



GENERAL FACULTIES COUNCIL  
AGENDA

Meeting #605, March 11, 2021, 1:30-4:30 p.m.

By Zoom platform

Item	Description	Presenter	Materials	Estimated Time
1.	Conflict of Interest Declaration	McCauley	Verbal	1:30
2.	Remarks of the Chair	McCauley	Verbal	
3.	Remarks of the Vice-Chair	Marshall	Verbal	
4.	Question Period	McCauley	Verbal	
5.	Safety Moment	Dalgetty <sup>1</sup>	Document	
	<b>Action Items</b>			
6.	Approval of the February 11, 2021 Meeting Minutes	McCauley	Document	
	<b>Information Items</b>			
7.	Growth Through Focus Update	McCauley	Verbal	2:15
8.	2020 National Survey of Student Engagement (NSSE) Institutional Results	Marshall/Reid <sup>2</sup> /Barker <sup>3</sup> / Arseneault <sup>4</sup> /Lambert <sup>5</sup> / Grant <sup>6</sup>	Document + PowerPoint	2:25
9.	Equity, Diversity and Inclusion (EDI) Dashboard	Marshall/Smith <sup>7</sup> /Evelyn <sup>8</sup> / Lambert	Document + Demo	2:45
10.	Enrolment Report on International Admissions and Recruitment	Saweczko <sup>9</sup> /de Roaldes <sup>10</sup>	PowerPoint	3:05
11.	High Performance Computing/Secure Research Computing	Skone <sup>11</sup> /Yousif <sup>12</sup>	Document + PowerPoint	3:25
12.	GFC and GFC Standing Committees Meeting Schedules for 2021-2022 and 2022-2023	In Package Only	Document	3:45

Item	Description	Presenter	Materials	Estimated Time
13.	Standing Reports: a) Report on the February 24, 2021 GFC Executive Committee Meeting b) Report on the February 22, 2021 Academic Planning and Priorities Committee Meeting c) Report on the February 18, 2021 Research and Scholarship Committee Meeting d) Report on the February 10, 2021 Senate Meeting e) Policy Development Update	In Package Only	Documents	
14.	Other Business	McCauley		
15.	Adjournment Next meeting: April 8, 2021	McCauley	Verbal	3:45

**Regrets and Questions:** Elizabeth Sjogren, Governance Coordinator  
 Email: [esjogren@ucalgary.ca](mailto:esjogren@ucalgary.ca)

Susan Belcher, University Secretary  
 Email: [sbelcher@ucalgary.ca](mailto:sbelcher@ucalgary.ca)

**GFC Information:** <https://www.ucalgary.ca/secretariat/general-faculties-council>

Presenters

1. Linda Dalgetty, Vice-President (Finance and Services)
2. Leslie Reid, Vice-Provost (Teaching and Learning)
3. Susan Barker, Vice-Provost (Student Experience)
4. Robin Arseneault, Teaching and Learning Project Coordinator, Taylor Institute for Teaching and Learning
5. Jacqueline Lambert, Office of Institutional Analysis
6. Kim Grant, Educational Development Consultant, Taylor Institute for Teaching and Learning
7. Malinda Smith, Vice-Provost (Equity, Diversity and Inclusion)
8. Bruce Evelyn, Vice-Provost (Planning and Resource Allocation)
9. Angelique Saweczko, Registrar
10. Jennifer de Roaldes, Associate Registrar - Admissions and Recruitment
11. Susan Skone, Associate Vice-President (Research)
12. Abdel Yousif, Director - Information Technologies

The response to pandemic has introduced many changes, some of which have increased non-virus related health and safety risks. An example of a societal impact is the increase in opioid related deaths in Alberta. Over the first ten months of 2020 there were 904 opioid related deaths which was more deaths than those caused by COVID-19 during this period and an increase over previous years. It is suspected that the response to the pandemic has contributed to the increase by reducing access to in-person treatment programs along with reports that some people have used federal COVID-19 income supports to purchase drugs.

Work related impacts include:

### **Increased Working Alone**

Working alone is a safety hazard given that a lone worker in distress may not receive assistance. With the significant reduction in the number of people on campus during the pandemic there will be more working alone in offices and laboratories in particular. The University introduced a new system at the start of the pandemic that calls for workers to receive authorization from their supervisor for working alone on campus and then establishes a check-in and check-out process.

### **New Tasks**

The pandemic has changed some work tasks and introduced new ones with associated safety hazards. For example, during the pandemic caretaker workers began using spray disinfectants that involved working with new chemicals and wearing a backpack containing a canister of liquid disinfectant. At the start of the pandemic an email was sent to all supervisors reminding them of the need to conduct hazard assessments for all new or changed work tasks.

### **Working at Home Related Ergonomic Hazards**

The location where employee's work in their homes may include ergonomic hazards that do not exist at their campus workstation. To address these hazards, the University has provided videos and written materials on the COVID-19 website to provide guidance on establishing an ergonomically safe home workstation. The University has also engaged an ergonomic consulting company to conduct remote ergonomic assessments of an employee's home workstation.

### **COVID-19 Distraction**

With so much focus on controlling the hazard of COVID-19 in the workplace there may not be as much attention paid to non-COVID-19 hazards. For example, when field research work is done a Field Level Hazard Assessment is required to be completed which should take into account COVID-19 hazards as well as all the other hazards associated with the work. The safety email that was sent to all supervisors early in the pandemic emphasized the importance of not losing our focus on non-COVID-19 hazards.

With these increased non-virus related hazards and the risk of being distracted by COVID-19, the university's EHS team continues to manage the non-COVID 19 workplace health and safety hazards during the pandemic. This is accomplished by maintaining rigorous application of all aspects of the University's EHS management system during these challenging times.



The draft Minutes are intentionally removed from this package.

Please see the approved Minutes [uploaded separately on this website](#).





UNIVERSITY OF  
CALGARY

## GENERAL FACULTIES COUNCIL INFORMATION BRIEFING NOTE

**SUBJECT:** 2020 National Survey of Student Engagement Institutional Results

**PROPONENTS:**

Leslie Reid, Vice-Provost (Teaching and Learning)  
Susan Barker, Vice-Provost (Student Experience)  
Jackie Lambert, Office of Institutional Analysis

**PURPOSE**

To provide for information and discuss the 2020 National Survey of Student Engagement (NSSE) Institutional results and provide information on how the NSSE 2020 results can be shared and used to support institutional strategies and initiatives.

