it thesis-based, course-based, or project-based?

Section 3: Mobility

Mobility is the ability to move freely from one jurisdiction to another and to gain entry into an academic institution or to participate in a learning experience without undue obstacles or hindrances.

1 Does the proposed degree, program, major, minor, concentration, or course involve mobility?

Yes  No

If yes, choose one of the following?

- Domestic Mobility (both jurisdictions are within Canada)
- International Mobility (one jurisdiction is outside of Canada)

2 Please indicate the mobility type (refer to Nomenclature for definitions).

- Joint Program
- Joint Degree
- Dual Degree
- Professional Internship Program
- Faculty-Led Course Abroad
- Term Abroad Program

3 The U of S enters into partnerships or agreements with external partners for the above mobility types in order to allow students collaborative opportunities for research, studies, or activities. Has an agreement been signed?

Yes  No

4 Please state the full name of the agreement that the U of S is entering into.

5 What is the name of the external partner?

6 What is the jurisdiction for the external partner?

**Section 4: New / Revised Major, Minor, or Concentration for Existing Degree Information (Undergraduate)**

1 Is this a new or revised major, minor, or concentration attached to an existing degree program? Yes  No  Revised

If you've answered NO, please continue on to the next section.

2 If YES, please specify whether it is a major, minor, or concentration. If it is more than one, please fill out a separate form for each.

Major - Environmental Earth Sciences [EES]

3 What is the name of this new / revised major, minor, or concentration?

Major - Hydrology [HYG] - currently exists as a concentration and will be used as the major also  
COEO [Cooperative Education Option] - concentration is also attached

4 Which department is the authority for this major, minor, or concentration? If this is a cross-College relationship, please state the Jurisdictional College and the Adopting College.

Geography and Planning [GEPL]

5

Which current program(s), degree(s), and/or program type(s) is this new / revised major, minor, or concentration attached to?

BSC4Y [Bachelor of Science (4 Yr)] and BSCHON [Bachelor of Science (Honours)]

**Section 5: New / Revised Disciplinary Area for Existing Degree Information (Graduate)**

1 Is this a new or revised disciplinary area attached to an existing graduate degree program? Yes  No  Revised

If you've answered NO, please continue on to the next section.

2 If YES, what is the name of this new / revised disciplinary area?

3 Which Department / School is the authority for this new / revised disciplinary area? (NOTE - if this disciplinary area is being offered by multiple departments see question below.)

4 Which **multiple** Departments / Schools are the authority for this new / revised disciplinary area?

4a Of the **multiple** Departments / Schools who are the authority for this new / revised disciplinary area and what allocation percentage is assigned to each? (Note - must be whole numbers and must equal 100.)

4b

Of the **multiple** Departments / Schools who is the primary department? The primary department specifies which department / school policies will be followed in academic matters (ex. late adds, re-read policies, or academic misconduct). If no department / school is considered the primary, please indicate that. (In normal circumstances, a department / school with a greater percentage of responsibility - see question above - will be designated the primary department.)

5 Which current program(s) and / or degree(s) is this new / revised disciplinary area attached to?

**Section 6: New College / School / Center / Department or Renaming of Existing**

1 Is this a new college, school, center, or department?

Is an existing college, school, center, or department being renamed?

Is an existing college, school, center, or department being deleted?

If you've answered NO to each of the previous two questions, please continue on to the next section.

Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>

2 What is the name of the new (or renamed) college, school, center, or department?

3 If you have renamed an existing college, school, center, or department, what is the current name?

4 What is the effective term of this new (renamed) college, school, center, or department?

5 Will any programs be created, changed, or moved to a new authority, removed, relabelled?

6 Will any courses be created, changed, or moved to a new authority, removed, relabelled?

7 Are there any ceremonial consequences for Convocation (ie. New degree hood, adjustment to parchments, etc.)?

**Section 7: Course Information - as per current set-up**

1 Is there a new subject area(s) of course offering proposed for this new degree? If so, what is the subject area(s) and the suggested four (4) character abbreviation(s) to be used in course listings?

2

If there is a new subject area(s) of offerings what College / Department is the academic authority for this new subject area?

3 Have the subject area identifier and course number(s) for new and revised courses been cleared by the Registrar?

4 Does the program timetable use standard class time slots, terms, and sessions?

Yes  No

If NO, please describe.

5 Does this program, due to pedagogical reasons, require any special space or type of rooms?

Yes  No

If YES, please describe.

NOTE: Please remember to submit a new "Course Creation Form" for every new course required for this new program / major. Attached completed "Course Creation Forms" to this document would be helpful.

**Section 8: Admissions, Recruitment, and Quota Information - as per current set-up**

1 Will students apply on-line? If not, how will they apply?

2 What term(s) can students be admitted to?

3 Does this impact enrollment?

4 How should Marketing and Student Recruitment handle initial inquiries about this proposal before official approval?

5 Can classes towards this program be taken at the same time as another program?

6 What is the application deadline?

7 What are the admission qualifications? (IE. High school transcript required, grade 12 standing, minimum average, any required courses, etc.)

8 What is the selection criteria? (IE. If only average then 100% weighting; if other factors such as interview, essay, etc. what is the weighting of each of these in the admission decision.)

9 What are the admission categories and admit types? (IE. High school students and transfer students or one group? Special admission? Aboriginal equity program?)

10 What is the application process? (IE. Online application and supplemental information (required checklist items) through the Admissions Office or sent to the College/Department?)

11 Who makes the admission decision? (IE. Admissions Office or College/Department/Other?)

12 Letter of acceptance - are there any special requirements for communication to newly admitted students?

13 Will the standard application fee apply?

14 Will all applicants be charged the fee or will current, active students be exempt?

15 Are international students admissible to this program?

**Section 9: Government Loan Information - as per current set-up**

NOTE: Federal / provincial government loan programs require students to be full-time in order to be eligible for funding. The University of Saskatchewan defines full-time as enrollment in a minimum of 9 credit units (operational) in the fall and/or winter term(s) depending on the length of the loan.

1 If this is a change to an existing program, will the program change have any impact on student loan eligibility?

2 If this is a new program, do you intend that students be eligible for student loans?

**Section 10: Convocation Information (only for new degrees) - not applicable**

1 Are there any 'ceremonial consequences' of this proposal (ie. New degree hood, special convocation, etc.)?

2 If YES, has the Office of the University Secretary been notified?

3 When is the first class expected to graduate?

4

What is the maximum number of students you anticipate/project will graduate per year (please consider the next 5-10 years)?

**Section 11: Schedule of Implementation Information**

1 What is the start term?

2 Are students required to do anything prior to the above date (in addition to applying for admission)?

Yes  No

If YES, what and by what date?

**Section 12: Registration Information - as per current set-up**

1 What year in program is appropriate for this program (NA or a numeric year)?

(General rule = NA for programs and categories of students not working toward a degree level qualification.)

2 Will students register themselves?

Yes  No

If YES, what priority group should they be in?

**Section 13: Academic History Information - as per current set-up**

1 Will instructors submit grades through self-serve?

Yes  No

2 Who will approve grades (Department Head, Assistant Dean, etc.)?

**Section 14: T2202 Information (tax form) - as per current set-up**

1 Should classes count towards T2202s?

Yes  No

**Section 15: Awards Information - as per current set-up**

1 Will terms of reference for existing awards need to be amended?

Yes  No

2 If this is a new undergraduate program, will students in this program be eligible for College-specific awards?

**Section 16: Government of Saskatchewan Graduate Retention (Tax) Program - as per current set-up**

1 Will this program qualify for the Government of Saskatchewan graduate retention (tax) program?

Yes  No

To qualify the program must meet the following requirements:

- be equivalent to at least 6 months of full-time study, and
- result in a certificate, diploma, or undergraduate degree.

Section 17: Program Termination

1 Is this a program termination? Yes  No

If yes, what is the name of the program?

Major of EES [Environmental Earth Sciences] is being replaced with the HYD [Hydrology] major in the BSC4Y and BSCHON programs

2 What is the effective date of this termination?

202005 [May 2020]

3 Will there be any courses closed as a result of this termination? Yes  No

If yes, what courses?

4 Are there currently any students enrolled in the program? Yes  No

If yes, will they be able to complete the program?

Search in Degree Works for active students in the EES major in the College of AR returns 48 students  
Students will be able to complete the EES major or move to the HYD major

5 If not, what alternate arrangements are being made for these students?

6 When do you expect the last student to complete this program?

Students have a 10 year period to complete a program they started

7 Is there mobility associated with this program termination? Yes  No

If yes, please select one of the following mobility activity types.

- Dual Degree Program
- Joint Degree Program
- Internship Abroad Program
- Term Abroad Program
- Taught Abroad Course
- Student Exchange Program


Partnership agreements, coordinated by the International Office, are signed for these types of mobility activities. Has the International Office been informed of this program termination?

Yes  No

Section 18: Proposed Tuition and Student Fees Information - as per current set-up

1 How will tuition be assessed?

- Standard Undergraduate per credit
- Standard Graduate per credit
- Standard Graduate per term
- Non standard per credit\*
- Non standard per term\*
- Other \*
- Program Based\*

\* See attached documents for further details

2 If fees are per credit, do they conform to existing categories for per credit tuition? If YES, what category or rate?

3 If program based tuition, how will it be assessed? By credit unit? By term? Elsehow?

4 Does proponent's proposal contain detailed information regarding requested tuition?

Yes  No

If NO, please describe.

5 What is IPA's recommendation regarding tuition assessment? When is it expected to receive approval?

6 IPA Additional comments?

7 Will students outside the program be allowed to take the classes?

8 If YES, what should they be assessed? (This is especially important for program based.)

9 Do standard student fee assessment criteria apply (full-time, part-time, on-campus versus off-campus)?

10 Do standard cancellation fee rules apply?

11 Are there any additional fees (e.g. materials, excursion)? If yes, see NOTE below.

12 Are you moving from one tuition code (TC) to another tuition code?

Yes  No

If YES, from which tuition code to which tuition code?

NOTE: Please remember to submit a completed "Application for New Fee or Fee Change Form" for every new course with additional fees.

**Section 19: TLSE - Information Dissemination (internal for TLSE use only)**

- 1 Has TLSE, Marketing and Student Recruitment, been informed about this new / revised program? Yes  No
- 2 Has TLSE, Admissions, been informed about this new / revised program? Yes  No
- 3 Has TLSE, Student Finance and Awards, been informed about this new / revised program? Yes  No
- 4 Has CGPS been informed about this new / revised program? Yes  No
- 5 Has TLSE, Transfer Credit, been informed about any new / revised courses? Yes  No
- 6 Has ICT-Data Services been informed about this new or revised degree / program / major / minor / concentration? Yes  No
- 7 Has the Library been informed about this new / revised program? Yes  No
- 8 Has ISA been informed of the CIP code for new degree / program / major? Yes  No
- 9 Has Room Scheduling/Scheduling Hub/Senior Coordinator of Scheduling been informed of unique space requirements for the new courses and/or informed of program, course, college, and department changes? Yes  No
- 10 Has the Convocation Coordinator been notified of a new degree? Yes  No
- 11 What is the highest level of financial approval required for this submission? Check all that apply.
  - a. None - as it has no financial implications
  - OR
  - b. Fee Review Committee
  - c. Institutional Planning and Assessment (IPA)
  - d. Provost's Committee on Integrated Planning (PCIP)
  - e. Board of Governors
  - f. Other

**SIGNED**

Date: *February 26, 2019*

Registrar (Russell Isinger): *Russell Isinger*

College / Department Representative(s): *Jordan West*

IPA Representative(s): *N/A*

**UNIVERSITY COUNCIL  
ACADEMIC PROGRAMS COMMITTEE  
FOR INFORMATION ONLY**

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**PRESENTED BY:** Roy Dobson, Chair, Academic Programs Committee

**DATE OF MEETING:** May 16, 2019

**SUBJECT:** **Annual Report to Council for 2018-19**

**COUNCIL ACTION:** For information only

**ANNUAL REPORT OF THE  
ACADEMIC PROGRAMS COMMITTEE OF COUNCIL  
2018-19**

The terms of reference for the Academic Programs Committee are as follows:

1. Recommending to Council policies and procedures related to academic programs and sustaining program quality.
2. Recommending to Council new programs, major program revisions, and program deletions, including their budgetary implications.
3. Approving minor program changes, including additions of new courses and revisions to or deletions of existing courses, and reporting them to Council
4. Considering outreach and engagement aspects of programs.
5. Reporting to Council processes and outcomes of academic program review, following consultation with Planning and Priorities and other Council committees as appropriate.
6. Undertaking the academic and budgetary review of proposals for the establishment, disestablishment or amalgamation of any college, school, department or any unit responsible for the administration of an academic program, and forwarding recommendations to the Planning and Priorities Committee.
7. Undertaking the academic and budgetary review of the proposed or continuing affiliation or federation of other institutions with the University and forwarding recommendations to the Planning and Priorities Committee.
8. Reporting to Council on the academic implications of quotas and admission standards.
9. Approving the annual academic schedule and reporting the schedule to Council for information, and recommending to Council substantive changes in policy governing dates for the academic sessions.
10. Approving minor changes (such as wording and renumbering) to rules governing examinations, and reviewing and recommending to Council substantive changes in this regard.
11. Recommending to Council classifications and conventions for instructional programs.
12. Designating individuals to act as representatives of the committee on any other bodies, when requested, where such representation is deemed by the committee to be beneficial.
13. Carrying out all the above in the spirit of a philosophy of equitable participation and an appreciation of the contributions of all people, with particular attention to rigorous and supportive programs for Aboriginal student success, engagement with Aboriginal

communities, inclusion of Indigenous knowledge, and experience in curricular offerings, as well as intercultural engagement among faculty, staff, and students.

### **Members of the Academic Programs Committee**

#### Council Members

Roy Dobson	Pharmacy & Nutrition	2019
Ryan Brook	Animal and Poultry Science	2021
Egan Chernoff	Curriculum Studies	2021
Lorin Elias	Psychology	2021
Susan Detmer	Veterinary Pathology	2020
Kathleen Solose	Music	2019
Shelley Spurr	Nursing	2020

#### General Academic Assembly Members

Michael Cottrell	Educational Administration	2020
Angela Kalinowski	History	2020
Longhai Li	Mathematics and Statistics	2019
Jeremy Rayner	Johnson Shoyama Graduate School of Public Policy	2021

#### Sessional Lecturer

Barbara Mills Wotherspoon	Educational Foundations	2019
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#### Other members

Patti McDougall	[Provost designate] Vice-Provost, Teaching, Learning and Student Experience ( <i>ex officio</i> )
Russell Isinger	University Registrar ( <i>ex officio</i> )
Sheldon Moellenbeck/ Carlos Muñoz Pimentel	[USSU designate]
Edgar Martinez Soberanes/ Chiamaka Ezekwesili	[GSA designate]

#### Resource members

Alison Pickrell	Assistant Vice-Provost, Strategic Enrolment Management
John Rigby	Interim Associate Provost, Institutional Planning and Assessment
Lucy Vuong	Financial Analyst, Institutional Planning and Assessment
Secretary:	Amanda Storey, Office of the University Secretary

The Academic Programs Committee of Council held 14 meetings this year (compared to 12 last year.) The Committee has dealt with 36 proposals for new programs, program revisions, and policy revisions to date (compared to 37 last year.)

### **Curricular Changes**

**Council's curricular approval process.** As indicated in the Terms of Reference, the Academic Programs Committee has responsibility for oversight of curricular changes at the University of Saskatchewan. Before 1995, the U of S system required that every change, even so much as a course title, had to be approved by a university-level committee. The resulting complexity and

gridlock were disincentives for curricular renewal. Approval authority has been devolved so that colleges are now in substantial control of their own curriculum.

University-level approval procedures now focus on major curricular changes or changes that may affect the students or programs in other colleges. Many curricular changes can be approved quickly and, for the most part, automatically through the Course Challenge. This allows the Academic Programs Committee to focus on the major curricular innovations and improvements that colleges propose. The committee also deals with wider academic and curricular policy issues, and acts as a reference and approval body for various academic policies.

**New programs, major program revisions, and program terminations.** The Academic Programs Committee reviews major curricular innovations and improvements and makes recommendations to Council regarding approval. The Academic Programs Committee has also been delegated the authority to approve several types of program changes from colleges, including new Options and Minors in new fields of specialization. This improves Council's ability to handle these types of program changes more quickly and efficiently, while still maintaining a university-level review of the changes to maintain quality and resolve any conflicts with other colleges.