**OVERVIEW**

The Indiana University Centre for Postsecondary Research released results of the [2020 National Survey of Student Engagement \(NSSE\)](#) to participating institutions in August 2020. The 2020 NSSE survey asks undergraduate students in their first and senior (typically fourth) years to assess their levels of engagement and related information about their experience. NSSE reports on ten (10) engagement indicators calculated from 47 core NSSE items. Indicators are grouped within four (4) theme areas.

The NSSE 2020 survey launched on February 13, 2020 and 89% of responses were collected by March 14, 2020. The remaining responses were collected by March 21, 2020.

**Key highlights from NSSE 2020 results**

- All UCalgary's average Engagement Indicator (EI) scores are either significantly higher or have no significant difference when compared to the Top 5 average (see Table 1, below):
  - For first-year students, average EI scores for 6 out of 10 indicators are significantly higher than the Top 5 average, an improvement over 2017's results, where 4 out of 10 were higher than the Top 5 average.
  - Relative to the Top 5 average, our average score for first-year Reflective & Integrative Learning has improved. For 2020, our average score is not significantly different compared to the Top 5 average, whereas it was significantly lower in 2017.
  - For senior students, average EI scores for 7 out of 10 indicators are significantly higher than the Top 5 average, compared to 9 out of 10 in 2017. Higher-Order Learning and Reflective & Integrative Learning are the two indicators where UCalgary's average scores are no longer significantly higher than the Top 5 average.
- Across most indicators, UCalgary's average Engagement Indicator scores are similar to or exceed those of the U15 and Canadian comparator groups (see Table 1).
- Average scores for most engagement indicators exceed 2017's and 2014's results (see Table 2, below).
- In terms of student ratings of their overall experience, UCalgary now out-performs or ties with the Top 5, for both first-year and senior students, an improvement over 2017's results.
- In terms of whether students would choose to attend UCalgary again, we continue to lag behind the Top 5 comparator group, but the gap in percentages has narrowed for senior students.

- UCalgary average scores for the Supportive Environment indicator are lower than the Top 5 average, among both first- and fourth-year students. Our average scores for this indicator also lag behind our 2014 and 2017 results. This is an area of NSSE we want to explore to better understand the factors that are affecting student experience and their perceptions of support in the areas surveyed.

Table 1: University of Calgary 2020 NSSE results compared with comparator averages

Theme	Engagement Indicator	Top 5		U15		Canadian	
		First Year	Senior	First Year	Senior	First Year	Senior
Academic Challenge	Quantitative Reasoning	Above	Above	Above	Above	Above	Above
	Learning Strategies	Similar	Similar	Similar	Above	Similar	Above
	Higher-Order Learning	Similar	Similar	Similar	Similar	Above	Similar
	Reflective and Integrative Learning	Similar	Similar	Similar	Above	Similar	Similar
Learning with Peers	Collaborative Learning	Above	Above	Above	Above	Above	Above
	Discussions with Diverse Others	Above	Above	Above	Above	Above	Above
Experiences with Faculty	Student-Faculty Interaction	Above	Above	Above	Above	Above	Above
	Effective Teaching Practices	Above	Above	Above	Above	Similar	Above
Campus Environment	Quality of Interactions	Above	Above	Similar	Above	Similar	Similar
	Supportive Environment	Similar	Above	Below	Similar	Below	Below

Table 2: UCalgary Year-Over-Year Comparison

Theme	Engagement Indicator	First Year		Senior Year	
		2020 vs. 2014	2020 vs. 2017	2020 vs. 2014	2020 vs. 2017
Academic Challenge	Quantitative Reasoning	Above	Above*	Above*	Above*
	Learning Strategies	Above	Above	Above	Above
	Higher-Order Learning	Above*	Above*	Above	Above
	Reflective and Integrative Learning	Above*	Above*	Above*	Above
Learning with Peers	Collaborative Learning	Above	Above	Above	Below
	Discussions with Diverse Others	Above*	Above	Above	Below
Experiences with Faculty	Student-Faculty Interaction	Above*	Above	Above*	Below
	Effective Teaching Practices	Above*	Above	Above*	Above
Campus Environment	Quality of Interactions	Above*	Above	Above*	Above
	Supportive Environment	Below*	Below*	Below*	Below*

\*Mean differences are statistically significant ( $p < .05$ ) 4

\*Differences are statistically significant ( $p < 0.05$ ); effect sizes associated with these differences are 0.2 or below, indicating that these differences are negligible in magnitude.

## BACKGROUND

### Survey Instrument

The NSSE survey instrument assesses the extent to which students engage in educational practices associated with high levels of learning and development. It provides an estimate of how undergraduate students spend their time and what they gain from attending university. NSSE results are used for institutional improvement, public reporting, and associated purposes. NSSE has been in operation since 2000 and has been used at more than 1,600 colleges and universities in the US and Canada. The 2020 questionnaire launched at UCalgary on February 13, 2020 and collects information in five categories: participation in dozens of educationally purposeful activities; institutional requirements



and the challenging nature of coursework; perceptions of the university environment; estimates of educational and personal growth since starting college; and background and demographic information.

In addition to the forty-seven survey questions contained in the 2020 NSSE survey, six items from the former Enriching Educational Experiences benchmark are reported separately as High-Impact Practices. Sets of related survey questions are organized into ten engagement indicators, grouped within four (4) themes (i.e., academic challenge, learning with peers, experiences with faculty, and campus environment).

Survey questions ask students about their experience, how they spend their time, what they gained from attendance, and their interactions with peers, faculty, and others. Filling out the survey takes about 15 minutes. Participation is voluntary.

Institutions receive their own scores, which are compared to peer averages. Results are aggregated in such a way that institutions cannot be identified, nor can they be explicitly ranked. Although the survey is administered annually, most institutions do not participate in the survey every year. The University of Calgary and many of its U15 peers only participate every three (3) years. As in 2014 and 2017, the University added a module on academic advising to the 2020 NSSE survey. Additionally, the 2020 NSSE administration the University also added the First-Year Experiences and Senior Transitions module, as well as additional consortium questions common to U15 institutions outside Ontario.