The following proposals and policies were dealt with by APC this year and forwarded to Council for decision or for information:

### **October 2018**

(all items presented on the October 2018 agenda were deferred to the November 2018 meeting due to a loss of quorum)

### **November 2018**

#### *Request for Decision:*

- Admissions Qualifications change – Bachelor of Science in Engineering (B.E.) program
- Admissions Qualification Change – Doctor of Philosophy (Ph.D.) program in Mechanical Engineering
- Admissions Qualification Change – English proficiency requirement for programs in the Johnson Shoyama Graduate School of Public Policy
- Project-based Master of Science in Field Epidemiology
- International Dental Degree Program
- Bachelor of Science (B.Sc.) Dentistry

#### *Items for Information:*

- Combined Pharm D/MBA program
- Program Change – College of Engineering reduction of credit units for the Bachelor of Science in Engineering (B.E.) in Mechanical Engineering
- Termination of the minor in Philosophy, Science, and Technology in the College of Arts and Science
- Arts and Science degree-level certificates
  - Biological Research
  - Computing
  - Politics and Law

- Study of Indigenous Storytelling
- Termination of degree-level certificate in applied and professional ethics
- Report on Diversity and Social Accountability Admissions Program (DSAAP) in the College of Medicine

## **December 2018**

### *Request for Decision:*

- Certificate in Business
- Certificate in Entrepreneurship
- Graduate degree-level certificate in Veterinary Clinical Sciences – Rotating Internship
- Graduate degree-level certificate in Veterinary Clinical Sciences – Specialty Internship
- Bachelor of Arts (B.A.) in Archaeology and Anthropology and termination of the B.A. in Archeology and the B.A. in Anthropology

### *Items for information*

- Program Change – College of Engineering increase in credit unities for the Bachelor of Science in Engineering (B.E.) in Computer Engineering
- Project-based Master of Arts (M.A.) in Anthropology

## **January 2019**

### *Request for Decision*

- Doctor of Education (Ed.D.)
- Master of Education in Health Profession Education, Graduate degree-level Certificate in Quality Teaching in Health Professions Education, and Graduate degree-level Certificate in Improving Teaching and Learning in Health Professions Education
- Technological Innovation Certificate

## **February 2019**

### *Request of Decision*

- Degree-level certificate in Teaching English as a Second Language (CERTESL)

### *Item for Information*

- 2019-2020 Academic Calendar

## **March 2019**

### *Request for Decision*

- Admissions Qualification change – English proficiency requirement for the Doctor of Veterinary Medicine (DVM) program

## **April 2019**

### *Request for Decision*

- Admissions Qualification change – Bachelor of Education (B.Ed) Special (Mature) Admission Category

*Item for Information*

- Admissions Templates 2019-2020

**May 2019**

*Request for Decision*

- Bachelor of Science Kinesiology/Bachelor of Education Combined Program

*Item for Information:*

- Bachelor of Science in Hydrology and termination of the Environmental Earth Science Program
- Annual Report from Academic Programs Committee

**University Course Challenge.** The University Course Challenge is a process mandated by University Council that allows for efficient collegial review and approval of curricular revisions. University Course Challenge documents are posted on the UCC website at

[http://www.usask.ca/secretariat/governing-bodies/council/committee/academic\\_programs/index.php](http://www.usask.ca/secretariat/governing-bodies/council/committee/academic_programs/index.php)

During the 2018-19 year, a total of 11 Course Challenge documents will have been posted. These included new courses, prerequisite changes, course deletions, and program revisions for programs in Agriculture & Bioresources, Arts & Science, Dentistry Education, Engineering, Graduate and Postdoctoral Studies, Kinesiology, Law, Medicine, Nursing, Pharmacy and Nutrition, and the School of Environment and Sustainability

The University Course Challenge is posted on a regular schedule, so that items posted on approximately the 15<sup>th</sup> of each month are considered to be approved by the end of the month.

One proposed curricular change was challenged this year. The challenge was resolved through email communication between the affected colleges.

**Other curricular changes,** Council has delegated authority for approval of many other curricular changes, such as course titles and descriptions, to colleges. In some cases, such as changes of course labels, this should be done in consultation with Teaching, Learning, and Student Experience (TLSE) Portfolio. Changes of this type, which affect the Catalogue listings of other colleges, can be posted for information in a course challenge posting.

Under the approval authority delegated by Council, the appropriate Dean and/or the Provost can approve changes to non-university-level programs, such as non-degree and community level certificates. There were no non-degree level certificates or community-level certificates approved

**Policies and Procedures**

Several areas of Council policy and procedures are reviewed on a regular basis by the Academic Programs Committee. These include issues around implementation of the enrolment plan, exam regulations, admission policies and procedures, and other areas of interest to students and faculty. This year, the Academic Programs Committee dealt with the following:

- Academic Program Review
- Enrolment management

- Non-degree-level certificate in Dental Assisting
- Changes to the Student Information System
- Changes to APC terms of reference in response to potential dissolution of the International Activities Committee

### **Student Enrolment and Services Division**

The following item was presented to Council for information, as shown above:

- 2019-20 Admissions Templates

### **Academic calendar**

The APC reviewed and approved the 2019-20 Academic Calendar. This was reported at the February 2019 meeting of Council.

I wish to thank committee members for their willingness to undertake detailed and comprehensive reviews of program proposals. Their commitment to excellence and high standards resulted in improved programs for the University of Saskatchewan.

I wish also to thank the many proponents and their administrative support who appeared at meetings of APC over the last year to present proposals and to answer questions of committee members. I offer thanks to Angela Kalinowski for serving as vice chair as well as for handily filling the chair role earlier this year. I also extend my thanks to Lorin Elias for taking on the role of acting vice-chair and to Kenneth Fox, for serving as chair at the start of this year. Finally, on behalf of the whole committee, I offer thanks to Amanda Storey for her administrative support.

Respectfully submitted on behalf of the Committee,

Roy Dobson, Chair

**UNIVERSITY COUNCIL**  
**PLANNING AND PRIORITIES COMMITTEE**  
**REQUEST FOR DECISION**

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**PRESENTED BY:** Dirk de Boer, chair  
Planning and priorities committee (PPC) of Council

**DATE OF MEETING:** May 23, 2019

**SUBJECT:** Name Change of the Centre for the Study of Cooperatives

**DECISION REQUESTED:** *It is recommended:*

*That Council approve the name change of the Centre for the Study of Cooperatives to the Canadian Centre for the Study of Cooperatives effective June 1, 2019.*

**PURPOSE:**

Changing the name of a centre requires approval by University Council. This is a request that the Centre for the Study of Cooperatives in the Johnson-Shoyama Graduate School of Public Policy be renamed the Canadian Centre for the Study of Cooperatives. The name change reflects the influence and reach of the centre, whose activities are renowned across the country and are supported and celebrated by the cooperatives sector.

**CONSULTATION:**

The name change was recommended by the centre's advisory board, and then approved by the school on February 11, 2019. The centres subcommittee of PPC considered and approved the proposal on April 4, 2019. PPC considered the name change at its meeting on April 10, 2019, and approved a motion to recommend the name change to Council.

**DISCUSSION SUMMARY:**

The name change follows through on the expansion of the original vision of the centre. In the 1980s, the funding and scope of the centre's activities were primarily at the provincial level. However, the centre's research has reached beyond Saskatchewan's borders – nationally and internationally. Furthermore, the funding for the centre is starting to be dominated by organizations outside of the province.

The centre's advisory board and centre fellows deemed that the inclusion of "Canadian" in the name will better indicate to current and potential funders, and end-users of the research, that the scope of the centre is beyond the province of Saskatchewan, and will better signal its unique status in Canada. In addition, the new name will raise the centre's profile with international researchers looking for Canadian partnerships.

**SUMMARY:**

The planning and priorities committee supports that the Centre for the Study of Cooperatives be renamed the Canadian Centre for the Study of Cooperatives as the name change signals that the centre is committed to advancing research, practice, and education in the study of cooperatives across Canada. The rationale for the proposed change is expanded upon in attachment 1.

**ATTACHMENTS:**

1. Centre for the Study of Cooperatives Name Change Request

 <b>UNIVERSITY OF SASKATCHEWAN</b>	<b>Request for Change of Name</b>
---	---------------------------------------

This Request form and attachments will be the basis for decision-making about this change.

Submitted by: Marc-André Pigeon    Date: February 13, 2019

College: Johnson Shoyama Graduate School of Public Policy

College approval date: February 11, 2019

Proposed effective date of the change: May 1, 2019

**1. Proposed change of name**

	<b>From:</b>	<b>To:</b>
<b>College</b>		
<b>Department</b>		
<b>Program name</b>		
<b>Degree name</b>		
<b>Name of Field of Specialization (major, minor, concentration, etc)</b>		
<b>Course label (alphabetic)</b>		
<b>Building</b>		
<b>Street</b>		
<b>Other</b>	<b>Centre for the Study of Co-operatives</b>	<b>Canadian Centre for the Study of Co-operatives</b>

## **2. Documentation**

### **Rationale**

In 1982, the University of Saskatchewan, the provincial government, and the province's co-operative sector came together to fund and create the Centre for the Study of Co-operatives. While the Centre has long been engaged in national and international research and has developed a strong reputation in the global academic community, Canada's co-operative sector has tended to view the Centre as a Saskatchewan-focused research hub perhaps owing to the location of its core funders. In recent years, however, this kind of dual identity – nationally and internationally known in the academic community; associated with Saskatchewan among co-op practitioners) has become a liability particularly since some of the Centre's traditional funders either no longer exist (e.g., the Saskatchewan Wheat Pool) or no longer support the sector (e.g., Saskatchewan Central). As a result, the Centre has started to approach funders outside the province.

Meanwhile, there has been significant changes in the academic landscape for co-operative studies across Canada, including the closure of the Centre for Co-operative and Community-Based Economy at the University of Victoria, and the dissolution of a Business Chair of Co-operative Enterprises at the University of Winnipeg, leaving our Centre as the only English-language research centre focused on co-operatives in Canada. St. Mary's University has a degree program in Credit Union and Co-operative Management through their business school, but does not have a strong research focus.

Our advisory board and our Centre Fellows feel that the inclusion of "Canadian" in our name will better indicate to current and potential funders, and end-users of our research, that the scope of our Centre is beyond the province of Saskatchewan, and will better signal our unique status in Canada. As well, it will raise our profile with international researchers looking for Canadian partnerships. We are in negotiations to put our new 5-year funding contract in place with our sector funders. We would like the new name used in the new contract.

### **Impact of the change**

The impact of the change will primarily be administrative to ensure the new name is reflected on websites, printed materials, and publications.

### **Costs**

The majority of the costs of the change will be the responsibility of our Centre (sign changes within the Diefenbaker building, business cards, etc.). We do not anticipate any significant costs to the university.

### **Consultation**

The Centre consulted with its advisory board, and with its slate of fellows including Murray Fulton, Brett Fairbairn, Michael Gertler, Marc-André Pigeon, Lou Hammond Ketilson, Isobel Findlay, Eric Micheels, Dionne Pohler, and Kostas Karantininis. They were supportive of the proposed name change.

## **3. Review and Approval Authority**

All changes of names for academic entities must be requested by the responsible college, following internal approval by its own approval procedures.

After submission of the Request by the College, the following approval procedures are used, and must be initiated by the College:

- **Changes of course labels** are approved by the Registrar in consultation with the college offering the courses. Any disputes arising over course label changes will be referred to the Academic Programs Committee for resolution. Course label changes are to be distributed for information through the Course Challenge system.
- **Changes of names for colleges and departments** are approved by University Council (following recommendation by the Planning & Priorities Committee) and by the Board of Governors, if the name is honorific.
- **Changes of names for degrees or a degree-level programs** are approved by University Council

- **Changes of names for fields of specialization** are approved by the Academic Programs Committee of Council.

- **Changes of names for buildings, streets and other physical entities** are approved by the Board of Governors (following recommendation by the Naming Committee).

If you have any questions about this form or these procedures, please contact the Office of the University Secretary or email [university.secretary@usask.ca](mailto:university.secretary@usask.ca)

**UNIVERSITY COUNCIL**  
**PLANNING AND PRIORITIES COMMITTEE**  
**REQUEST FOR DECISION**

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**PRESENTED BY:** Dirk de Boer, chair  
Planning and priorities committee (PPC) of Council

**DATE OF MEETING:** May 23, 2019

**SUBJECT:** Proposal to establish the quanTA Centre

**DECISION REQUESTED:**

*It is recommended: That Council approve the establishment of the Centre for Quantum Topology and its Applications (quanTA) effective June 1, 2019.*

**PURPOSE:**

To request that the Centre for Quantum Topology and its Applications be established in the College of Arts & Science as a Type A centre.

The rationale for the establishment of the centre is partly that there is a “language barrier” across the disciplines of mathematics, physics, computer science, and chemistry for the convergent problem of quantum materials. There is considerable potential to systematize, consolidate and capitalize on the interdisciplinary collaborations on the topic within the College of Arts & Science.

The centre will complement the efforts of other new Canadian organizations, but with the unique approach of using mathematics to understand the critical threshold between order and disorder, and thereby discover the next generation of quantum materials. In turn, the goal is to make USask and the Province of Saskatchewan a recognized leader in topological materials research.

**CONSULTATION:**

The quanTA centre proposal was considered by the department, and then considered and recommended by the College of Arts & Science to PPC. The centres subcommittee of PPC considered and approved the proposal on April 4, 2019. The Research, Scholarly and Artistic Works committee considered the proposal at its meeting on May 9, 2019 and provided feedback

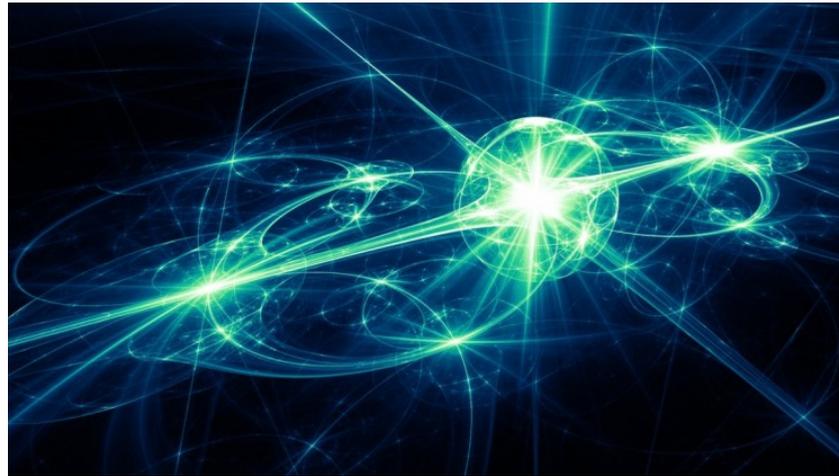
to the proponents before the submission to University Council. PPC considered the proposal at its meeting on April 10, 2019, and approved a motion to recommend the establishment of the new centre Council.

**ATTACHMENTS:**

1. University of Saskatchewan Research Centre Proposal: quanTA
2. Presentation: quanTA Type A Research Centre Proposal

# quanTA

**Centre for Quantum Topology and Its Applications**



**University of Saskatchewan  
Type A Research Centre Proposal**

**Steven Rayan, Math & Stats, College of Arts & Science  
May 9, 2019**

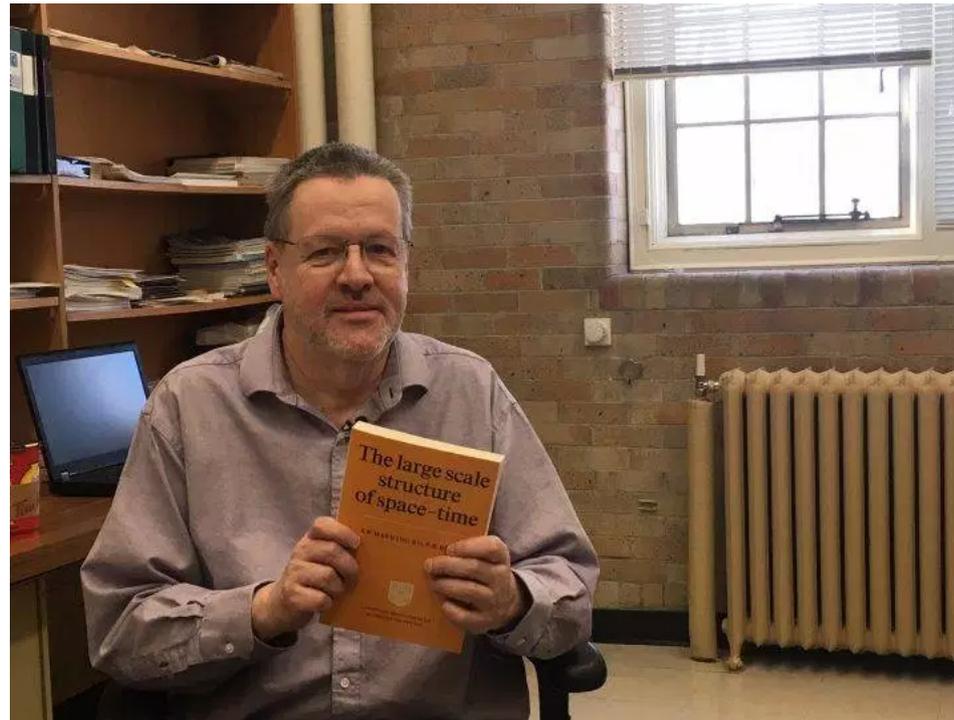
# Centre Members

- **Michael Bradley (Physics & Eng Physics)**



# Centre Members

- **Rainer Dick (Physics & Eng Physics)**



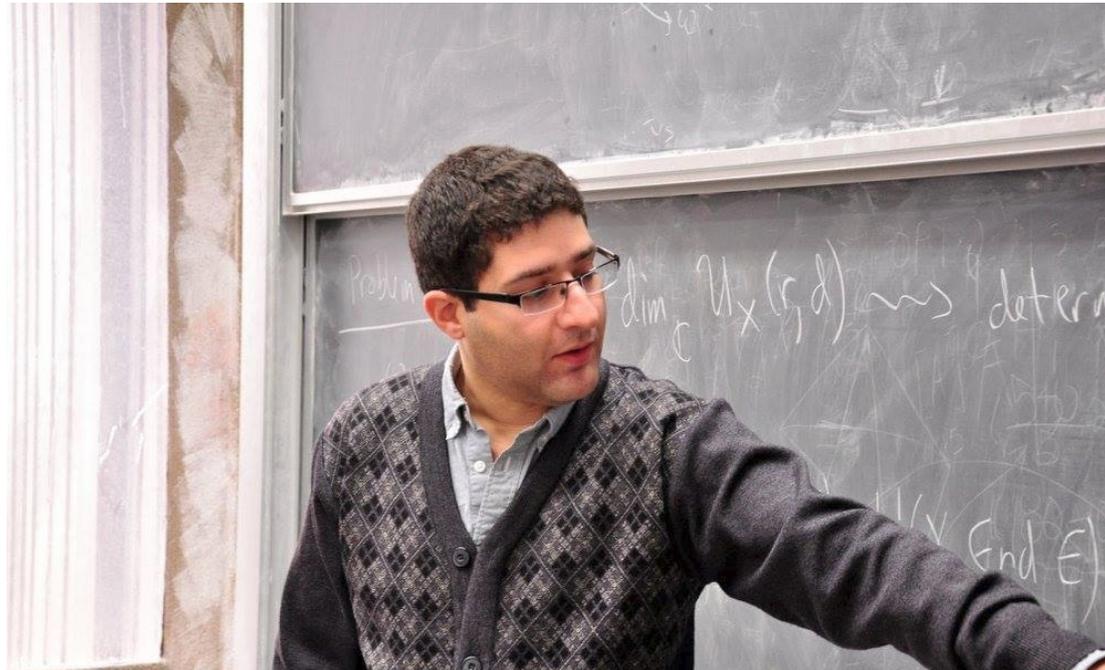
# Centre Members

- **Rob Green (Stuart Blusson Quantum Matter Institute, UBC / CLS, U of S)**



# Centre Members

- **Steven Rayan (Math & Stats, U of S / Associate Member, Perimeter Institute)**



# Centre Members

- **Artur Sowa (Math & Stats, U of S)**



# Centre Members

- **Amy Stevens (Chemistry, U of S)**



# Centre Members

- **Jacek Szmigielski (Math & Stats, U of S)**



# Centre Members

- **Kaori Tanaka (Physics & Eng Physics)**



# Centre Members

- **Juan Zuniga (WestGrid / Compute Canada / AMD)**



# External Advisors

- **Anne Broadbent** (University Chair, Quantum Information, U Ottawa)
- **Derek Krepski** (Math, U of M)
- **Lindsay LeBlanc** (CRC Cold Quantum Gases and Simulation, U of A)
- **Joseph Maciejko** (CRC Topological Materials, U of A)



# What are Topological Materials?

- **Imagine a world where you can construct beneficial new technologies, such as full-fledged quantum computers or smartphones the size of a paperclip...**



# What are Topological Materials?

- **Imagine a world where you can construct beneficial new technologies, such as full-fledged quantum computers or smartphones the size of a paperclip...**
- **...but material imperfections in your components do not matter!**



# What are Topological Materials?

- **Imagine a world where you can construct beneficial new technologies, such as full-fledged quantum computers or smartphones the size of a paperclip...**
- **...but material imperfections in your components do not matter!**
- **This is exactly what topological materials promise**



# How Does It Work?

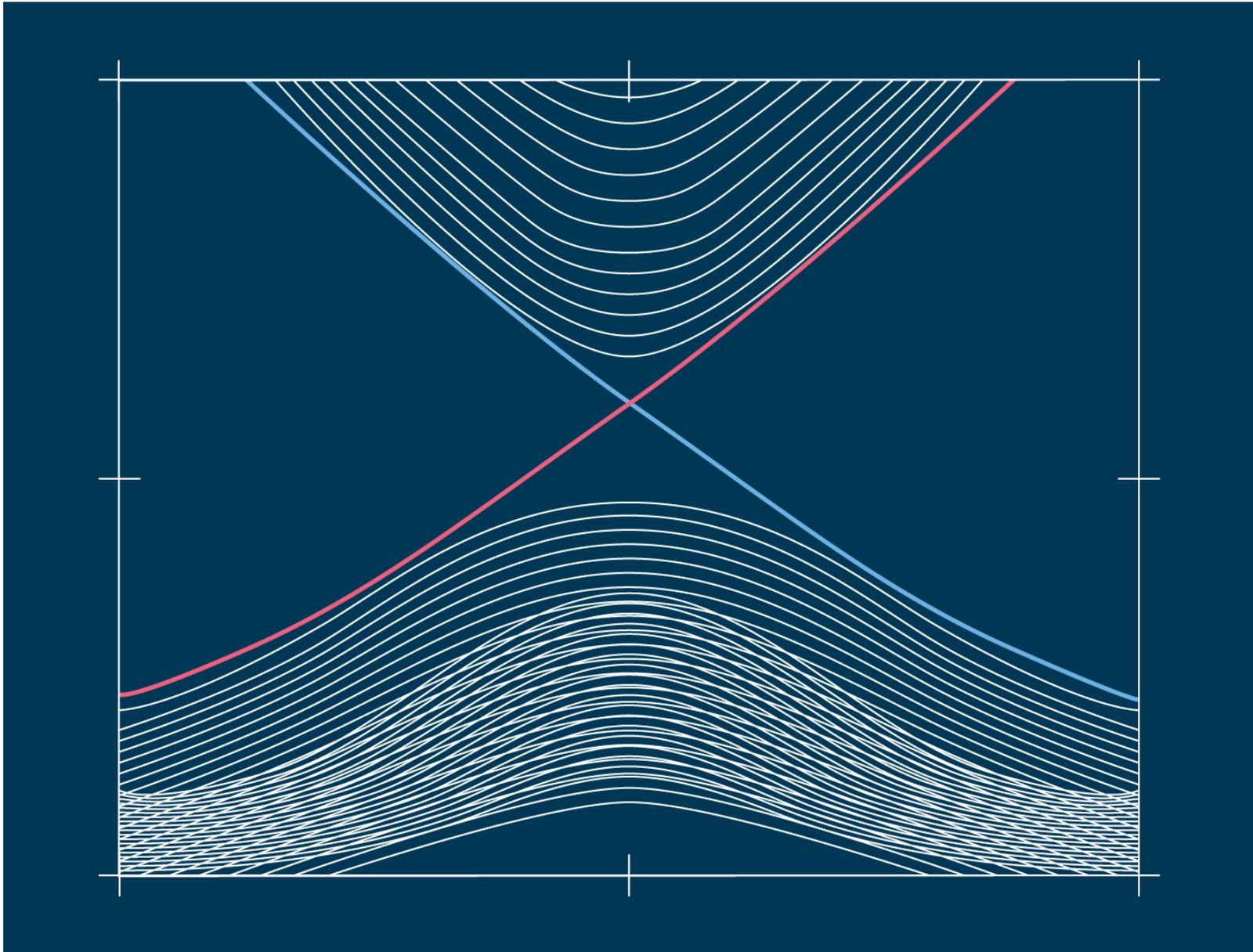
- **Visible World vs. Quantum World**
- **Physical Phenomena vs. Mathematical Phenomena**
- The **conductivity** of a metal is a physical phenomenon determined by the **wave function** of electrons travelling within the metal
- **At ultra-low temperatures, only certain conductivities are possible**
- **Roughly, we have conductivity of strength 0, 1, 2, 3, 4, ...**
- **This is the Quantum Hall Effect (1985)**



# How Does It Work?

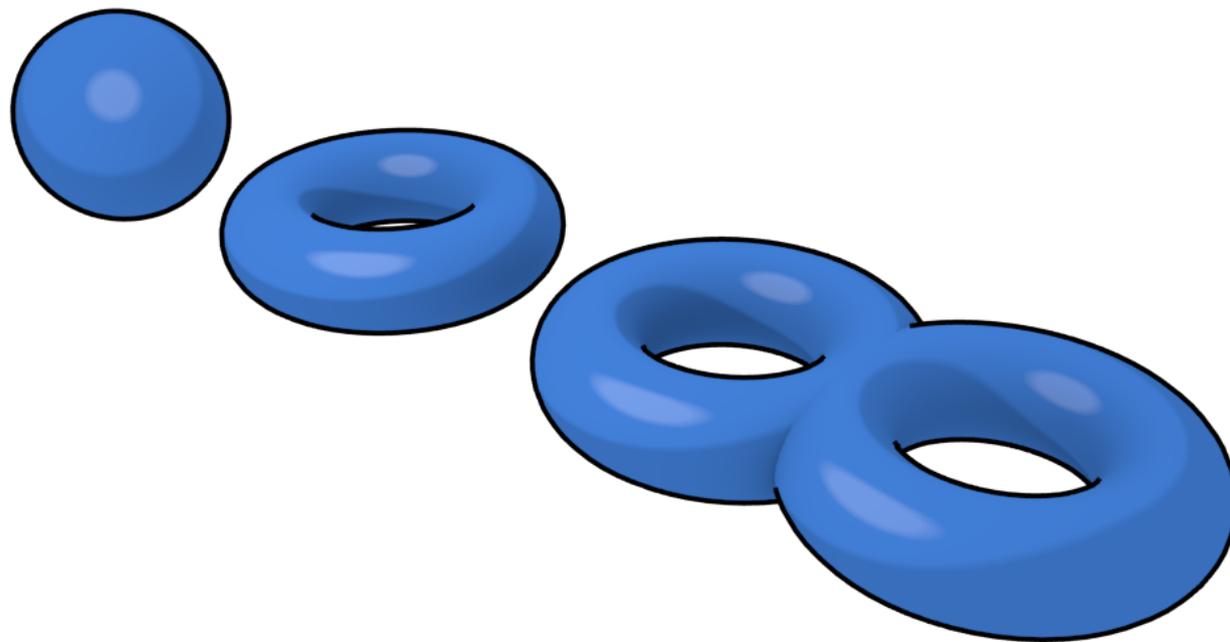
- This effect can only be explained at the quantum level, using the wave function of the electrons
- It was conjectured by Thouless (1982) that the conductivity strength is the number of **holes** in the wave function
- Science of counting holes = **topology**
- If true, the conductivity of low-temp electronic materials **would depend only on their *quantum shape***, not their visible shape...and so engineers needn't worry about material imperfections!





**Fig: A quantum wavefunction for a system of electrons.**





**Fig: Shapes of wave functions.**





# Discovery of Topological Materials

- **Materials known to admit topological conductivity:**

Mercury telluride (I)

Cadmium telluride (I)

Bismuth selenide / telluride (I)

Bismuth-antimony (I, detected experimentally 2008)

$\alpha$ -Tin (*Gray tin*, SemiC)

Germanium-Tin (SemiC)



# Discovery of Topological Materials

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Bismuth-antimony (I, detected experimentally 2008)

$\alpha$ -Tin (*Gray tin*, SemiC)

Germanium-Tin (SemiC)

**+ hundreds more**



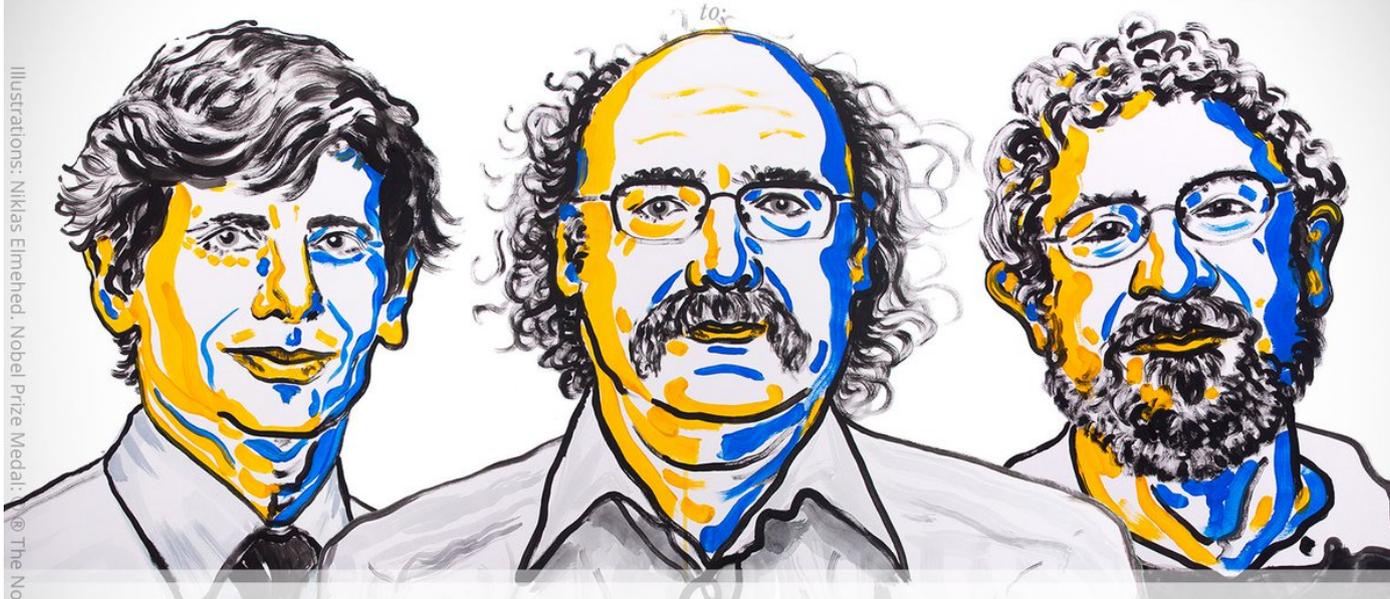
*"For the greatest benefit to mankind"*  
*Alfred Nobel*



The Royal Swedish Academy of Sciences has decided to award the

# 2016 NOBEL PRIZE IN PHYSICS

Illustrations: Niklas Elmehed, Nobel Prize Medal: © The Nobel Foundation, Photo: Lovisa Engblom.



**David J. Thouless**  
**F. Duncan M. Haldane**  
**J. Michael Kosterlitz**

*"for theoretical discoveries of topological phase transitions  
and topological phases of matter"*

Nobelprize.org





**Fig: Nobel Prize Committee member explains topological materials with pastries (October 4, 2016).**



# What's Next?

- **Topological materials require an extremely regular internal structure and are only predictable at extremely low temperatures**



# What's Next?

- **Topological materials require an extremely regular internal structure and are only predictable at extremely low temperatures**
- **Can we create “hot” topological materials that enjoy all the properties of topological insulators and semi-conductors but at higher temperatures, with more interactions, with messier internal structures, and in higher dimension?**



# What's Next?

- **Topological materials require an extremely regular internal structure and are only “protected” at extremely low temperatures**
- **Can we create “hot” topological materials that enjoy all the properties of topological insulators and semi-conductors but at higher temperatures, with more interactions, with messier internal structures, and in higher dimension?**
- **We need more mathematics!**



# Convergent Science

- **Developing the next generation of quantum materials is a problem at the interface of numerous scientific disciplines with promising disruptive applications**
- **Canadian quantum computing community is waiting for new materials that can offer fault-tolerant performance at higher temperatures**
- **Energy-efficient thermoelectric converters**
- **Superconductor-based spintronic data storage devices**
- **And more....**



# Synergy Across Disciplines

- **Physics / Chemistry**
  - Condensed Matter Physics
  - Quantum Theory and Experiment
- **Mathematics**
  - Topology
  - Geometry
- **Engineering**
  - Material Science
  - Quantum Engineering
- **Computing**
  - Numerical Simulation
  - Applications to Quantum Computing



# University and College Plans

- **Courageous Curiosity**

  - Unleash Discovery

  - Embrace Interdisciplinary

  - Seek Solutions

- **Boundless Collaboration**

  - Enrich Disciplines

  - Align Structures

- **Putting Students First**

  - Collaborative Training Environment

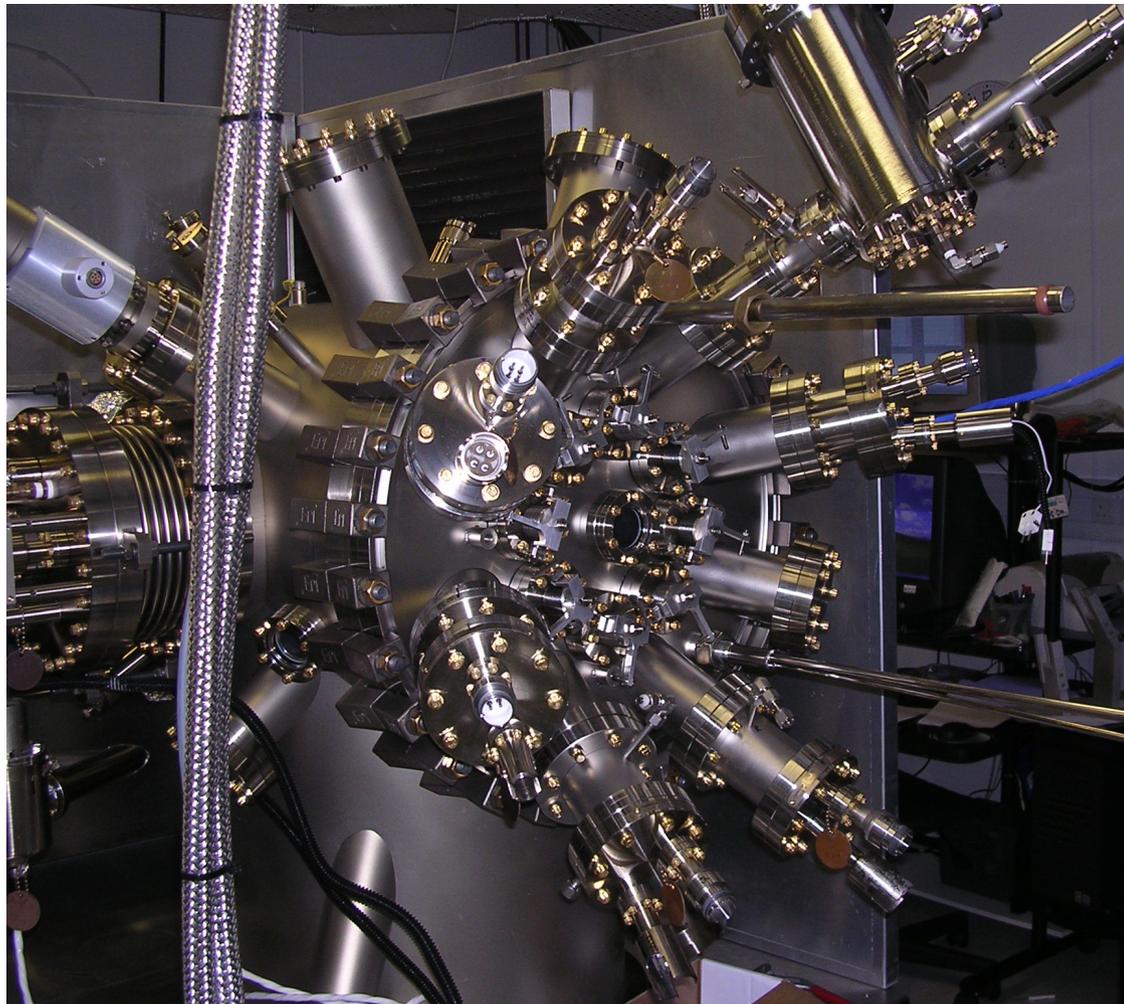
  - 21<sup>st</sup> Century Skills for New Career Pathways