### **Respondent Profile**

At the University of Calgary, 6,439 first-year undergraduate students and 4,904 senior-year students were invited to participate in 2020 (Table 2). Approximately 2,881, or 45 percent of first-year students participated in the survey, representing a sizeable increase over the 2017 first-year response rate of 33 percent. About 2,177, or 44 percent of the 4,904 senior-year students participated, also an increase from the 2017 response rate of 39 percent. University of Calgary response rates exceeded those of the U15 and Canada as a whole.

### **COVID-19-related Considerations**

Most University of Calgary responses to the 2020 NSSE survey were completed prior to the cancellation of classes on Friday, March 13, 2020. 89% of responses were completed by the week of March 8-14, 2020; the remaining 10% were completed during the week of March 15-21, the first full week of classes affected by COVID-19-related operational changes.

NSSE provided institutions with the option to exclude post-disruption institutional and comparison group responses from NSSE reports; the University of Calgary did not elect to do so. NSSE advises against excluding post-COVID disruption respondents from institutional reporting.

The broader effects of the pandemic on NSSE's operations led to a delayed schedule, where the NSSE survey closed a week later than usual, remaining open until May 22, 2020. In addition, finalized data files and institutional reports were not made available to participating institutions until early August.

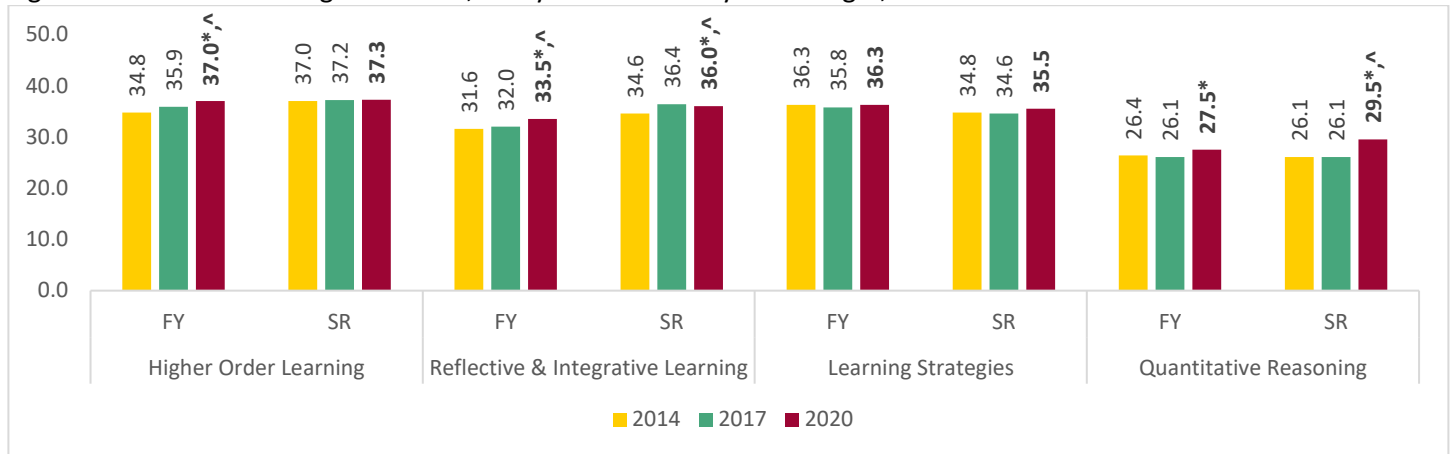
### **Results**

The following charts (Figures 1 through 4) provide a comparison of 2014, 2017, and 2020 results by Theme and Engagement Indicator; the following notes will focus on comparisons between 2017 and 2020 results. University of Calgary scores for both first-year (FY) and senior-year (SR) students increased from 2017 to 2020 across most indicators for the following:

- Senior-year indicators in the Learning with Peers category: “collaborative learning” and “discussions with diverse others”
- First-year and senior-year “student-faculty interaction”
- First-year and senior-year “supportive environment”

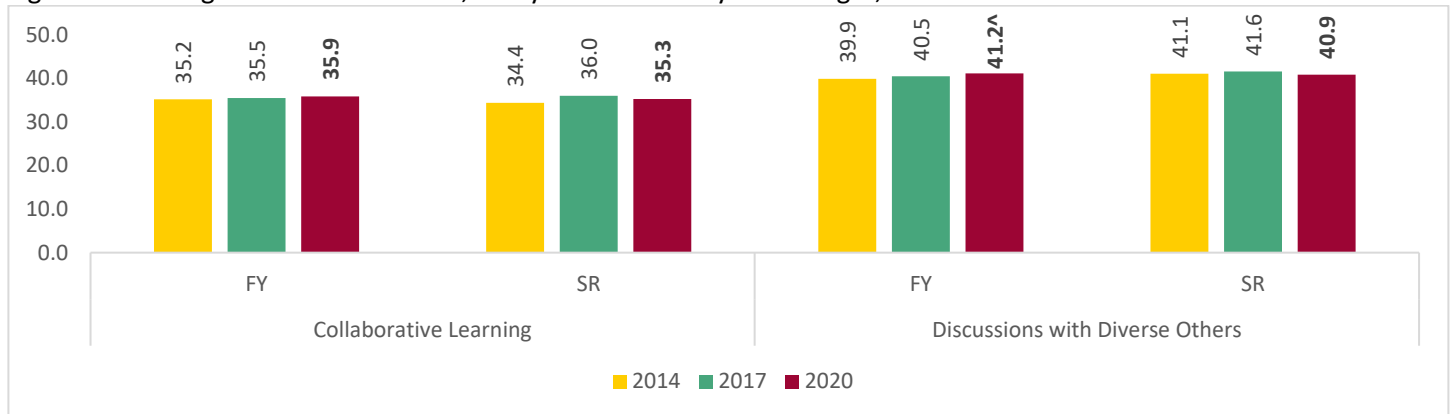
It should be noted that slight differences may not signify meaningful change from year-to-year.