  - Internships with Cutting-Edge Companies



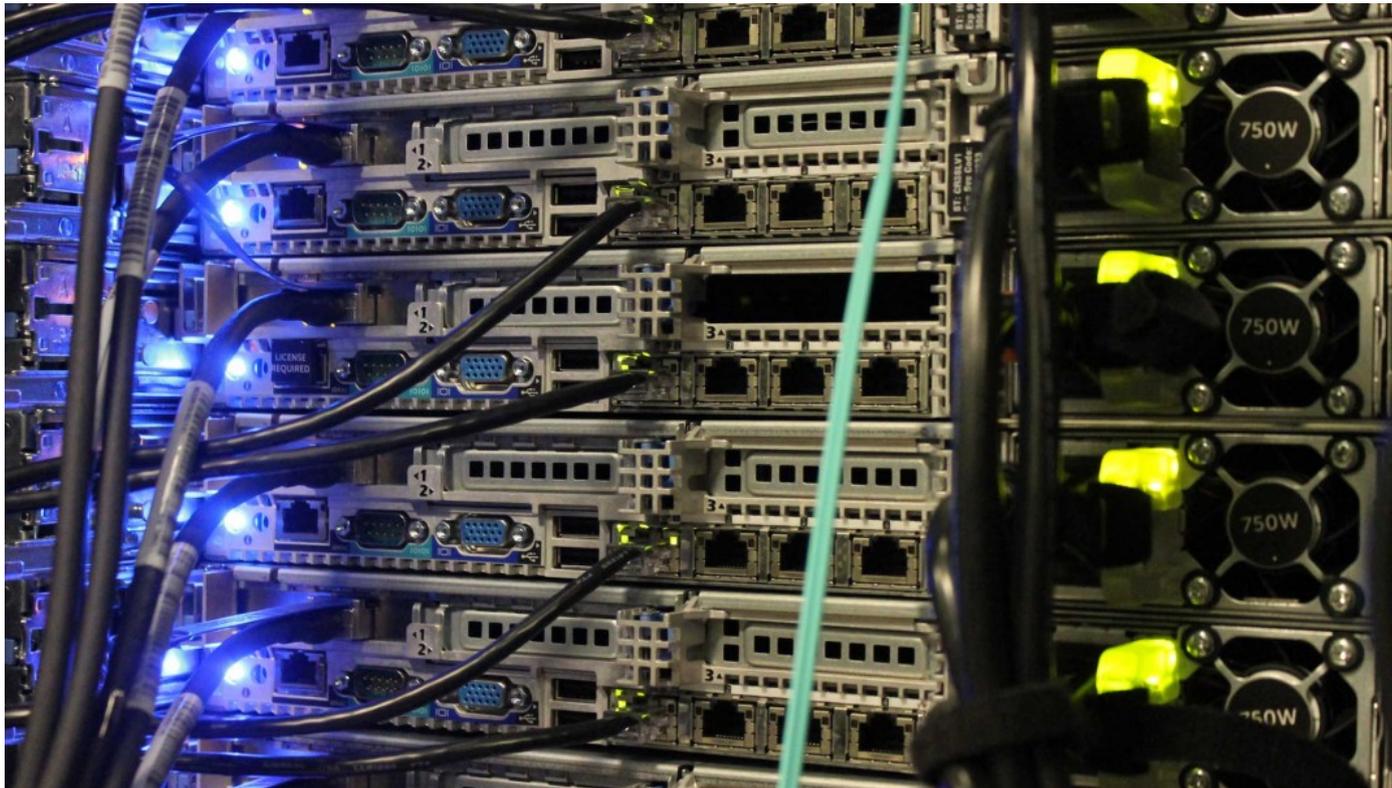
# Infrastructure

- Through multiple stages of CFI competitions, we intend to acquire Molecular Beam Epitaxy (MBE) for on-demand rapid prototyping and growth of thin-film crystals in controlled setting (CFI-IF)



# Infrastructure

- **High-performance dedicated GPU nodes:** large memory / high-density nodes without wall times for simulation (CFI-JELF)



# Infrastructure

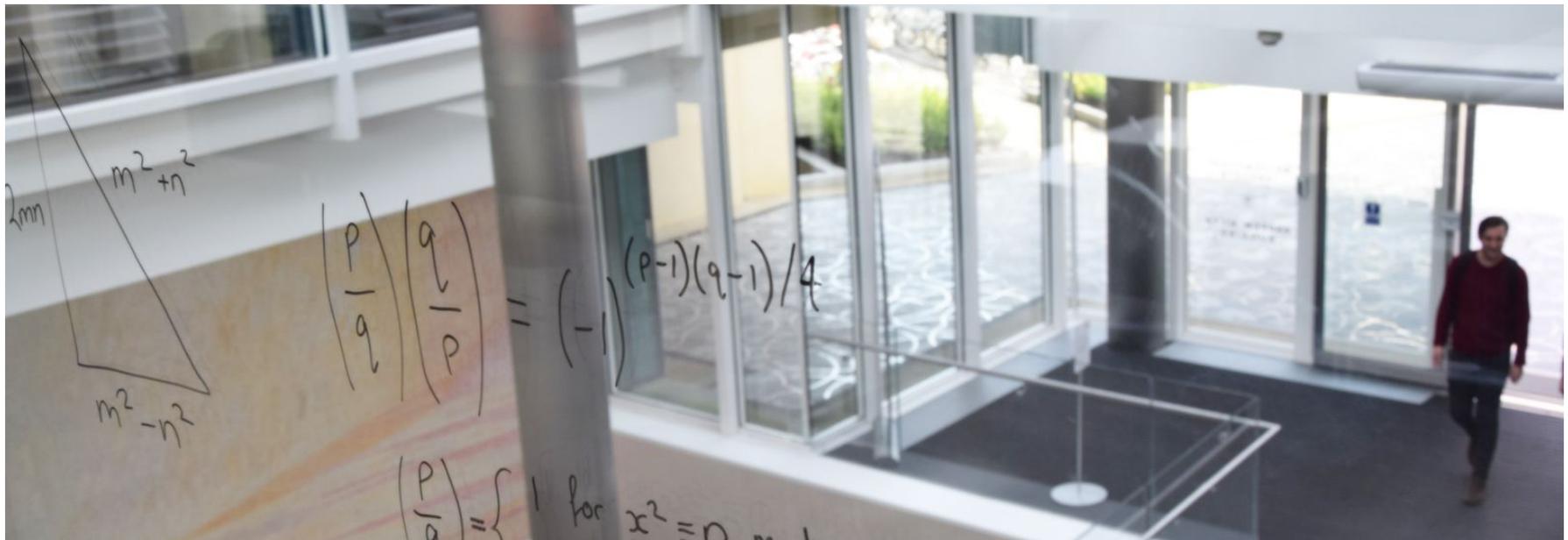
- **Access to CLS:** For ARPES detection of topological states, available through team member Dr. Rob Green (UBC / U of S)



# Infrastructure

- **We intend to acquire:**

**physical space to house MBE, high-vac, computing, personnel, and to catalyze collaboration and training**



# Building on U of S Capacity

- **CLS members are developing an end station for probing of topological states in materials, in collaboration with Stewart Blusson QMI at UBC**



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- **CLS members are developing an end station for probing of topological states in materials, in collaboration with Stewart Blusson QMI at UBC**
- **Required mathematical talent exists at U of S**



# Building on U of S Capacity

- **CLS members are developing an end station for probing of topological states in materials, in collaboration with Stewart Blusson QMI at UBC**
- **Required mathematical talent exists at U of S**
- **This is right time to establish a quantum topology centre at the U of S**



# Building on U of S Capacity

- **Would like to establish Canadian Prairies, and the U of S in particular, as a major international centre for topological materials research**
- **Potential for great synergy across the country (SB-QMI, Quantum Alberta, Institute for Quantum Computing, and other national partners)**



# Funding Sources

- **College of Arts & Science Investment**  
25K, two summer students hired
- **Pacific Institute for Mathematical Sciences (PIMS)**  
Collaborative Research Group proposal (450K) advanced to final stage of competition, mainly for personnel, visiting experts, workshops
- **Gov Alberta MIF / Quantum Alberta**  
*Quantum Technologies* success (5.8M, announced in March), portion earmarked for quantum topology, potential for co-funding for PDFs and some other costs
- **Tri-Agency New Frontiers Fund**  
We won a New Frontiers grant (announced one month ago), valued at 250K over 2 years!



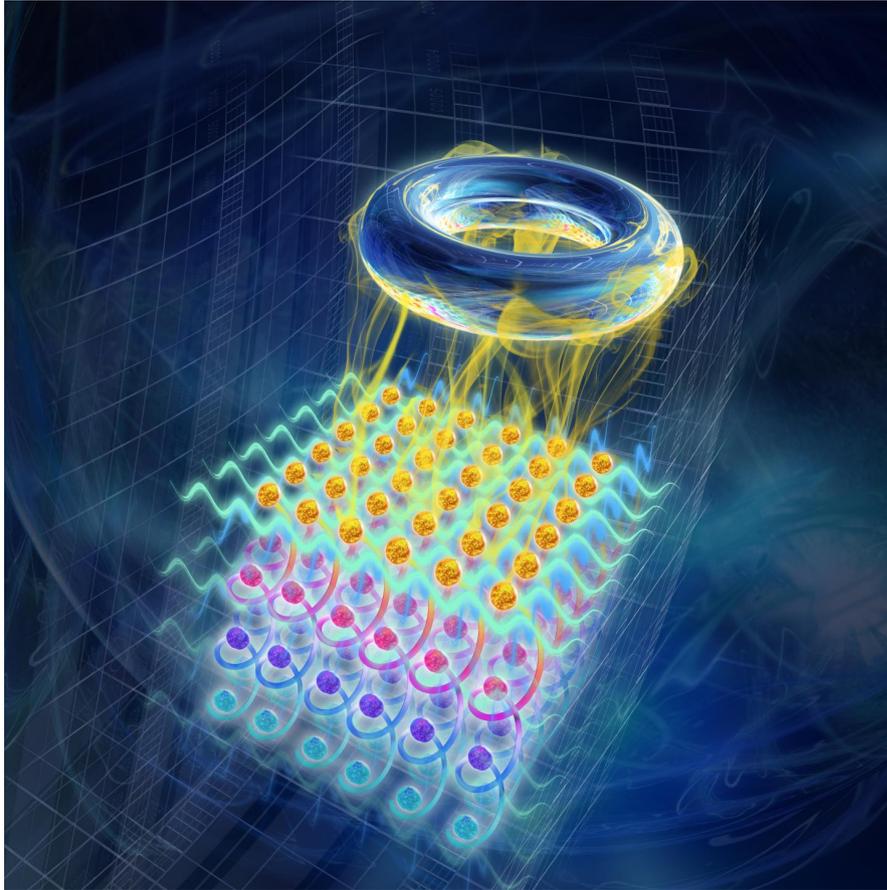
# Industry and International Opportunities

- **We are exploring collaborations with:**  
**1QBit, D-Wave, Creative Destruction Lab, Xanadu**
- **We are exploring collaborations with:**  
**Beijing Institute of Technology**  
**Centre for the Quantum Geometry of Moduli Spaces**  
**University of Aarhus, Denmark**  
**Loughborough University, UK**

**We are also pleased to announce that we are now part of the Geometry Labs United (GLU) initiative in the US**



# Questions?



# University of Saskatchewan Research Centre Proposal

## quanTA: Centre for Quantum Topology and Its Applications



**Centre Type:** A (College of Arts & Science)

**Nominated Director:** Steven Rayan (Math & Stats)

**Proposed Local Personnel:** Michael Bradley (Physics & Engineering Physics)  
Rainer Dick (Physics & Engineering Physics)  
Rob Green (Physics & Engineering Physics / CLS)  
Steven Rayan (Math & Stats)  
Artur Sowa (Math & Stats)  
Jacek Szmigielski (Math & Stats)  
Kaori Tanaka (Physics & Engineering Physics)  
Juan Zuniga-Anaya (West Grid / Compute Canada, U of S)

**Proposal Version (3):** April 8, 2019

### — Contents at a Glance —

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In this proposal, we present our vision for a new research centre at the University of Saskatchewan. By bringing together talent and interests from different corners of the College of Arts & Science, we aim to:

- explore new frontiers in science;
- provide an enhanced experience for students and postdocs in our Departments;
- connect with the public in innovative and exciting ways.

Below, we explain the goals and vision for the *Centre for Quantum Topology and Its Applications*, beginning with our long-term academic plan.

## — Academic Plan —

### *Goals and Objectives*

#### **i. Rationale: Interdisciplinary Collaboration on a Convergent Problem**

Of all of the scientific discoveries of the past few decades, one of the most promising — and surprising — is that of **topological materials**. These materials have unique properties that take advantage of quantum theory. Quantum theory is now part of the bread and butter of modern science. Since its advent in the 1920s, its predictions have been vindicated by a battery of tests and experiments. One of the truly wild, but true, ideas in quantum theory is that every physical object has a footprint in the visible world and another in the quantum world — the world at incredibly tiny length scales where subatomic particles live. Sometimes, it is the visible world that determines the properties of an object; other times, it is the quantum world that matters.

For topological materials, it is the quantum world that matters. The physics of a topological material — in particular, its electrical conductivity — is determined exclusively by the shape of its *wavefunction* in the quantum world. This wavefunction can be thought of as the *shadow* that the material casts in the quantum world. That shadow has a shape, and that shape determines everything.

Why are topological materials so important and exciting? Because only their quantum shape matters, rather than their visible shape, imperfections in the outward physical engineering of these materials have no effect on the fine properties of their conductivity. This makes topological materials them the ideal material for the most sensitive electrical engineering goals, including:

- the development of a full-fledged quantum computer;
- the design of micro- and nano-scale electronics, such as non-invasive medical micro-implants;
- the realization of new modes of electrical transport, such as spin current, which is destined to disrupt the current paradigm of information storage and security.

These are but a few examples. Topological materials have the potential to change not only what is done in labs but also what we do in our homes as once far-away disruptive technologies are made possible through new pathways in condensed matter physics. Fittingly, the theoretical prediction and experimental discovery of topological materials was celebrated with nothing less than a **Nobel Prize in 2016**.

Canada has responded to these developments with the establishment of the **Stewart Blusson Quantum Matter Institute** (SB-QMI) at UBC and the formation of the **Quantum Alberta** initiative through the Government of Alberta's Major Innovations Fund. In the past two years, a number of Canada Research Chairs have been established in the field of topological materials.

Apart from their very existence, one of the truly surprising features of topological materials is the extent to which *pure mathematics* played a role in their discovery. In particular, **topology** — often called the science of shape — lies at the heart of topological materials, as the name suggests. Much research is being devoted on the physics and material science side to understanding the basic properties of topological materials and classifying these properties through a basic “topological periodic table”. However, there is little current research on what happens during the *break down* of the conditions guaranteeing topological protection of these materials' properties. For instance, while the material *Tungsten Di-Telluride* begins to exhibit some topological conductivity at temperatures as high as -173 degrees Celsius (reported in 2018), topological superconductivity, which is the most desirable of conducting states, does not manifest until -272 degrees Celsius. This is only 1 degree warmer than the lowest possible temperature in nature: *absolute zero*! Despite all the promise of topological materials, the conditions under which topological phenomena manifest is a major constraint on their deployability. Understanding how conductivity changes as we transition to high temperatures and how to restore control over the physics is a key problem. Put differently, is there a larger class of *quantum materials* at higher temperature with an electronic robustness that is protected by some mathematical feature other than strictly the topology?

Predicting which configurations of systems of electrons, and hence which physical materials, might experience protected conductivity phenomena — especially superconductivity — at hotter temperatures requires a careful exploration of the geometry of the *spectrum* of the wavefunction associated to such systems. These systems will be messier and more complicated than the ones that submit to the typical methods of condensed matter physics. *In other words, the problem requires more mathematics!*

Partly due to a scientific language barrier, there is no appreciable conversation in any university, lab, or institute in any corner of the world between mathematicians and physicists on the convergent problem of “hot” or “disordered” quantum materials — nowhere except here in the College of Arts & Science at the U of S!

Here within the College, we have assembled a team of interested mathematicians, physicists, chemists, computer scientists, and other experts deeply interested in finding a synergistic solution this problem. We believe the time is right to establish a new research centre within the College and the University to consolidate and capitalize upon these efforts. This centre, titled *Centre for Quantum Topology and Its Applications* or *quanTA*, will complement the efforts of other new Canadian institutes, but with the unique approach of using mathematics to understand the critical threshold between order and disorder and thereby discover the next generation of quantum materials. In turn, we have a goal of making the U of S, and the Province of Saskatchewan in general, a recognized leader in topological materials research.

Through the efforts of the centre, we hope to initiate a program of research that attracts diverse Canadian talent in mathematics and physics creates a new frontier of interaction between mathematics, physics, and quantum innovation.

## ii. Centre Activities

The specific and key technical questions to be addressed over the next 5 years by the proposed centre are:

- *How can we extend the classification of noninteracting topological materials? Can we discover new materials using mathematics?*
- *Can supersymmetric topological quantum field theories coming from high-energy physics describe new types of topological materials?*
- *In the presence of strong many-body interactions, how do topological invariants present themselves in quantum effects?*
- *Can we use the properties and behaviour of topological materials to better understand quantum mechanics on non-trivial geometries?*
- *What is the next frontier of disruptive technologies built around topological materials? Which quantum properties can be channeled into surprising macroscopic applications?*

The answers to these questions will not only bring mathematics and physics at the U of S closer together, but also usher in ***new possibilities for applications and technologies, many of which would be of a truly disruptive nature.*** We expect that the work above will contribute to the following innovations:

- ***further versatility in optoelectronic devices manufactured from quantum materials (including plasmonic solar cells, broadband photodetectors, and nanoscale waveguides); efficient quantum-dot-based thermoelectric converters with an output exceeding current industry standards;***
- ***Stable noise-reducing quantum antennas in MRI machines;***

- *fault-tolerant quantum computation and robust Majorana-nanowire-based quantum computing architectures;*
- *superconductivity induced within a higher temperature regime than is currently possible, opening up a myriad array of potential applications, including unprecedented high-temperature superconductor-based spintronic data storage devices.*

These questions and applications will be focal points for the proposed centre and will lead to natural topics for the thesis work of students at the undergraduate, Master's, and doctoral levels.

The day-to-day activities of the centre will involve concentrated research in teams into the mathematical and physical structure of emergent quantum materials, as described below under "Affiliated Scholars" (pages 6-7). This will necessitate a bimonthly seminar delivered by the centre's core members as well as their graduate students and postdoctoral fellows, as part of a *robust training program that will foster a new generation of scholars in these areas*. The seminar talk will be given on some occasions by external experts, in particular those associated to the centre as External Advisors (see "National and International Collaborations", page 8). These talks will occur in person where possible or via web conferencing. We expect to host at least one visiting scholar for several weeks per year in order to enhance the activities of the centre and the training of junior highly-qualified personnel.

We intend to organize one summer school every two years during the period of operation of the centre, providing unique interdisciplinary training for the next generation of researchers in quantum materials. We hope to attract international speakers and attendees for these schools. For example, one summer school may cover topological and geometric techniques for topological materials while the other might be focused on quantum systems modelling. These schools would be available for advanced undergraduates and beginning and established graduates. Advanced graduate topics courses in mathematical physics covering topics of direct relevance to topological materials will be offered and made available to students at partner institutions via videoconference technology. We also plan to host week-long workshops bringing together leading experts in the field to discuss recent results and further contribute to breaking down the language barrier between physicists and mathematicians.

### iii. Academic Units

The core membership of the proposed centre (see "Affiliated Scholars" below) will be drawn from the departments of Mathematics & Statistics and Physics & Engineering Physics. The activities they will be engaged in, as outlined above, are natural components of their existing research duties. Many of the proposed members are already engaged in organizing workshops and summer schools in their respective areas. The centre will promote synergy and collect these activities under an interdisciplinary framework.

We expect no effect on assignment of duties or other functions related to the home departments of the members. We do expect that the activities of the centre will promote and enhance the profiles of these home departments.

Junior personnel, in the form of graduate students and postdoctoral fellows, are expected to be funded through existing NSERC Discovery support, Graduate Teaching Fellowships, Pacific Institute for the Mathematical Sciences (PIMS) Fellowships, as well as through a New Frontiers Grant that has recently been awarded to the PI, valued at 250K over 2 years.

## *Affiliated Scholars*

Through the diverse expertise of its members, our proposed centre is poised to break new ground in the field of topological materials by formally establishing a collaboration between theoretical physicists working in the field of topological materials and mathematicians with expertise either in topology or in subfields of mathematics deeply connected to topology, geometry, and integrability.

The centre's membership will consist of:

- **Michael Bradley (U of S Physics & Engineering Physics)**  
**PhD:** MIT, Physics  
**Specialization:** Semiconductors, plasma physics, numerical modelling of plasma processing technologies
- **Rainer Dick (U of S Physics & Engineering Physics)**  
**PhD:** Hamburg, Physics  
**Specialization:** Theoretical physics, including low-dimensional systems in nanotechnology and condensed matter physics and physics beyond the Standard Model of Matter
- **Robert Green (U of S Physics & Engineering Physics / CLS / UBC)**  
**PhD:** U of S, Physics  
**Specialization:** Semiconductors, spintronics, band gap engineering, x-ray spectroscopy, synchrotron science
- **Steven Rayan (U of S Mathematics / Associate Member, Perimeter Institute)**  
**PhD:** Oxford, Mathematics  
**Specialization:** Geometry and topology of moduli spaces and integrable systems arising from physics
- **Artur Sowa (U of S Mathematics)**  
**PhD:** City University New York, Applied Mathematics  
**Specialization:** Theory, modelling, and simulation of quantum systems, quantum technologies and quantum engineering

- **Jacek Szmigielski (U of S Mathematics)**  
**PhD:** Georgia, Mathematics  
**Specialization:** Integrable systems, inverse problems, nonlinear PDEs arising in mathematical physics, quantum algebras
- **Kaori Tanaka (U of S Physics & Engineering Physics)**  
**PhD:** McMaster, Physics  
**Specialization:** Condensed matter theory, superconductivity, nonlinear dynamics, computational physics, nano-engineering
- **Juan Zuniga-Anaya (WestGrid / Compute Canada Advanced Analyst, U of S)**  
**PhD:** Toulouse, Systems Science  
**Specialization:** Supports researchers invested in Compute Canada and West-Grid infrastructure at the U of S; expert in algorithm design and computing infrastructure development for interdisciplinary research projects

The collaboration will succeed in meeting the specified research goals of the proposed centre in the following way:

### Theory

- **Steven Rayan, Jacek Szmigielski, and Kaori Tanaka** will collaborate on theoretical questions concerning the passage from topological to geometric data as disorder increases in a quantum-mechanical configuration of electrons, in order to predict a new paradigm for quantum materials.

### Simulation and Numerical Analysis

- **Michael Bradley, Steven Rayan, Artur Sowa, and Juan Zuniga-Anaya** will collaborate on numerical modelling related to the theoretical work above.

### Experiment

- **Robert Green and Kaori Tanaka** will collaborate on the detection, using CLS beamlines, of surface states in materials predicted to have quantum conductivity properties. (Some of these materials will be custom grown at the proposed centre using equipment acquired expressly for the centre — see “Resource Request”, [page 9.](#))

### Design

- **Michael Bradley, Robert Green, and Artur Sowa** will collaborate on the design of new plasmonic and spintronic devices that exploit the unique properties of quantum materials discovered in the steps above.

## Impact and Relationships

### i. National and International Collaborations

Given that we see our proposed centre as one node in a growing Canadian landscape of quantum materials research, we are actively forming an extended network of collaboration, both within Canada and internationally. Nationally, we will rely upon the expertise of the following **External Advisors** of the centre:

- **Anne Broadbent (U Ottawa Mathematics & Statistics)**  
PhD: Montreal, Quantum Informatics  
Specialization: University Chair, Quantum Information Processing, focusing on theoretical quantum computing, quantum cryptography, quantum algorithms
- **Derek Krepski (U of M Mathematics)**  
PhD: Toronto, Mathematics  
Specialization: Algebraic topology, symplectic geometry, quantization, mathematical physics
- **Lindsay LeBlanc (U of A Physics / Quantum Alberta)**  
PhD: Toronto, Physics  
Specialization: Canada Research Chair (Tier 2) in Ultracold Quantum Gases, focusing on quantum simulation, quantum many-body systems in both theory and experiment
- **Joseph Maciejko (U of A Physics / Quantum Alberta)**  
PhD: Stanford, Physics  
Specialization: Canada Research Chair (Tier 2) in Condensed Matter Theory, focusing on quantum many-body systems and topological phases of matter

In addition to our Canadian-based external advisory group above, we are excited to begin collaborations with the following individuals based outside Canada:

- **Jørgen Anderson (Director, Centre for Quantum Geometry of Moduli Spaces)**  
An expert in the analysis of topological quantum field theories and quantum Chern-Simons theory, Prof. Anderson is based in Aarhus, Denmark and is leading an international collaboration on applications of techniques from quantum field theory to protein architecture, self-assembly, and viral replication. We are keen to collaborate with Prof. Anderson and his group on potential applications of novel tailor-made topological materials to problems involving topological phase transitions, superconductivity, and Majorana quasiparticles in double-stranded DNA.
- **Bing-Zhao Li (School of Mathematics, Beijing Institute of Technology)**  
Prof. Li is an expert in quantum-compatible signal processing. We are keen to work with him on developing signal processing applications of topologically-stabilized QMM-based waveguides and antennas.

- **Alex Zagoskin (Physics, Loughborough University / UK Institute of Physics)**

Prof. Zagoskin is a leading expert on quantum engineering, quantum metamaterials, quantum computing, and emergent superconductivity. He is a close collaborator of core CRG member A. Sowa and will be working with us on the modelling and construction of stable noise-reducing antennas from quantum metamaterials.

We are also in the early stages of exploring partnerships with **companies** invested in quantum computing, such as **D-Wave Systems** and **1QBit**, both based in Vancouver, as well as the **Creative Destruction Lab** and **Xanadu Systems** in Toronto. We are particularly interested in establishing internship opportunities for our students and postdoctoral fellows.

## ii. Students, Industry, and the Public

A key aspect of our vision is to enhance the training of our students, both undergraduate and graduate. Many of our students are interested equally in mathematics and physics and feel that they “*shouldn’t have to choose between them*”. We are sympathetic to this and believe that our centre can play a crucial role in creating an **interdisciplinary training environment** for them, one in which they can learn both mathematics and physics at a high level.

At the same time, we want to equip students with skills that prepare them for 21<sup>st</sup> Century research and development environments. These skills include:

- quantitative inference and deduction;
- mathematical modeling of real-world phenomena;
- use of computers to simulate physical phenomena predicted by mathematical techniques, with a view to bridging theory and experiment;
- machine learning as a way of gaining insight into unsolved physical and mathematical problems;
- 21<sup>st</sup> Century fabrication techniques, such as high-performance 3D printing.

As we further develop our scientific platform, we hope to attract interest from Canadian high-tech companies, especially those mentioned in the preceding section, e.g. 1QBit and Xanadu. We hope to place our students and postdocs as interns in these companies, with a view to opening **new career pathways** for them.

Finally, our proposed centre comes with an **outreach** mission, one that is important to all members of the centre. Inspired by the Quantum Exhibit, a national touring exhibit on quantum science designed by the Perimeter Institute in Waterloo, we want to engage young minds in Saskatoon and Saskatchewan on foundational aspects of quan-

tum science. Although quantum mechanics has been around for nearly 100 years, in spite of the fact that it is the basis for modern electronics, and in spite of the fact that nearly every person has a quantum device in their pocket (their smartphone!), few young people are aware of how or why quantum mechanics works. Quantum science is not going away and we want our young people to be inspired by it. We want to set up an interactive exhibit, possibly in partnership with the **Museum of Natural Science**, that demonstrates some of the fundamental and surprising features of quantum theory. Our overall goal is to help nurture a generation literate in mathematics and physics, not simply for the sake of mathematics and physics, but to keep our young people competitive in an increasingly technological world.

### iii. University and College 2025 Plans

The University of Saskatchewan has identified **courageous curiosity** and **boundless collaboration** as two of the core objectives of its 2025 Plan.

Under courageous curiosity, the Plan identifies a goals of **unleashing discovery**, **embracing interdisciplinarity**, and **seeking solutions**. By capitalizing upon, and potentially extending, the discovery of topological materials, and by utilizing resources from a number of distinct scientific disciplines, the proposed centre accomplishes all three of these goals simultaneously. We plan to work in a convergent, interdisciplinary fashion to discover new frontiers in quantum material science, seeking solutions to real-world computing and design problems that depend on novel new materials.

Under boundless collaboration, the Plan identifies a goal of **enriching disciplines**: *“Build, enhance, and sustain research, scholarly and artistic strength central to vibrant collaboration within and among all disciplines and academic units”*. We believe that the Centre for Quantum Topology and Its Applications promises exactly this: sustained, vibrant, synergistic, and convergent collaboration between key units within Arts & Science and beyond.

Another key goal under boundless collaboration is to **align structures**: *“Ensure that academic, administrative, and physical infrastructure enable collaborative opportunities for all students, faculty, and staff”*. The centre is designed with this in mind, too, as we aim to make it easier for physical sciences departments in the College of Arts & Science to foster collaboration between faculty and students.

We also believe that our centre reflects strategic directions prioritized by the University, including **Energy & Mineral Resources** (through applications of quantum materials to improving energy efficiency in electronics) and **Synchrotron Science** (through the potential usage of the CLS to detect topological states in matter).

In alignment with the goals of the University Plan, the College of Arts & Science has identified barrier-free interdisciplinary research as one of the pillars of its own 2025 Plan.

We believe the proposed *Centre for Quantum Topology and Its Applications*, with its strong emphasis on interdisciplinarity and its commitment to working with national and international research partners, captures perfectly the goals of the College Plan.

We also believe that our proposed centre responds well to the call of “*putting students first*” in the College Plan, as our research goals are inseparable from our goals of creating new experiences and career pathways for students.

In short, we believe that our proposal is aligned fundamentally with the goals of both the University and the College of Arts & Science.

## — Resource Request and Budget —

In proposing the *Centre for Quantum Topology and Its Applications*, we are committed to the idea that common space is a catalyst and facilitator for truly convergent research. While the principal proposed members of the centre (see “Affiliated Scholars”, [page 6](#)) are already faculty within the College of Arts & Science, a shared space will facilitate a common dialogue on the problem of quantum materials — a dialogue that, due to the challenges of connecting different languages and view points on the problem, requires a continual availability of meeting space. We believe that the current structure of academic units and the demands on their physical space does not currently allow for this dialogue in a way that has been conducive to fully-realized interdisciplinary research. The formation of the centre and the acquisition of space for its functions is reinforced by the fact that we intend to acquire, in stages, specialized equipment in support of our scientific goals.

The main resource request associated with this proposal is for **refurbished space** within the College of Arts & Science. The space should have:

- **Offices (x5+):** Spaces with desks and desktop computers, shared by current members, visiting scholars, graduate students, and postdoctoral fellows associated with the centre.
- **Seminar Room:** Chalk and white boards, smart board for collaboration and conferencing, seating for approx. 15 attendees (to be used for discussion, seminars by visiting scholars, workshops, and other activities) .

- **Lab Room with High-Vac System:** Space to house equipment for fabrication of topological materials, with high-vac system and cabinetry for sample and equipment storage, as well as two desktop computers for device interface and data analysis.
- **Cluster Room:** Space to house high-performance computing nodes

In regards to the cluster and lab space, we intend to house the following equipment specifically:

- **High-Performance Computing:** Predicting new topological materials will require simulation of electron dynamics and the numerical analysis of partial differential equations arising in quantum mechanics and condensed matter theory. Dedicated computing nodes will be a necessary ingredient in this work. A laboratory to house these nodes, accessible by all centre members, will be required.
- **Material Prototyping Equipment:** A natural step in the study of new quantum materials is to *make* them. We intend to acquire a molecular beam epitaxy (MBE) device in order to grow topological insulators, semiconductors, and superconductors.

Regarding the infrastructure above, our request to the College is for *space, refurbishments* (including the high-vac system), and *limited standard computing provisions only*. The computing nodes and MBE device described above are intended to be acquired through separate infrastructure funding, staged through levels of CFI competitions. We intend for the space and refurbishment allocations to be used as matching resources towards CFI proposals. Our initial CFI bid will be through the John Evans Leaders Fund (JELF) for the computing equipment.

**This being said, we are prepared to commence with the core activities of the centre prior to being assigned specific space.** In fact, we have already hired two summer students to work on projects related to the centre's activities.

Furthermore, there is no request for searches for additional personnel related to the activities of the centre. The local membership of the centre are drawn from existing faculty in the College of Arts & Science and their participation in the centre is a natural extension of their existing research duties. Any specialized computing equipment acquired by the centre will be managed and maintained by members Artur Sowa and Juan Zuniga-Anaya. And specialized experimental equipment (e.g. the MBE machine) will be maintained by members Michael Bradley and Robert Green.

Apart from space-related costs, our only fixed budgetary request is for **25K** for employing three summer students, employing another student as an outreach officer, and paying for four visiting expert speakers. We intend for two of the four visiting experts to be **women**.

This amount of 25K has already been awarded to the PI as a fund for commencing the research activities associated with the centre. As mentioned above, two summer students have already been hired. We are in the process of seeking a student for scientific outreach work.

Here, we summarize the funds currently available to the centre for its core activities:

- 25K College of Arts & Science support fund (awarded)
- 250K New Frontier Grant (awarded to PI, Steven Rayan)
- NSERC Discovery Grants of most centre members (as appropriate)
- Limited funds from Quantum Alberta and from the Quantum Technologies provincial fund (5.8M award to our external members from the Government of Alberta's Major Innovations Fund, portion earmarked for Quantum Topology)

## — Consultation: Proponents and Support —

The College of Arts & Science has expressed its explicit support for the formation of quanTA, as evidenced by its 25K investment, and has initiated discussions with Facilities Management to secure space. A letter of support from the Vice-Dean RSAW as well as a quote for space from Facilities, made in consultation with the Vice-Dean RSAW and quanTA PI Steven Rayan are included in the Appendix.

## — Centre Management / Governance —

We propose that the centre be governed by the following structure:

- **Director / PI**  
Steven Rayan, Mathematics & Statistics
- **Steering Committee**  
Michael Bradley, Physics & Engineering Physics  
Rainer Dick, Physics & Engineering Physics  
Rob Green, Physics & Engineering Physics / CLS  
Steven Rayan, Mathematics & Statistics  
Artur Sowa, Mathematics & Statistics  
Jacek Szmigielski, Mathematics & Statistics  
Kaori Tanaka, Physics & Engineering Physics
- **External Advisors**  
Anne Broadbent, Mathematics & Statistics / Quantum Information,  
University of Ottawa  
Derek Krepski, Mathematics, University of Manitoba  
Lindsay LeBlanc, Physics, University of Alberta  
Joseph Maciejko, Physics, University of Alberta

The centre's point of contact will be Steven Rayan ([rayan@math.usask.ca](mailto:rayan@math.usask.ca)).