Figure 1: Academic Challenge indicators, first-year and senior-year averages, 2014 to 2020



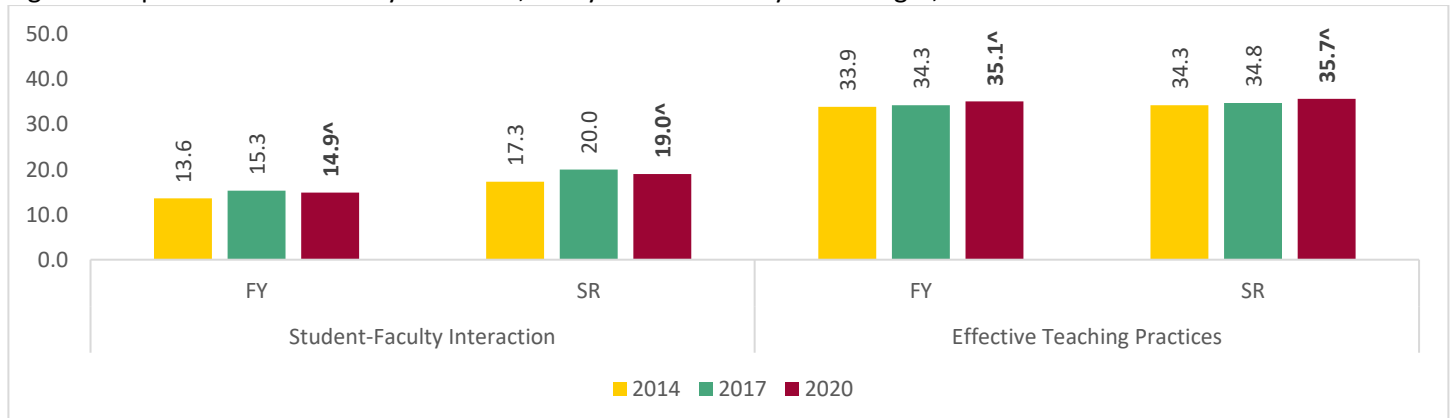
\* Significantly different from 2017 ^ Significantly different from 2014

Figure 2: Learning with Peers indicators, first-year and senior-year averages, 2014 to 2020



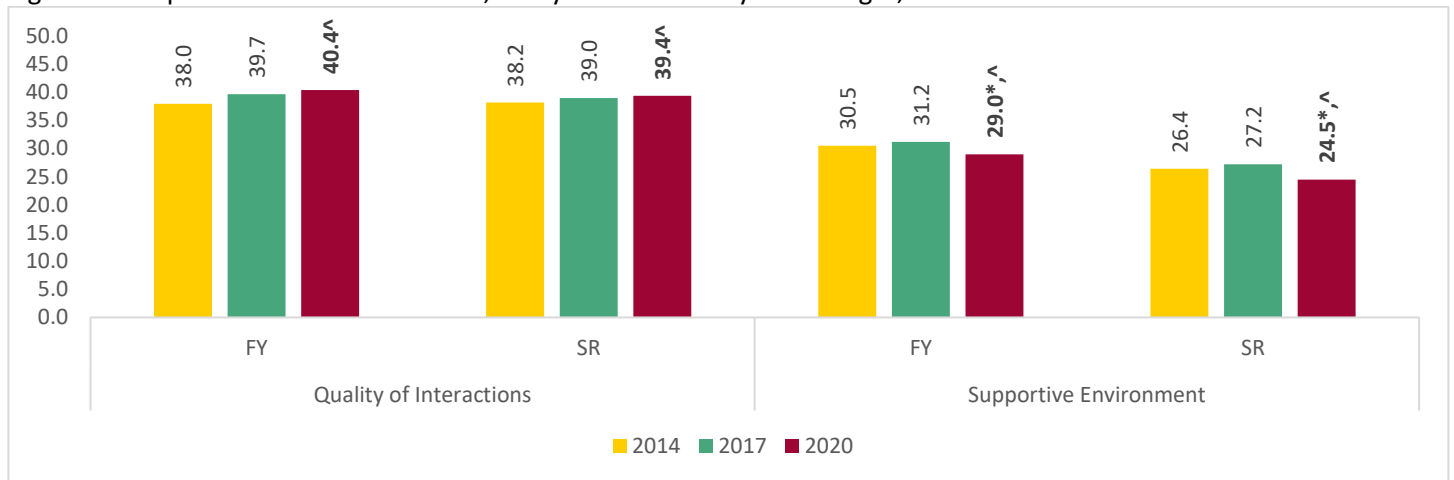
\* Significantly different from 2017 ^ Significantly different from 2014

Figure 3: Experiences with Faculty indicators, first-year and senior-year averages, 2014 to 2020



\* Significantly different from 2017 ^ Significantly different from 2014

Figure 4: Campus Environment indicators, first-year and senior-year averages, 2014 to 2020



\* Significantly different from 2017 ^ Significantly different from 2014

Of note, UofC's first-year students' engagement scores for both indicators in the Learning with Peers category are comparable to that of institutions with average scores placing them in the top 50% of all 2019 and 2020 NSSE-participating institutions.

### Open-Response Questions

There are three open-ended questions within the NSSE 2020 survey; for each question an initial analysis has been conducted and a summary of some of the key themes that emerged along with a few representative examples of student comments.

1. **"Please describe the most significant learning experience you have had so far at this institution."** This question concluded the core 47 question survey with 2,052 valid responses. These comments underscore a strong sense of satisfaction and significance for students' learning experiences around experiential learning opportunities like work-integrated learning, fieldwork and research, along with a desire for more practical skills embedded within their degrees. Other themes that emerged include the importance of personal relationship building, connection and community; personal development of competencies related to leadership, communication and resilience strategies and around more practical and hands-on learning.

*"The most significant learning moment I have had so far is conducting my own research project. I've been able to complete all the skills that I have developed throughout my degree, and I am able to put them to use while answering my research question. It is effective because it prepares me well to do research in the future."*

*"Personal investment and kindness from professors, TAs, lab techs etc. means that world coming out of a high school with incredibly compassionate teachers. it provides motivation you otherwise lack and gives value to the university experience"*

*"Learning how to improve myself, especially to take criticism. How to manage life in general."*

*"I've learned to have confidence in my skills and abilities and working well with peers to obtain success. I believe that even if I don't maintain a career related to my degree, it has taught me significant social skills and willingness to take risks in order to learn."*

*"The most significant learning experience is learning that the school doesn't do a good enough job of preparing students to face challenges they will inevitably come across in the workplace"*

*"most significant learning experience so far is that connection matters and being part of various clubs gets you opportunities."*

*"Just the overall interaction with such a diverse community of people. The interaction between students really elevates the experience academically and socially".*

2. **"Regarding academic advising, who has been the most helpful and in what way?"** This question was at the end of the NSSE 2020 Academic Advising module. Approximately 2,114 valid responses were recorded. The qualitative comments highlight a sense of satisfaction regarding both formal and informal academic advising. Students felt the most helpful resources for academic advising include those formally recognized like the Student Success Centre, counsellors, student accessibility services, and academic advisors. Second to this, was the support received from students' family and friends, especially with similar education experiences (i.e. undergraduate degree attainment) and could provide constructive advice based on experience. Immediate instructors and supervisors were also highly rated for their role in advising students on their degree and course choices, as were peers within their program.

*"The academic advising staff. Although they can be difficult to book an appointment with during peak seasons, they offer excellent long-term advising for the completion of your degree".*

*"The accessibility services for students have been most helpful because they routinely check in with me and provided many resources. the regular communication has been most helpful."*

*"Family and friends because they have gone through parts of university and have the experience to help guide me."*

*"Faculty. By giving me realistic expectations about the workforce, academic life as an instructor/professor, etc. and by helping me know how to prepare and what to do to succeed in the workforce in the future".*

3. **"Is there anything your institution could have done better to prepare you for your career or further education?"** This question asked students to respond in an open text box in the NSSE 2020 First-Year Experiences and Senior Transitions module. Comments were recorded for 707 seniors. Students highlighted areas that helped them in their learning experiences and commented on areas where the university could improve and provide more learning opportunities. Students commented they want to know about more opportunities outside of the classroom, available student resources and advising especially in relation to 'what next' after graduation. There was also a strong desire for increased opportunities in skill development for professional and practical applications that have real-world applications.

*"Have more advisors follow up on students, also have more non-coursework opportunities (e.g., internships, assistant jobs at labs, etc.), be more available for students".*

*"Our classes could have done a better job of providing more practical examples instead of strictly learning and memorizing theory. A lot of practical skills I have related to my degree I learnt in my practicum or at work".*

*"A more integrated curriculum that allows students to have confidence in their skills while heading to a work setting would have been much appreciated".*

*"Student services does not have the outreach to effectively aid all students, and these combined factors can leave students lost for direction post-graduation".*

### Student Rating of Overall Experience

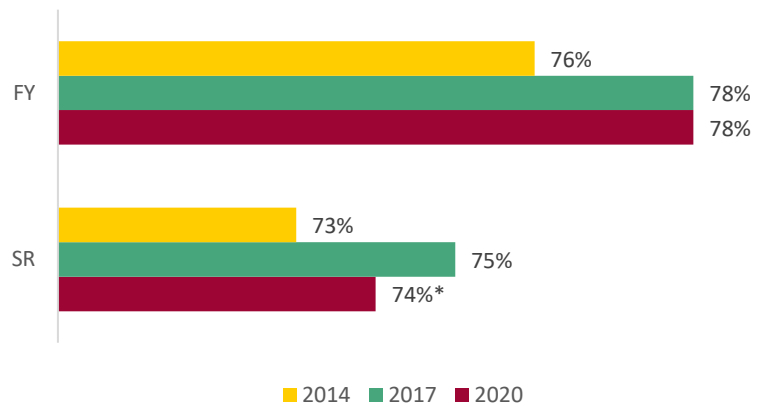
When asked how they would rate their overall experience, 78 percent of first-year students at the University of Calgary rated it as “excellent” or “good” compared to 75 percent of students at Top 5 comparator institutions and 78 percent of students at U15 comparator institutions and Canadian institutions as a whole. Seventy-four percent of senior students at the University of Calgary rated their overall experience as “excellent” or “good” in 2020 compared to 74 percent within Top 5 comparators, 76 percent within the U15, and 77 percent at Canadian institutions overall (Table 4). The University of Calgary’s ratings of student experience are similar to those in 2017 for first-year students, but represent a slight decrease for senior-year students. (Figure 5).

Table 3: 2020 NSSE Question 19. Percentage Rating Their Overall Experience as “Excellent or “Good”, University of Calgary and comparator averages

	UofC	Top 5	U15	Canada
First-year	78%	75%*	78%	78%
Senior-year	74%	74%	76%	77%*

\*Significantly different from UCalgary proportions (p<0.5)

Figure 5: 2020 NSSE Question 19/2014 and 2017 Question 18, Percentage Rating Their Overall Experience as “Excellent or “Good”, University of Calgary, 2014 to 2020



\*Significantly different from UCalgary proportions (p<0.5)

### Students asked Whether they Would Attend Again

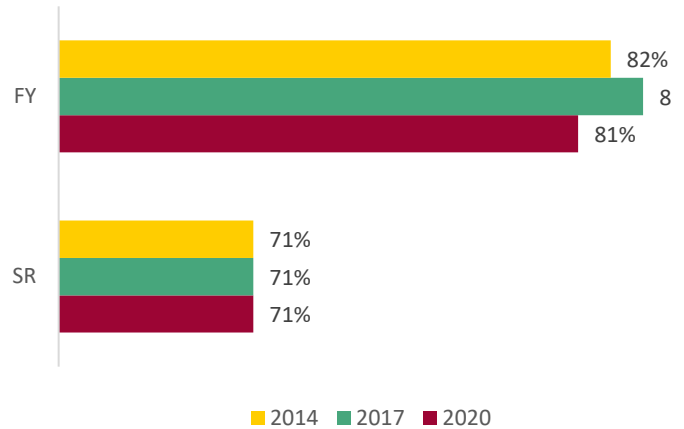
When asked whether they would attend this institution again, 81 percent of first-year students at the University of Calgary said they would “definitely” or “probably” attend again compared to 84 percent of students at Top 5 and Canadian comparator institutions, and 85 percent within the U15 (Table 5). Seventy-one percent of senior students at the University of Calgary said they would “definitely” or “probably” attend again compared to 76 percent within Top 5 comparator institutions, and 78 percent within the U15 and Canadian institutions as a whole. While results for senior-year students at the University of Calgary are similar to 2017’s and 2014’s, results for first-year students in 2020 represent a decline from their 2017 levels, where 83 percent said they would “definitely” or “probably” attend again (Figure 6).