At the current time, no academic programming in the form of individual taught undergraduate courses or degree programs is to be associated with the proposed centre. If in the future an academic programming component is proposed, an additional committee will be formed for this purpose, possibly with the addition of other local members.

Changes to the membership or management structure of the proposed *Centre for Quantum Topology and Its Applications* will be voted upon by the full steering committee and external advisory group, requiring a simple majority to succeed. (Where possible, the external advisors should be present in person or via web conferencing for such votes, but may vote by email.)

## — Systematic Assessment —

Our intent is that the proposed *Centre for Quantum Topology and Its Applications* undergo a systematic review of its activities and objectives every 18 months.

At the end of each such period, the current Director / PI of quanTA will submit to the Dean and Vice-Dean RSAW, Arts & Science, a report detailing the following:

- major scientific results and progress on the centre's stated scientific goals
- publications and working papers emerging from members of the centre
- highlights of interdisciplinary research (including but not limited to results published in prestigious interdisciplinary journals, as measured by impact factors and other metrics)
- new graduate and postdoctoral personnel joining the centre as well as students and postdoctoral fellows who have completed their programs
- invited speaking engagements by centre members on work associated with the centre's themes
- visiting scholars hosted by the centre
- workshops and summer schools hosted by the centre
- data on the usage and maintenance of space and facilities allocated to the centre
- outreach activities of the centre (including but not limited to talks intended for the general public and secondary school students and engagement with the social sciences and arts)
- efforts to promote equality, diversity, and inclusion within (and outside) the centre

We will also participate in any other review exercises or requests for information from the College of Arts & Science and/or the University PPC.

## — Attachments —

**Attached are:**

- Letter of support from Prof. Jack Gray, Vice-Dean, Research, Scholarly, and Artistic Work, College of Arts & Science
- Space allocation exploratory statement from Facilities Management (cost of such space to be used as matching funds from College for associated Canada Foundation for Innovation application)
- Letter from ICT acknowledging delivery of services to the centre

**Note:** We do not expect any impact whatsoever on U of S Library resources. All resources are presently sufficient.

March, 5, 2019

Professor Dirk De Boer  
Chair, Planning and Priorities Committee  
University of Saskatchewan  
105 Administrative Place  
Saskatoon, SK, S7N 5A1

Dear Dr. De Boer:

I am writing to provide strong support of the proposal to establish a Type A Centre - *Quantum Topology and Its Applications* - which is led by Steven Rayan (Principal Investigator) together with a team of faculty members from Mathematics & Statistics, Physics & Engineering Physics, and Chemistry within the College of Arts & Science, as well as from Research Computing.

This new centre is poised to make significant progress to realize *quantum materials* — physical materials that may one day serve as components in next-generation devices such as quantum computers and portable, ultra-stable MRI machines. The simplest known quantum materials are the “topological materials”, whose discovery earned the 2016 Nobel Prize in Physics. Their discovery was an unexpected marriage of pure mathematics and experimental physics. Our College has the necessary talent in mathematics, physics, and chemistry to make unprecedented breakthroughs in the prediction and realization of new quantum materials. The assembled team aims to shape Canada's response to this rapidly emerging science and put the University of Saskatchewan at the forefront of development.

For this reason, I not only support the granting of official status to this centre, but have also initiated discussions with Facilities Management about the renovation of new space in support of the centre's experimental research infrastructure, which is the subject of a parallel application by the centre's Principal Investigator to the Infrastructure Fund of the Canada Foundation for Innovation. This application, if successful, will bring key experimental equipment and high-performance computing resources to the University.

The proposed centre brings with it an exciting potential for new collaborations, not only within the College of Arts & Science but also beyond college boundaries. This potential interaction includes the Canadian Light Source, which will play a crucial role in testing properties of quantum materials.

As an inherently interdisciplinary venture with the potential to open new research horizons, the Quantum Topology initiative is well-aligned to the College and University 2025 plans. This proposed centre strongly aligns with the College of Arts and Science



RSAW priority to “foster connections and collaborations” and the University’s commitments to Courageous Curiosity and Boundless Collaboration. Dr. Rayan is ideally suited to lead the development and establishment of the centre. He is one of our rising stars with an impressive track record of RSAW success. He clearly understands the interdisciplinary nature of the proposed centre and how it will propel this field to national prominence.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jack Gray", enclosed in a light blue rectangular box.

Jack Gray  
Professor and Vice-Dean Research, Scholarly and Artistic Work  
College of Arts and Science

# Order of Magnitude

Rev - 0

<b>Completed For: Steven Rayan</b> Department: Arts & Science / Mathematics & Statistics Email: rayan@math.usask.ca Phone: 966-9060		<b>Building:</b> N/A <b>Room:</b> N/A <b>Description:</b> Demolition and renovation of space for new Institute of Quantum Topology
<b>Reviewed by: Trisha Ottenbreit</b> Email: trisha.ottenbreit@usask.ca Phone: 966-8063	<b>Completed by: Jason Hiebert</b> Email: Phone:	<b>Project #</b> <b>WO#</b> <b>Date:</b> Feb. 12, 2019

Construction		Description	Material	Labour	Sub-Total	PST 6%	GST 1.65%	Sub-Total
<b>Architectural</b>	As per design		625000.00		625,000.00	-	-	625,000.00
<b>Mechanical</b>	As per design		365000.00		365,000.00	-	-	365,000.00
<b>Electrical</b>	As per design		275000.00		275,000.00	-	-	275,000.00
<b>External Contractor</b>	Possible Asbestos Abatement		75000.00		75,000.00	4,500.00	1,237.50	80,737.50
<b>Sub-Total</b>			<b>1,340,000.00</b>		<b>1,340,000.00</b>	<b>4,500.00</b>	<b>1,237.50</b>	<b>1,345,737.50</b>

Furniture		Description	Material	Labour	Sub-Total	PST	GST	Sub-Total
Desks & Chairs	As per design		35,000.00	0.00	35,000.00	2,100.00	577.50	37,677.50
Office Furnishings	As per design		5,000.00	0.00	5,000.00	300.00	82.50	5,382.50
Window Coverings	As per design		3,000.00	0.00	3,000.00	180.00	49.50	3,229.50
<b>Sub-Total</b>			<b>43,000.00</b>	<b>0.00</b>	<b>43,000.00</b>	<b>2,580.00</b>	<b>709.50</b>	<b>46,289.50</b>

Non-construction costs		Description	Material	Labour	Sub-Total	PST	GST	Sub-Total
Design / Engineering	Review scope and requirements. Prepare drawings.		0.00	200,000.00	200,000.00	-	-	200,000.00
ICT - Network Services	Existing server upgrades, activation fees, etc.		7,500.00	2,500.00	10,000.00	-	-	10,000.00
Supplier - [equipment]	Fumehood / Exhaust fan		20,000.00	0.00	20,000.00	1,200.00	330.00	21,530.00
ICT - Equip. Services	Multimedia components		30,000.00	5,000.00	35,000.00	2,100.00	577.50	37,677.50
Project Management	Responsible for execution and closing of the project.		0.00	75,000.00	75,000.00	-	-	75,000.00
<b>Sub-Total</b>			<b>57,500.00</b>	<b>282,500.00</b>	<b>340,000.00</b>	<b>3,300.00</b>	<b>907.50</b>	<b>344,207.50</b>

10.0%	Contingency (construction costs)	134,573.75
10.0%	Contingency (non-construction costs)	34,420.75
5.0%	Cost Escalation - 2020	86,811.73

# Order of Magnitude

Rev - 0

**Total Estimate (rounded)****1,900,000.00****Authorization**

User: \_\_\_\_\_

Account Number: \_\_\_\_\_

Funding Authority: \_\_\_\_\_

Director/Dean/Head: \_\_\_\_\_

**This is an estimate only.** It is based only on our evaluation and experience. A contingency amount is included for any unforeseen on-the-job events that might be required. However, our invoice will include only the actual materials and labour used on the project. Project management costs are calculated on a percentage basis for estimate purposes, but are charged based on actual number of hours spent on the project. **THANK YOU.**

If you have any questions, please contact your FSA or Project Manager to discuss.

Once the final estimate is approved, please email Facilities Services @ [facilitieservices@usask.ca](mailto:facilitieservices@usask.ca) or your Project Manager with a copy of the signed approval. You can also return a signed copy by fax to Facilities Support Services at 306-966-4080. This estimate is valid for 60 days. Taxes are included.

March 13, 2019

Dr. Steven Rayan

Department of Mathematics and Statistics

University of Saskatchewan

Dear Dr. Rayan:

Thank you for your communication regarding your proposed Centre and potential CFI Innovation Fund application:  
*Institute of Quantum Topology and Its Applications.*

Information and Communication Technology, in consultation with you and your group, has conducted a preliminary evaluation of the IT infrastructure and support required for your Centre (attached). Guided by the preliminary evaluation, ICT will work to provide the Centre access to IT infrastructure and services to meet your research requirements.

Sincerely,



Chad Coller

Director, ICT Academic and Research Technologies

University of Saskatchewan

## IT requirements for Steven Rayan CFI / Centre proposal

## General comments:

If the Centre is funded, ICT should be involved in technology selection, procurement and installation of IT infrastructure. Significant IT infrastructure should be housed in ICT data centres (e.g. HPC equipment). Funds should be budgeted for one-time installation of purchased IT equipment. Ongoing operation funds (e.g. CFI IOF) should be reserved for ongoing IT operations not covered as part of ICT core services.

## Network:

- **Videoconferencing** – equipment should be purchased by the centre but back-end USask enterprise videoconference service is free
- **Media streaming ability** – required equipment for media streaming has to be purchased by the centre
- **High-speed data transfer** – standard 1Gbps should be sufficient, high-speed access to the centre's data will be part of DATASTORE arrangement
- **Firewall** – network segmentation is provided by ICT Networks free of charge but if actual firewall is required in the centre, it has to be purchased separately and approved by the ICT Networks

## Phone:

- **six phones** – free of charge for phones and lines, only potential cost is associated with establishing new physical lines to the centre from USask phone infrastructure and determined by FMD on case-by-case basis

## Data:

- **group DATASTORE allocation for** central data storage and backup – current rates (subsidized to cost of \$50/TB/year, up to 20TB; past 20TB, negotiated rates reflecting cost to provide service)

## HPC:

- **one large-memory GPU node** – will be purchased provided they get CFI funding
- **it will be integrated into Plato** as a contributed system – marginal overhead to the cluster support
- **one license for cluster management** – cost included into the hardware

## Services:

- **System administration:** our preliminary estimate is that 5% sysadmin FTE required
- HPC support provided by ICT RC as part of **Plato support and operation** – free up to 5%; if more required, operating funds for IT admin will be required

- **web content:** required domain name *quanta.usask.ca* – free
- **web content management training** required
- IT support provided by ICT through **Help Desk and ticketing system** – free

Software (Linux):

- HPC node
  - i. **SAGE** – to be purchased from CFI funds
  - ii. **Plato software stack** – free
- Desktops
  - i. **SAGE, R** – open source
  - ii. **MATLAB, Maple, Mathematica** – pooled licenses are available from the USask license server, however, some MATLAB toolbox licenses may need to be purchases for the guaranteed use

ICT will provide standard operational support for the above IT needs.

Some examples of needs requiring additional funding include the following:

- videoconferencing and/or streaming hardware
- installing new physical phone line
- extra MATLAB toolboxes and other software packages designated for the institute's exclusive usage
- DATASTORE storage space

UNIVERSITY COUNCIL  
SCHOLARSHIP AND AWARDS COMMITTEE  
FOR INFORMATION ONLY

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**PRESENTED BY:** Dr. Donna Goodridge  
Chair, Scholarship and Awards Committee

**DATE OF MEETING:** May 23, 2019

**SUBJECT:** Annual Report to Council: Undergraduate and Graduate Scholarships and Awards

**COUNCIL ACTION:** For information only

**ORIGIN OF REQUEST AND ADVANCED CONSULTATION:**

This report summarizes the activities of the Scholarship and Awards Committee for two overlapping time periods:

- 1) 2018-2019 Annual summary of centrally administered **and** college administered awards distributed to students
- 2) 2018 Calendar year description of Committee Activities

The Committee has four responsibilities and this report outlines the Committee’s activities with respect to undergraduate scholarships and awards within the framework of the four areas of responsibility.

The Student Finance and Awards Office disbursed approximately \$12.9 million in undergraduate student awards in 2018-2019 on behalf of the Scholarships and Awards Committee of University Council, the college deans, and Huskie Athletics. The majority of this funding is awarded as Guaranteed Entrance Scholarships, Competitive Entrance Awards, Transfer Scholarships, and Continuing Awards (both scholarships and bursaries). This annual report also includes information regarding the distribution of graduate awards for the 2018-2019 year, as this is the reporting vehicle upon which graduate scholarships and awards can be reported to Council.

**DISCUSSION SUMMARY:**

**Part A – Undergraduate**

**Responsibility #1: Recommending to Council on matters relating to the awards, scholarships and bursaries under the control of the University.**

This Committee last reported to University Council on May 17, 2018.<sup>1</sup> Since that time, the Committee had two regular meetings during the 2018 calendar year and various subcommittee meetings to select undergraduate recipients for awards with subjective criteria.

**Responsibility #2: Recommending to Council on the establishment of awards, scholarships and bursaries.**

The Awards Development Liaison, Student Finance and Awards, and Development Officers within University Relations and the respective colleges work with donors to establish new scholarships, bursaries, awards, and prizes, and revise Terms of Reference for previously existing awards. During the 2018-2019 fiscal year, the University of Saskatchewan signed Terms of Reference agreements to accept donations establishing 76 new awards for undergraduate students and 8 new awards for graduate students. Of the 76 undergraduate awards, 23 are merit-based, 9 are need-based, and 44 are a combination of merit and need. Of the 8 graduate awards, all are merit based. Four of the undergraduate awards are for indigenous students, and one of the graduate awards is for females.

	<b>New Awards (Graduate and Undergraduate) by College</b>
Agriculture and Bioresources	4
Arts and Science	8
Dentistry	3
Engineering	7
Edwards School of Business	16
Huskie Athletics	5
Law	5
Medicine	7
Pharmacy and Nutrition	1
Veterinary Medicine	6
Multi-College Awards	10
Graduate Studies	8
Indigenous Awards (4 undergraduate)	4
Female Awards (1 graduate)	1
<b>Total New Awards</b>	<b>76</b>

<sup>1</sup>The May 17, 2018 Report to Council was based on data compiled May 5, 2018. \$413,963 in undergraduate student awards was disbursed as part of the 2017-2018 academic year after that date.

**Responsibility #3: Granting awards, scholarships, and bursaries which are open to students of more than one college or school.**

Four primary undergraduate award cycles exist: Entrance Awards, Transfer Scholarships, Scholarships for Continuing Students, and Bursaries for Continuing Students.

**Entrance Awards**

Entrance Awards are available to students who are entering the University of Saskatchewan with no previous post-secondary experience.<sup>2</sup> There were two components to the Entrance Awards cycle in 2018-2019: Guaranteed Entrance Scholarships and Competitive Entrance Awards. The Guaranteed Entrance Scholarships are distributed to students upon applying for admission and are guaranteed to students, so long as they meet the average requirements outlined in Table 1.

Students who did not proceed directly from high school to the U of S but had less than 18 transferable credit units were considered for Guaranteed Entrance Scholarships based on their final Grade 12 marks.

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<sup>2</sup> 18 credit units or less of transferable credit if they have attended another post-secondary institution.

Table 1 - Guaranteed Entrance Scholarship Distribution for 2018-2019<sup>3</sup>

Award Tier		Number of Recipients Paid	Total Value
<b>\$3,000 Guaranteed Entrance Scholarship (95% +)</b>			
	Agriculture and Bioresources	35	\$105,000
	Arts and Science	218	\$654,000
	Education	24	\$72,000
	Engineering	72	\$216,000
	Edwards School of Business	34	\$102,000
	Kinesiology	38	\$114,000
	<b>Total \$3,000 Guaranteed Entrance Scholarships</b>	<b>421</b>	<b>\$1,263,000</b>
<b>\$2,000 Guaranteed Entrance Scholarships (93 - 94.9%)</b>			
	Agriculture and Bioresources	21	\$42,000
	Arts and Science	153	\$304,750 <sup>4</sup>
	Education	20	\$42,000
	Engineering	51	\$102,000
	Edwards School of Business	28	\$56,000
	Kinesiology	23	\$46,000
	<b>Total \$2,000 Guaranteed Entrance Scholarships</b>	<b>296</b>	<b>\$590,750</b>
<b>\$1,000 Guaranteed Entrance Scholarships (90 – 92.9%)</b>			
	Agriculture and Bioresources	38	\$38,000
	Arts and Science	223	\$223,000
	Education	33	\$33,000
	Engineering	58	\$58,000
	Edwards School of Business	50	\$50,000
	Kinesiology	52	\$52,000
	<b>Total \$1,000 Guaranteed Entrance Scholarships</b>	<b>454</b>	<b>\$454,000</b>
<b>\$500 Guaranteed Entrance Scholarships (85 – 89.9%)</b>			
	Agriculture and Bioresources	74	\$37,000
	Arts and Science	351	\$175,500
	Education	60	\$30,000
	Engineering	76	\$38,000
	Edwards School of Business	87	\$43,500
	Kinesiology	34	\$17,000
	<b>Total \$500 Guaranteed Entrance Scholarships</b>	<b>682</b>	<b>\$341,000</b>
<b>Total Guaranteed Entrance Scholarships</b>		<b>1,853</b>	<b>\$2,648,750</b>

The Competitive Entrance Awards Program requires a separate application, and includes both centrally and donor-funded scholarships, bursaries and prizes. The majority of the awards are one-time, but

<sup>3</sup> Data as of April 24, 2019.

<sup>4</sup> Note one Arts and Science student was only able to receive \$750 of a \$2,000 Guaranteed Entrance Scholarship in order to ensure she did not exceed the cumulative dollar value cap of cost of tuition for fall and winter plus allowable living costs.

there are several awards which are renewable if certain criteria are met each year. Prestigious renewable entrance awards include the George and Marsha Ivany - President's First and Best Scholarships, valued at \$40,000 over four years, and the Dallas and Sandra Howe Entrance Award, valued at \$32,000 over four years.

Based on a policy exception approved by University Council in 2012, entering students were eligible to receive both a Guaranteed Entrance Scholarship and a Competitive Entrance Award in 2018-2019. There are also a few very specific awards which are also listed as an exception in the *Limits on Receiving Awards* section of the Undergraduate Awards Policies approved by University Council. Because of their very specific nature, these awards with subjective criteria may be distributed to students who have won another Competitive Entrance Award. Also, most college-specific awards<sup>5</sup> may be received in addition to the Guaranteed Entrance Scholarship and Competitive Entrance Awards governed by the Scholarships and Awards Committee.

Table 2 - Competitive Entrance Awards Distribution for 2018-2019<sup>6</sup>

	Number of Recipients <sup>7</sup>	Total Value
<b>University of Saskatchewan Funded Competitive Entrance Awards</b>		
Agriculture and Bioresources	3	\$26,000
Arts and Science	37	\$267,500
Education	2	\$15,000
Engineering	7	\$75,500
Edwards School of Business	10	\$63,500
Kinesiology	2	\$16,000
<b>Total U of S Funded</b>	<b>61</b>	<b>\$463,500</b>
<b>Donor Funded Competitive Entrance Awards</b>		
Agriculture and Bioresources	19	\$101,535
Arts and Science	65	\$299,344
Education	18	\$87,273
Engineering	29	\$274,113
Edwards School of Business	16	\$60,800
Kinesiology	10	\$32,000
<b>Total Donor Funded</b>	<b>144</b>	<b>\$855,065</b>
<b>Total Competitive Entrance Awards</b>	<b>205</b>	<b>\$1,318,565</b>

<sup>5</sup> College-specific entrance award recipients are selected by the Student Finance and Awards Office but are reported in Table 8 - College Administered University of Saskatchewan Undergraduate Awards.

<sup>6</sup> Rounded to the nearest dollar.

<sup>7</sup> Here and elsewhere in this document, each recipient is only counted once on a given table, regardless of the number of awards they received relevant to the table in question.

### Transfer Scholarships

Students who are transferring to a direct entry college at the University of Saskatchewan from another post-secondary institution are not eligible for entrance awards or awards for continuing students. Consequently, a transfer scholarship program was developed to provide scholarships, based solely on academic achievement, to students transferring to the University of Saskatchewan. Students are awarded U of S Transfer Scholarships when they apply for admission. Scholarships are guaranteed to students based on their transfer average, as outlined in Table 3. Students with the highest academic average from 18 specific institutions targeted are offered Transfer Scholarships valued at \$2,500.

Table 3 - Transfer Scholarship Distribution for 2018-2019

Transfer Average	Scholarship Amount	Number of Recipients Paid	Total Distributed
Incentive Institution <sup>8</sup>	\$2,500	0	\$0
85% +	\$2,000	18	\$36,000
80-84.9%	\$1,500	23	\$34,500
78-79.9%	\$1,000	5	\$5,000
<b>TOTAL</b>		<b>47</b>	<b>\$75,500</b>

### Continuing Awards

Continuing students are defined as students who attended the University of Saskatchewan in the previous fall and winter terms (September to April) as full-time students. Students who completed 18 credit units<sup>9</sup> or more in 2017-2018 were eligible for the 2018-2019 continuing scholarships and continuing bursaries. Awards are offered to these students both centrally (because the awards are open to students from multiple colleges) and from their individual colleges (because the awards are restricted to students from that specific college). Table 4 outlines the **centrally-administered awards** (excluding the Transfer Scholarships) distributed to continuing students in 2018-2019.

<sup>8</sup> Incentive institutions include: Athabasca University; Beijing Institute of Technology (BIT), China (Dual degree program, flagship partner institution); Briarcrest College; Camosun College; Columbia College; Coquitlam College; Douglas College; Grand Prairie Regional College; Huazhong Agricultural University (HZAU), China (Dual degree program, flagship partner institution); INTI College, Malaysia; Lakeland College; Langara College; Lethbridge Community College; Medicine Hat College; Red Deer College, Saskatchewan Polytechnic; Taylor's College, Malaysia; Xi'an Jiaotong University (XJTU), China (Dual degree program, flagship partner institution). The list of institutions is reviewed annually.

<sup>9</sup> Students registered with Disability Services for Students (DSS) and approved to study on a Reduced Course Load (RCL) are required to complete 12 credit units in the previous fall and winter terms.

Table 4 – Centrally-Administered<sup>10</sup> Continuing Awards Distribution for 2018-2019

	Number	Total Value
<b>University of Saskatchewan Funded Continuing Awards</b>		
Agriculture and Bioresources	37	\$83,644
Arts and Science	580	\$862,267
Dentistry	10	\$20,000
Education	257	\$265,003
Edwards School of Business	73	\$144,790
Engineering	81	\$269,000
Kinesiology	32	\$79,600
Law	63	\$94,531
Medicine	42	\$75,834
Nursing	175	\$249,303
Pharmacy and Nutrition	55	\$118,000
Western College of Veterinary Medicine	50	\$95,558
Graduate Studies and Research <sup>11</sup>	25	\$22,672
<b>Total University of Saskatchewan Funded</b>	<b>1,480</b>	<b>\$2,370,811</b>
<b>Donor Funded Continuing Awards</b>		
Agriculture and Bioresources	20	\$64,494
Arts and Science	81	\$281,351
Dentistry	7	\$8,000
Education	49	\$184,592
Edwards School of Business	23	\$41,030
Engineering	23	\$74,365
Kinesiology	7	\$32,300
Law	29	\$58,200
Medicine	17	\$44,680
Nursing	35	\$95,756
Pharmacy & Nutrition	25	\$33,000
Western College of Veterinary Medicine	15	\$49,500
Graduate Studies and Research <sup>12</sup>	6	\$12,350
<b>Total Donor Funded</b>	<b>337</b>	<b>\$979,617</b>
<b>Total Continuing Awards</b>	<b>1,817</b>	<b>\$3,350,428</b>

<sup>10</sup> Some continuing awards are funded from U of S funds but selected by the college/department (e.g., U of S Scholarships, U of S Undergraduate Scholarships, etc.). Also, the Aboriginal Achievement Book Prizes and Aboriginal Students with Dependent Children Bursaries are paid in two installments and counted as such.

<sup>11</sup> There are a few select Continuing Awards administered by the Student Finance and Awards Office that are open to both undergraduate and graduate students.

<sup>12</sup> There are a few select Continuing Awards administered by the Student Finance and Awards Office that are open to both undergraduate and graduate students.

### Saskatchewan Innovation and Opportunity Scholarship (SIOS)

The Saskatchewan Innovation and Opportunity Scholarships are part of a provincial government program that matches scholarship money raised by the university to a maximum of \$2 million per year in the areas of innovation and strategic priority to the institution.

Table 5 – Saskatchewan Innovation and Opportunity Scholarships (SIOS)<sup>13</sup> to support undergraduate students in 2017-2018<sup>14</sup>

College	Total Payouts	Total Value
Arts and Science	4	\$7,000
Education	1	\$2,000
Edwards School of Business	3	\$6,000
Kinesiology	1	\$2,000
Law	1	\$3,000
<b>TOTAL</b>	<b>10</b>	<b>20,000</b>

### University of Saskatchewan Faculty Association (USFA) Scholarship Fund Program

Each year \$250,000 is contributed to the USFA Scholarship Fund. The amount in the fund is divided by the number of credit units eligible applicants have successfully completed. In 2017-2018, 152 applications were received. Seven of the applicants were considered ineligible for consideration. The total paid out for the credit units completed during the 2017-2018 academic year, was \$248,025. Eligible applicants received \$54.50 per credit unit they successfully completed. The 2018-2019 USFA Scholarships have not been awarded yet.

Table 6 – University of Saskatchewan Faculty Association (USFA) Scholarship Fund 2017-2018 Distribution<sup>15</sup>

	Number of Recipients
Undergraduate	125
Graduate	22
<b>Total</b>	<b>147</b>

### Administrative and Supervisory Personnel Association (ASPA) Tuition Reimbursement Fund

In 2017-2018, there were 149 applications for the ASPA Tuition Reimbursement Fund. Four applicants were considered ineligible. Eligible applicants received partial tuition reimbursement for the credit units completed during the academic year of May 1, 2016-April 30, 2017. There was \$185,584 available for allocation and it was divided among the number of eligible credit units the applicants successfully completed. Given the number of completed credit units, eligible applicants received \$46 per credit unit

<sup>13</sup> Saskatchewan Innovation and Opportunity Scholarships (SIOS) administered by SESD (including ISSAC). Additional scholarships are administered by Graduate Awards and Scholarships.

<sup>14</sup> Rounded to the nearest dollar.

<sup>15</sup> The funding source for the USFA Scholarship Fund is the University of Saskatchewan, as negotiated in the USFA Collective Agreement. The USFA Scholarship Fund awards are based on credit units completed in the 2017-2018 academic year.

they successfully completed. The total payout for tuition reimbursements in 2017-2018 was \$185,058.00. The 2017-2018 ASPA Tuition Reimbursements have not been awarded yet.

*Table 7 – ASPA Tuition Reimbursement Fund 2017-2018 Distribution<sup>16</sup>*

Number of Recipients	
Undergraduate	127
Graduate	18
<b>TOTAL</b>	<b>145</b>

**Responsibility #4: Recommending to Council rules and procedures to deal with appeals from students with respect to awards, scholarships and bursaries.**

In 2010, Policy #45 *Student Appeals of Revoked Awards* was implemented. As such, the Awards and Financial Aid Office, on behalf of the Scholarships and Awards Committee of University Council, adjudicates the student appeals of revoked awards. There were five student appeals submitted to the Student Finance and Awards Office during the 2018 calendar year. All five of these appeals were based on medical grounds. In each case, the appellant was allowed to retain their award.

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<sup>16</sup> According to Article 12.4 of the old Collective Agreement (May 1, 2011 – April 30, 2014), “Effective 1 May 2012, the university will provide an annual allotment of \$180,000 to the TRF.” Based on this agreement, two allotments are anticipated one on May 1, 2012 and the second on May 1, 2013 for a total of \$360,000. The ASPA executive agreed to divide the \$360,000 over three years in order to provide tuition reimbursement to applicants for the 2011/12, 2012/13 and 2013/14 academic years. In May 2018, \$180,000 was received. The ASPA TRF is based on credit units completed in the 2017-2018 academic year.

### Additional Section: 2018-2019 Total Distribution of College Administered University of Saskatchewan Undergraduate Awards

Although awards distributed by the colleges are not within the purview of the Committee except the requirement that they are created and disbursed in compliance with the Undergrad Awards Policy, the members felt it appropriate to include them in order to give an accurate picture of the total state of awards on campus. The following table indicates how many college-specific awards were given to undergraduate students in each college.

Table 8 – College-specific Awards at the University of Saskatchewan 2018-2019 <sup>17</sup>

College	Total Payouts	Total Value
Agriculture and Bioresources <sup>18</sup>	227	\$447,178
Arts and Science <sup>19</sup>	289	\$423,810
Dentistry	4	\$12,750
Education	89	\$99,005
Edwards School of Business <sup>20</sup>	444	\$755,258
Engineering <sup>21</sup>	323	\$609,950
Kinesiology	23	\$18,250
Law	244	\$588,150
Library	2	\$2,000
Medicine	111	\$405,998
Nursing	52	\$114,417
Pharmacy and Nutrition	100	\$153,510
Veterinary Medicine	142	\$247,184
Huskie Athletics	559	\$855,202
<b>TOTAL</b>	<b>2,609</b>	<b>\$4,732,661</b>

In addition to the above listed college-specific awards, \$309,549 was distributed through Enrolment and Student Affairs funding. \$168,000 was distributed in the form of \$1,000 Global Engagement Scholarships to help offset costs related to studying abroad. The remaining \$141,549 was distributed in the form of varying sized U of S Student Travel Awards to provide financial assistance to students participating in a conference, competition or other activities off-campus. Both awards are available to graduate and undergraduate students.

<sup>17</sup> Number and values reported as of April 24, 2019. Totals are rounded to the nearest dollar.

<sup>18</sup> Numbers include awards and values for College of Agriculture and Bioresources entrance awards administered by Student Finance and Awards.

<sup>19</sup> Number does not include Aboriginal Student Learning Community Award, as the fund is under the University Registrar Organization.

<sup>20</sup> Numbers reported include the Edwards Undergraduate Scholarships and other Edwards-specific entrance awards administered by Student Finance and Awards.

<sup>21</sup> Numbers include awards and values for College of Engineering entering and continuing awards administered by Student Finance and Awards.

## Part B – Graduate

The College of Graduate and Postdoctoral Studies (CGPS) administers approximately \$8.4 million of centrally funded money for graduate student support. The majority of this funding is allocated between three major scholarship programs: Devolved and Non-Devolved and the Dean’s Scholarship program.

### Funding Programs

More than \$4 million is available to support students through the Devolved and Non-Devolved funding arrangements. The amount of funding available through each pool is determined based on the number of scholarship-eligible students to be funded.

### Devolved Funding Program

“Devolved” refers to an arrangement whereby larger academic units receive an allocation from the CGPS to award to their graduate students at the academic unit level. To be eligible for this pool of funding, departments must have a minimum of twelve full-time graduate students in thesis-based programs on a three-year running average and been awarded two non-devolved scholarships on a three year average.

Allocations to “devolved” departments are determined by a formula created in 1997 and based on the average number of scholarship-eligible graduate students in thesis-based programs during the previous three years in each program, as a proportion of the number of graduate students in all programs averaged over the same three years. Doctoral students beyond the fourth year and Master students beyond the third year of their programs are not counted in the determination. Doctoral students are valued at 1.5 times Master students. Each academic unit participating in the devolved funding program is allocated a percentage of the total funds available in the devolved pool.

### *Allocations for Devolved Graduate Programs for 2018-2019*

<b>Graduate Program</b>	<b>Allocation</b>
<b>College of Agriculture &amp; Bioresources</b>	
Agricultural & Resource Economics	\$63,728.71
Animal and Poultry Science	\$110,776.51
Food and Bioproduct Sciences	\$75,314.62
Plant Sciences	\$132,168.21
Soil Science	\$98,468.34
<b>College of Arts and Science</b>	
Archaeology	\$28,821.86
Biology	\$141,225.68
Chemistry	\$153,808.88
Computer Science	\$189,576.43
Economics	\$43,354.06
English	\$71,077.74

<b>Graduate Program</b>	<b>Allocation</b>
<b>College of Arts and Science (cont.)</b>	
Geography and Planning	\$94,213.00
Geological Sciences	\$89,626.77
History	\$96,897.58
Mathematics & Statistics	\$47,413.04
Physics and Engineering Physics	\$110,241.64
Political Studies	\$42,013.18
Psychology	\$132,804.48
Sociology	\$66,088.34
<b>Edward School of Business</b>	
Finance & Management Science	\$24,292.27
<b>College of Education</b>	
Educational Administration	\$88,580.49
Educational Foundations	\$33,364.38
Educational Psychology and Spec. Ed.	\$77,691.56
<b>College of Engineering</b>	
Biomedical Engineering	\$81,824.58
Chemical and Biological Engineering (Biological)	\$38,836.23
Chemical and Biological Engineering (Chemical)	\$68,484.39
Civil and Geological Engineering	\$107,589.53
Electrical and Computer Engineering	\$139,511.14
Mechanical Engineering	\$177,403.81
<b>Interdisciplinary Studies</b>	
Interdisciplinary Studies	\$39,114.13
<b>College of Kinesiology</b>	
Kinesiology	\$75,575.27
<b>College of Law</b>	
Law	\$24,991.86
<b>College of Medicine</b>	
Anatomy and Cell Biology	\$32,798.00
Biochemistry	\$64,076.79
Community Health and Epidemiology	\$98,398.16
Microbiology and Immunology	\$37,851.57
<b>College of Nursing</b>	
Nursing	\$66,943.78
<b>College of Pharmacy and Nutrition</b>	
Pharmacy and Nutrition	\$113,980.06
<b>College of Veterinary Medicine</b>	
Veterinary Biomedical Sciences	\$69,817.45
Veterinary Microbiology	\$55,924.53

<b>Schools</b>	
School of Environment and Sustainability	\$129,955.38
School of Public Health	\$66,370.42
School of Public Policy	\$77,649.57
<b>Toxicology</b>	
Toxicology	\$73,338.58
<b>Total</b>	<b>\$3,651,983.00</b>

### Non-Devolved Funding Program

Departments that do not qualify for the Devolved Funding Program may nominate students for consideration in the campus-wide Non-Devolved Scholarship Program. Effective September 2013, Non-Devolved Scholarships values were increased from \$15K to \$16K for the Master's and \$18K to \$20K for the PhD.

The following awards of new and continuing awards in 2018/2019, as part of the Non-Devolved Funding Program.