Table 4: 2020 NSSE Question 20. Percentage Who Would “Definitely” or “Probably” Attend This Institution Again, University of Calgary and comparator averages

	UofC	Top 5	U15	Canada
First-year	81%	84%***	85%***	84%***
Senior-year	71%	76%***	78%***	78%***

Figure 6: 2020 NSSE Question 20/2014 and 2017 Question 19, Percentage Who Would “Definitely” or “Probably” Attend This Institution Again, University of Calgary, 2014 to 2020

\*\*\*Significantly different from UCalgary proportions (p < .001)



### Next Steps & Considerations

With institutional-level data now available, the next steps will involve further dissemination with the University of Calgary community, including how to engage with the whole campus. Next steps and considerations include:

- Preparing unit level NSSE data reports and self-service dashboards
- Coordination of NSSE work with Growth Through Focus and other institutional priorities and plans
- The broader impact of the pandemic on University operations and resources that support NSSE rollout
- A deeper analysis on the University's performance on NSSE indicators including understanding what is contributing to areas of strength and what is contributing to areas where we are lagging
- Develop a *NSSE Support Team* to address where the university might enhance or develop strategies to improve student engagement and address areas of concern at an institutional level
- Hold a half-day campus retreat with key stakeholders across campus in the first quarter of 2021 to explore institutional NSSE results at a deeper level.

### ROUTING AND PERSONS CONSULTED

Progress	Body	Date	Approval	Recommendation	Discussion	Information
	Teaching and Learning Committee	2021-01-19			X	
	Academic Planning and Priorities Committee	2021-02-22			X	
X	General Faculties Council	2021-03-11				X

### SUPPORTING MATERIALS

1. NSSE 2020 PowerPoint
2. NSSE 2020 Snapshot (Top 5 comparisons)
3. Qualitative Report NSSE 2020



## **University of Calgary NSSE 2020 Institutional Results**

**Leslie Reid, Vice Provost Teaching and Learning**

**Susan Barker, Vice Provost Student Experience**

**Jackie Lambert, Office of Institutional Analysis**

Theme	Engagement Indicators
<b>Academic Challenge</b>	Higher-Order Learning
	Reflective & Integrative Learning
	Learning Strategies
	Quantitative Reasoning
<b>Learning with Peers</b>	Collaborative Learning
	Discussions with Diverse Others
<b>Experiences with Faculty</b>	Student-Faculty Interaction
	Effective Teaching Practices
<b>Campus Engagement</b>	Quality of Interactions
	Supportive Environment

**UCalgary 2020  
Response Rates**  
First Year - 45%  
Senior - 44%



# UCalgary Results / Top 5, U15 & Canadian Comparisons

Theme	Engagement Indicator	Top 5		U15		Canadian	
		First Year	Senior	First Year	Senior	First Year	Senior
<b>Academic Challenge</b>	Quantitative Reasoning	Above	Above	Above	Above	Above	Above
	Learning Strategies	Similar	Similar	Similar	Above	Similar	Above
	Higher-Order Learning	Similar	Similar	Similar	Similar	Above	Similar
	Reflective and Integrative Learning	Similar	Similar	Similar	Above	Similar	Similar
<b>Learning with Peers</b>	Collaborative Learning	Above	Above	Above	Above	Above	Above
	Discussions with Diverse Others	Above	Above	Above	Above	Above	Above
<b>Experiences with Faculty</b>	Student-Faculty Interaction	Above	Above	Above	Above	Above	Above
	Effective Teaching Practices	Above	Above	Above	Above	Similar	Above
<b>Campus Environment</b>	Quality of Interactions	Above	Above	Similar	Above	Similar	Similar
	Supportive Environment	Similar	Above	Below	Similar	Below	Below

# Engagement Indicators / UCalgary Year-Over-Year Comparison

Theme	Engagement Indicator	First Year		Senior Year	
		2020 vs. 2014	2020 vs. 2017	2020 vs. 2014	2020 vs.2017
<b>Academic Challenge</b>	Quantitative Reasoning	Similar	Above	Above	Above
	Learning Strategies	Similar	Similar	Similar	Similar
	Higher-Order Learning	Above	Above	Similar	Similar
	Reflective and Integrative Learning	Above	Above	Above	Similar
<b>Learning with Peers</b>	Collaborative Learning	Similar	Similar	Similar	Similar
	Discussions with Diverse Others	Above	Similar	Similar	Similar
<b>Experiences with Faculty</b>	Student-Faculty Interaction	Above	Similar	Above	Similar
	Effective Teaching Practices	Above	Similar	Above	Similar
<b>Campus Environment</b>	Quality of Interactions	Above	Similar	Above	Similar
	Supportive Environment	Below	Below	Below	Below