*Table 9 – Number and Value of Non-Devolved Funding in 2018-2019*

Anthropology	1 Master's	\$16,000
Art & Art History	3 Master's	\$48,000
Education Dean's Office	1 Doctoral	\$20,000
Health Sciences	1 Master's/6 Doctoral	\$136,000
Large Animal Clinical Sciences	1 Doctoral	\$20,000
Linguistics & Religious Studies	1 Master's	\$16,000
Marketing & Management	1 Master's	\$16,000
Music	1 Master's	\$16,000
Pharmacology	1 Master's	\$16,000
Physiology	1 Master's/2 Doctoral	\$56,000
Veterinary Pathology	1 Master's/3 Doctoral	\$76,000
Women/Gender/Sexualities Studies	2 Master's	\$32,000
Writing	3 Master's	\$48,000
<b>Total</b>		<b>\$516,000.00</b>

### Teacher-Scholar Doctoral Fellowships

The Teacher-Scholar Doctoral Fellowships provide an annual stipend of approximately \$20,000 and a mentored teaching experience, which is made possible by partnerships with other graduate units and the Gwenna Moss Centre for Teaching Effectiveness. Thirteen doctoral students across campus received this Fellowship in 2018/2019.

### **Graduate Teaching Fellowships Program**

The CGPS allocates 47 Graduate Teaching Fellowships (GTF's). Total annual budget for this program including the summer supplement portion is \$986,971. The GTF's are allocated to the 12 colleges with graduate programs based on a formula that takes into account the number of undergraduate course credits, and the number of graduate students registered, in each college.

### **Graduate Research Fellowships**

The CGPS introduced the Graduate Research Fellowship program several years ago funded by the Provost's Committee on Integrated Planning. This is a shared-cost program that provides \$8,000 per year to thirty graduate students across campus who receive at least an equal amount in salary or scholarship funds from faculty research grants or contracts from external sources.

### **Dean's Scholarship Program**

At the time of this report, 22 Master's (12 Canadian and 10 International) and 61 PhD (21 Canadian and 40 International) students were awarded Dean's and International Dean's Scholarships in 2018/2019. The PhD Dean's Scholarship is valued at \$22,000 per year for three years and the Dean's Master award is valued at \$18,000 per year for two years. This program requires one year of funding (either \$18,000 or \$22,000 for Master or PhD students, respectively) from the departments for the final year of funding of these awards.

Effective September 1, 2017, doctoral students holding a Dean's Scholarship became eligible to receive up to 3 years of tuition scholarships. The CGPS received \$483,000 from the Academic's Priority Fund to establish the Dean's Doctoral Tuition Scholarship Program.

### **Indigenous Graduate Leadership Award**

The CGPS for 2018/2019 awarded the first Indigenous Graduate Leadership Awards. The purpose of this award is to recognize students who have demonstrated academic excellence and leadership with a personnel commitment to improving their communities. The value of the PhD is \$20,000 plus tuition per year for up to 4 years and Master's \$16,000 plus tuition per year for up to 2 years.

In 2018/2019, the committee received reviewed ten applications and we were able to award six recipients (4 at the Master's level; 2 at the PhD level).

### **The Saskatchewan Innovation and Opportunity Scholarship (SIOS) program (in partnership with the province of Saskatchewan)**

The SIOS was established to provide support for students in emerging fields of study where innovative work is being done. The scholarship includes two components: innovation and academic/research excellence, and targets disciplines as diverse as, but not limited to, mining, biotechnology, environment, engineering, medicine and science programs. Furthermore, the projects must align with one of the six Signature Areas of the U of S

- (a) Aboriginal Peoples (Engagement and Scholarship)
- (b) Agriculture (Foods and Bioproducts for a Sustainable Future)

- (c) Energy and Mineral Resources (Technology and Public Policy for a Sustainable Future)
- (d) One Health (Solutions at the Animal-Human-Environment Interface)
- (e) Synchrotron Science (Innovation in Health, Environment, and Advanced Technologies)
- (f) Water Security (Stewardship of the World's Freshwater Resources).

This year, the CGPS offered 19 awards (8 at the Master's level; 11 at the PhD level), with a value of Master's set at \$16,000 for one year and value of PhD set at \$20,000 for one year. Over \$500,000 of this year's SIOS funding envelope was also used for top-ups for national award holders (again, recognizing excellence and innovation).

### **New Faculty Graduate Student Support Program**

The CGPS administers the New Faculty Graduate Student Support Program to provide start-up funds to new tenure-track faculty to help establish their graduate education and research programs. In 2018/2019, \$272,000 was allocated to 15 new tenure-track faculty across campus.

### **Graduate Teaching Assistantships**

In 2018/2019, the CGPS allocated approximately \$299,567 graduate teaching assistant support to colleges with graduate programs across campus. The annual distribution is based on relative enrollment of full-time graduate students in thesis-based programs, using annual Census data. This fund was established for providing support to Colleges for teaching or duties specifically related to teaching (e.g. marking, lab demonstrations, and tutorials).

### **Graduate Service Fellowships**

The CGPS created the Graduate Service Fellowship Program to provide fellowships to graduate students who will carry out projects or initiatives that will enhance services and the quality of graduate programs for a broad base of graduate students. In addition to the financial support, each Graduate Service Fellow receives valuable work experience and learns skills related to project organization, delivery, and reporting. In 2018/2019, approximately \$154,000 was allocated for various projects across campus.

### **Sponsored Student Agreements**

The CGPS has several key agreements with foreign governments to facilitate the recruitment of international students to study at the University on scholarships provided by their own governments. Notable among these are:

- China Scholarship Council (CSC) is a government agency in China, which provides scholarships to Chinese citizens for doctoral and postdoctoral studies abroad. The requirement from the CSC for any student studying abroad is that the host institution must provide a tuition bursary or tuition waiver.
- Vietnam International Education Development (VIED), an arm of the Vietnamese Ministry of Education which provides funding to junior faculty in public universities in Vietnam to go abroad for masters and doctoral programs;
- Secretaría Nacional de Educación Superior, Ciencia, Tecnología e Innovación (SENESCYT), an agency within the Ecuadorian government's Ministry of Education, which provides scholarships to Ecuadorian citizens to complete graduate programs overseas.

There is strong competition among western universities for these students, and partnership agreements with targeted incentives for qualified students, helps the University of Saskatchewan attract top quality applicants. For 2018/2019, approximately \$30,166 was allocated to these international scholarship programs from CGPS.

UNIVERSITY COUNCIL  
JOINT COMMITTEE ON CHAIRS AND PROFESSORSHIPS  
FOR INFORMATION ONLY

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**PRESENTED BY:**

**Jim Basinger, Interim Vice-Provost Faculty Relations and  
Chair, JCCP**

**DATE OF MEETING:** June 20, 2019

**SUBJECT:** JCCP 2018-19 Annual Report

**COUNCIL ACTION:** For information only

**CONTEXT AND BACKGROUND:**

The Joint Board/Council Committee on Chairs and Professorships (JCCP) is chaired by the Provost and Vice-President Academic or designate with representation from: University Council; Board of Governors; Research, Scholarly and Artistic Work Committee of Council; the Vice-President Research or designate; the Vice-President University Relations or designate; the Controller, Financial Services or designate; and the Secretary to the Board of Governors and Council or designate.

The committee is responsible for reviewing proposals for the establishments of chairs and professorships, receiving annual reports of chairs, and developing and reviewing procedures and guidelines related to the funding and on-going administration of chairs. The committee makes recommendations to University Council and the Board of Governors for the establishment of chairs and professorships that fall within its jurisdiction.

**DISCUSSION SUMMARY:**

Over the course of 2018/2019 JCCP reviewed and recommended establishment of four Chairs at the University of Saskatchewan, including the Edwards Enhancement Chair in Business, the Nutrien Chair in Clinical Research, the Western Grains Research Foundation Integrated Agronomy Research Chair, and the Ducks Unlimited Chair in Wetland and Waterfowl Conservation. University Council and the Board of Governors subsequently approved three of these Chairs; the Edwards Enhancement Chair in Business is going to the Board for final approval in June.

**Committee Membership:**

Interim Vice-Provost, Faculty Relations and Chair  
Board of Governors Representative  
Vice-President Research Designate  
Research, Scholarly and Artistic Work  
Member of Council Representative  
University Secretary's Designate  
Controller, Financial Services  
  
University Advancement Designate

Jim Basinger  
Grant Devine  
Andy Potter  
Jane Alcorn  
Jafar Soltan  
Beth Bilson  
Terry Summers  
Lucy Vuong (alternate designate)  
Shandi Boser

**Committee Support:**

Research Services Resource Person  
Secretary

Laura Zink  
Anna Okapiec

**ATTACHMENTS:**

None

**UNIVERSITY COUNCIL  
COORDINATING COMMITTEE  
REPORT FOR INFORMATION**

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**PRESENTED BY:** Jay Wilson, chair, coordinating committee

**DATE OF MEETING:** May 23, 2019

**SUBJECT:** Banner system upgrade and multi-term classes

**COUNCIL ACTION:** **For information only**

**PURPOSE:**

To address an action item from the March 21, 2019 Council meeting where a question was posed to the Academic Programs Committee (APC) regarding Banner system upgrades and multi-term classes.

**DISCUSSION SUMMARY:**

At the March 21, 2019 Council meeting a council member directed a question to the chair of APC. The minutes of the meeting reflected that “the Registrar’s Office is upgrading the Banner system and that it will have an effect on multi-term courses, including 6 cu courses, in that it will be more difficult and costly to accommodate them in the system. The council member inquired as to the potential impact of proposed software changes for academic direction given by Council, i.e. on course syllabi. It was requested that APC consider the matter and report back to Council.”

In response to the action item, the coordinating committee directed the question to APC and the Teaching, Learning and Academic Resources Committee (TLARC). The memo from the Registrar and the reply from APC and TLARC are provided herein for Council.

**ATTACHMENTS:**

1. Joint APC and TLARC memo on Student Information System and multi-term classes, dated May 8, 2019
2. Memo from the Registrar to the Academic Deans’ Group on changes impacting multi-term classes, dated December 20, 2018.



## ***MEMORANDUM***

TO: Jay Wilson, Chair, University Council and Coordinating Committee of Council

FROM: Roy Dobson, chair, Academic Programs Committee of Council  
Vince Bruni-Bossio, chair, Teaching, Learning, and Academic Resources Committee of Council

DATE: May 8, 2019

RE: Student information system and multi-term classes

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A question was posed at the March 21, 2019 meeting of University Council about upcoming changes to the student information system that will impact multi-term classes. The question was referred to the Academic Programs Committee, who discussed the issue at its April 17, 2019 meeting. Mr. Russell Isinger, University Registrar, was invited to provide information about the pending changes to the student information system. Mr. Isinger was also invited to TLARC for a similar discussion, which occurred at its May 7, 2019 meeting.

The University acquired Banner (our student information system) in 2007 from a company that worked extensively in the US college system. It did not support multi-term classes, as multi-term classes are not commonly used in the US system. At that time, there was a discussion about support for multi-term classes and it was determined that the university would continue to support multi-term classes, so Banner was modified to allow for multi-term classes. This involved changes to the code to make multi-term courses function behind the scenes, so that students would not have to complete two registrations to take a 6cu course spanning two terms. Every time that Banner is upgraded, the code needs to be re-written.

Thus far, maintaining the modifications to Banner has been manageable, but the upcoming upgrade is going to involve a major rewrite of its underlying programming architecture, meaning that the re-written code that has been used since 2007 will no longer work. In order to continue to support a single registration in multi-term classes, we would need to draft new code to allow for this. The cost/benefit analysis has showed that this would not be a worthwhile use of limited resources, given the declining use of multi-term classes.. Additionally, if alternations are made to the new Banner to support multi-term courses, some of the benefits of the new version would be disabled, such as block registration.

With the decision of ICT and Registrarial Services not to continue to support multi-term registration, there are two options for multi-term classes. One would be to eliminate multi-term classes. The Registrar has noted that there has already been a significant reduction in multi-term classes (from 1100 in 2005 to 300 in 2018), and that this reduction has occurred through curriculum renewal and change. Many of the existing multi-term classes are dissertation/research/thesis courses. This is not a decision that Registrarial Services will make, as course design is the purview of the academic units offering the courses.

There will, therefore, still be multi-term classes at USask following the upgrade to Banner, but students will now have to register in both halves of the course separately. The Registrarial Services is planning to ensure that students registering in (or withdrawing from) one-half of a two-part course will see a pop-up message at the time of registration informing them that they need to register in (or drop) the other half. If students fail to heed the pop-up, they will receive a daily email telling them to register in the other half, until they do so. If the emails are unsuccessful, the Registrar's office will run a report to find all instances of students registered in only half of a two-part course and the students will be contacted through student advisors and college offices. If all these efforts fail, students will be entered manually into the second half of a multi-term class by staff in Registrarial Services.

The new version of Banner will launch in June 2020 and all colleges have been informed of both the pending change and the planned response. The memo that was sent by the University Registrar outlining the changes is attached for information.

The academic programs committee and TLARC were both pleased to receive this clarification about the upcoming changes to Banner and its impacts on program delivery. After full discussions at both committees, both APC and TLARC determined that these changes will not impact pedagogy and are not limiting the ability to have multi-term classes, but is only removing the ability to have registration that spans multiple academic terms. Both committees appreciated the efforts that Registrarial Services is taking to ensure the transition to the latest version of Banner is as seamless as possible.

**TO | Academic Deans' Group**

**FROM | Russell Isinger, University Registrar**

**SUBJECT | Changes Impacting Multi-Term Classes.**

**DATE | December 20, 2018**

Dear colleagues,

Further to my memo of June 16, 2016, and our recent meeting of October 18, 2018, I am writing to confirm a decision that has been taken regarding multi-term classes at the University of Saskatchewan.

To summarize what was outlined in my previous memo and what was discussed at our previous meetings, due to the fact that our Banner student information system is term-based (being an American system, where term-based is the norm for colleges and universities), Student Information Systems (SIS) had to customize the system to handle our multi-term classes. These customizations served to automatically register (and withdraw) a student from the second half of a multi-term class when they registered in (or withdrew from) the first half, as well as providing for other functionality (for example, assigning the final grade automatically to both halves of a multi-term class when it is submitted).

These customizations had to be maintained, at a cost to the institution, through each upgraded version of Banner, and to date this has proven feasible. However, the newest iteration of Banner, version 9, is based on completely new and different underlying architecture, and after considerable analysis SIS has determined that reimplementing of the multi-term code in Banner 9 would be both difficult and costly.

More importantly, SIS has also determined that reimplementing of the multi-term code, even if found to be practical in Banner 9, would prevent the introduction of many enhancements to the student registration experience that are being introduced in this latest version. These enhancements include the following:

- enhanced course/class searching
- ability for students to prepare for registration by creating multiple plans in a calendar format
- ability for students to register from their prepared plans
- the ability to easily view, email, or print their schedule of registered classes
- self-service block registration
- the ability for advisors to access self-service registration functionality on behalf of the student, allowing advisors to help create plans for their students

Given that the above benefits of Banner 9 student registration outweigh those of reimplementing of the multi-term code (even if that were found to be practical), and given that the number of multi-term classes has been steadily declining since Banner was implemented in 2005 (down from 1132 in 2005 to 331 in 2018), a decision has been taken to eliminate the multi-term code customizations.

The decision not to reimplement the multi-term code in Banner 9 leaves colleges and departments with two options.

### **1. Reduce or eliminate multi-term classes through curricular change**

As we have discussed before, many other institutions do offer the same programs and course content that we do within a term-based system. And reducing or eliminating multi-term classes would seem to be the culmination of a process that has been underway at the University of Saskatchewan since 2005. As an example, we have split almost all of the first year Arts and Science introductory classes into 3 credit unit classes.

More 3 credit unit classes to choose from would also provide many students with more flexibility to build their schedules, and a lessened financial impact in the case of withdrawal (if you withdraw from a multi-term class late in the first term, you lose the entire tuition for the class, including the second half portion). Prerequisite and program requirements can be changed to ensure that students who need to take both halves of a former multi-term class still take them. There would of course be more final examinations scheduled in the final examination periods, which would place some further pressure on available space, and more grading for instructors



who previously might only have had a mid-term to grade (if scheduled) as opposed to a final examination.

## **2. Retain multi-term classes with additional work for staff**

There may be androgogical reasons for the continued offering of multi-term classes, and I certainly want to reemphasize that we are in no way suggesting that system requirements should drive academic requirements. For those colleges and departments that want to continue offering multi-term classes, they can certainly choose to do so.

The challenge, however, of continuing to offer multi-term classes is that they will essentially function as two separate classes. Students will have to register in (and withdraw from) both halves as the system will no longer handle the second half automatically for them. This will require clear communication with the students so that they understand how to register and withdraw, and error checking by staff of their registrations.

We are examining using “pop-up” messages to remind students to register in (or withdraw from) the second halves of multi-term classes (also a system customization, but a less sophisticated one). As well, we are examining automating emails to students should they fail to register in (or withdraw from) the second halves of multi-term classes. In the end, error reports can be run by college or department staff to identify students who have not performed their registrations or withdrawals properly so that they can be communicated with. Our survey of other institutions who have never implemented code to handle multi-term classes automatically indicates that these are procedures they have used successfully.

Colleges and departments that want to retain multi-term classes and who will also use self-service block registration will avoid some of these challenges as a block can simply be set up to register students in the second half of any multi-term classes.

As mentioned above, currently a customization allows instructors to enter a final grade once and the system automatically applies it to both halves of a multi-term class (and subsequently the approver only approves it once). It is anticipated that this aspect of the customization (which lies outside of the registration module) will



also not be reimplemented, meaning final grades will have to be entered on both halves of multi-term classes, and both halves approved separately.

In terms of timeline, the first registration in Banner 9 will take place in June 2020 for Fall and Winter 2020-21 classes (we are considering a soft launch for Spring and Summer 2020 classes in February 2020, but that will depend on how the project unfolds). Registration in June 2019 for Fall and Winter 2019-20 classes will take place in Banner 8 which will still handle multi-term classes automatically.

SIS and Registrarial Services staff are available to meet with colleges and departments if you need advice on structuring split multi-term classes, or how multi-term classes, if retained, would function.

As always, if you have any questions or comments, please feel free to get in touch with me, and I am also happy to meet with your college and department staff about this if you feel that would be of value.

Yours respectfully,



Russell Isinger  
University Registrar