## How much an institution emphasizes services and activities that supports learning and development

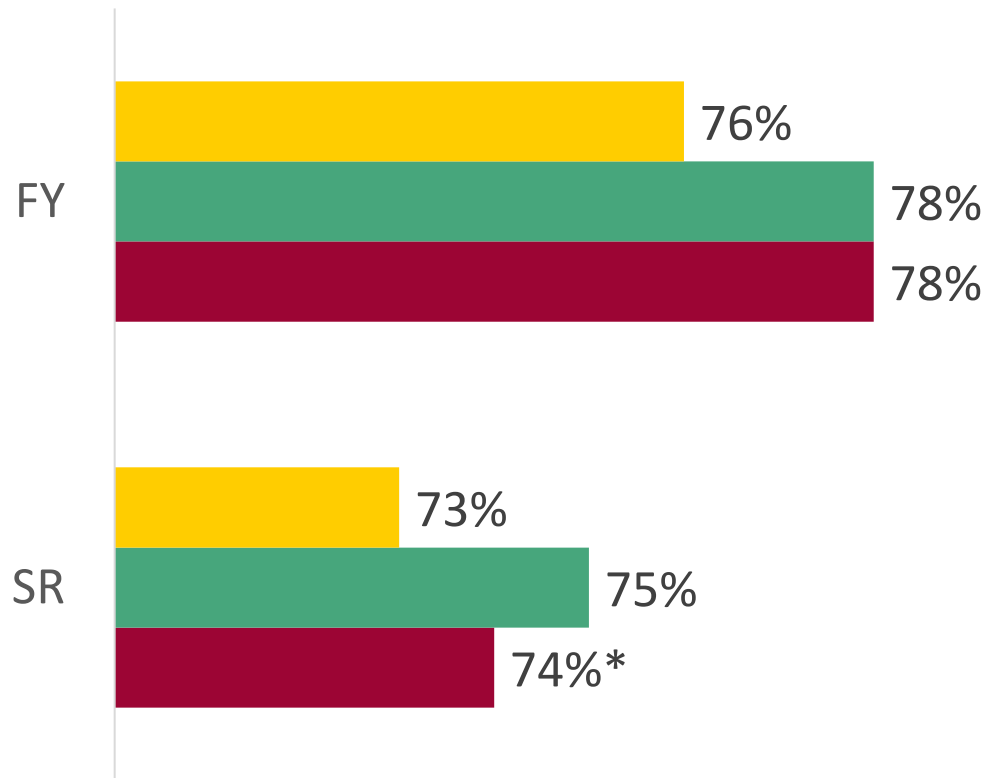
- Support for overall well-being (recreation, health care, counselling)
- 

- Support to succeed academically
  - Learning support services
  - Encouraging contact among students from different backgrounds
  - Helping manage non-academic responsibilities (work, family, etc.)
- 

- Attending campus activities and events
- Attending events that address social, economic, or political issues



## UCalgary Results Last Three NSSE Cycles



2014 2017 2020

\*Significantly different from 2014 and 2017 results ( $p < .05$ )

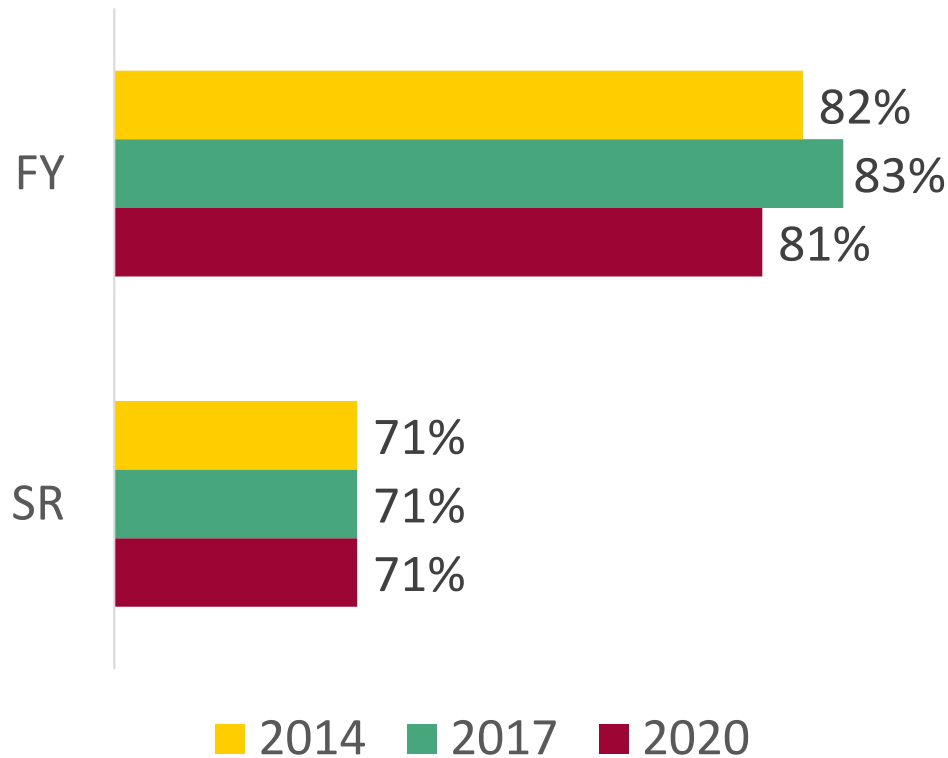
## 2020 NSSE Results w Comparators

	UofC	Top 5	U15	Canada
<b>First-year</b>	78%	75%*	78%	78%
<b>Senior-year</b>	74%	74%	76%	77%*

\*Significantly different from UCalgary proportions ( $p < .05$ )

# 'Attend This Institution Again': % "Definitely" or "Probably"

## UCalgary Results Last Three NSSE Cycles



## 2020 NSSE Results w Comparators

	UofC	Top 5	U15	Canada
<b>First-year</b>	81%	84%***	85%***	84%***
<b>Senior-year</b>	71%	76%***	78%***	78%***

\*\*\*Significantly different from UCalgary proportions ( $p < .001$ )

**"Please describe the most significant learning experience you have had so far at this institution."**

- *"The most significant learning moment I have had so far is conducting my own research project. I've been able to complete all the skills that I have developed throughout my degree, and I am able to put them to use while answering my research question. It is effective because it prepares me well to do research in the future."*
- *"Personal investment and kindness from professors, TAs, lab techs etc. means that world coming out of a high school with incredibly compassionate teachers. it provides motivation you otherwise lack and gives value to the university experience"*

**“Is there anything your institution could have done better to prepare you for your career or further education?”**

- *“Probably let students know everything the campus has to offer...”*
- *“During my time in the program, more could have been done to provide undergraduates with work experience relevant to their field. I wish there were more opportunities to gain field work experience and co-op opportunities”*



- Set up NSSE Support Team
- Campus Community Retreat
- Distribute Faculty NSSE Reports
- Integrate NSSE into institutional work



### A Summary of Student Engagement Results

Student engagement represents two critical features of collegiate quality. The first is the amount of time and effort students put into their studies and other educationally purposeful activities. The second is how institutional resources, courses, and other learning opportunities facilitate student participation in activities that matter to student learning. NSSE surveys undergraduate students in their first and final years to assess their levels of engagement and related information about their experience at your institution.

#### Comparison Group

The comparison group featured in this report is

#### Top 5

See your *Selected Comparison Groups* report for details.

This *Snapshot* is a concise collection of key findings from your institution's NSSE 2020 administration. We hope this information stimulates discussions about the undergraduate experience. Additional details about these and other results appear in the reports referenced throughout.

### Engagement Indicators

Sets of items are grouped into ten Engagement Indicators, organized under four broad themes. At right are summary results for your institution. For details, see your *Engagement Indicators* report.

Key:

▲ Your students' average was significantly higher ( $p < .05$ ) with an effect size at least .3 in magnitude.

△ Your students' average was significantly higher ( $p < .05$ ) with an effect size less than .3 in magnitude.

-- No significant difference.

▼ Your students' average was significantly lower ( $p < .05$ ) with an effect size less than .3 in magnitude.

▽ Your students' average was significantly lower ( $p < .05$ ) with an effect size at least .3 in magnitude.

Theme	Engagement Indicator	Your students compared with Top 5	
		First-year	Senior
Academic Challenge	Higher-Order Learning	--	--
	Reflective & Integrative Learning	--	--
	Learning Strategies	--	--
Learning with Peers	Quantitative Reasoning	△	△
	Collaborative Learning	△	△
	Discussions with Diverse Others	△	△
Experiences with Faculty	Student-Faculty Interaction	△	△
	Effective Teaching Practices	△	△
Campus Environment	Quality of Interactions	△	△
	Supportive Environment	--	△

### High-Impact Practices

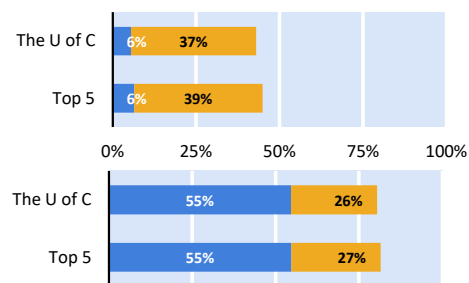
Due to their positive associations with student learning and retention, special undergraduate opportunities are designated "high-impact." For more details and statistical comparisons, see your *High-Impact Practices* report.

#### First-year

Service-Learning, Learning Community, and Research w/Faculty

#### Senior

Service-Learning, Learning Community, Research w/Faculty, Internship, Study Abroad, and Culminating Senior Experience



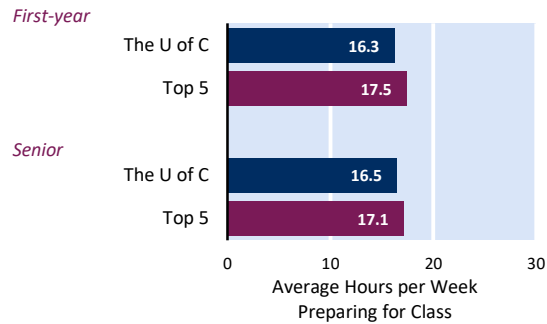
■ Participated in two or more HIPs ■ Participated in one HIP

### Academic Challenge: Additional Results

The Academic Challenge theme contains four Engagement Indicators as well as several important individual items. The results presented here provide an overview of these individual items. For more information about the Academic Challenge theme, see your *Engagement Indicators* report. To further explore individual item results, see your *Frequencies and Statistical Comparisons*, the *Major Field Report*, the *Online Institutional Report*, or the Report Builder.

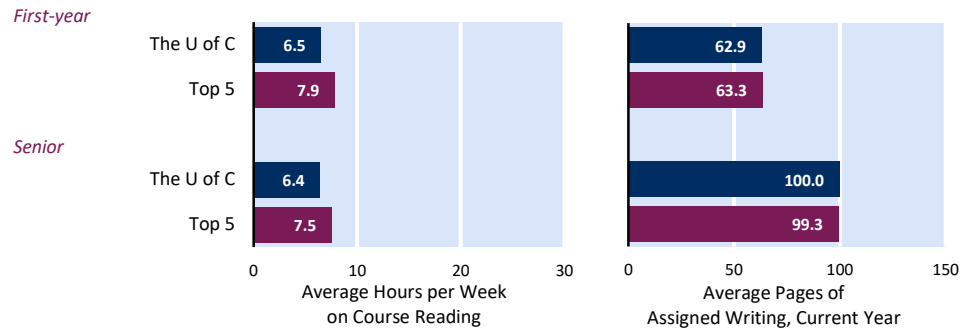
#### Time Spent Preparing for Class

This figure reports the average weekly class preparation time for your students compared to students in your comparison group.



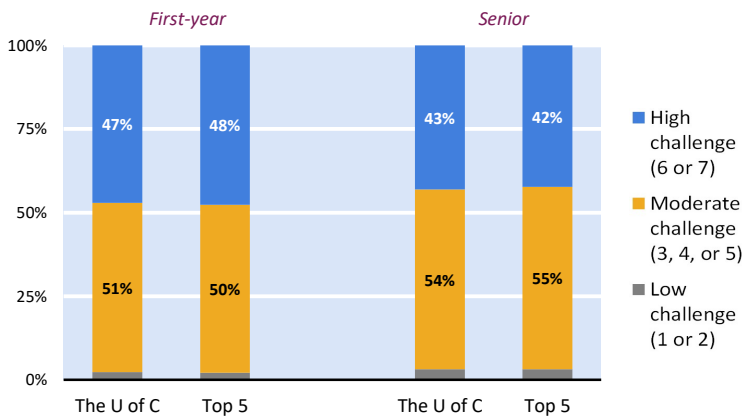
#### Reading and Writing

These figures summarize the number of hours your students spent reading for their courses and the average number of pages of assigned writing compared to students in your comparison group. Each is an estimate calculated from two or more separate survey questions.



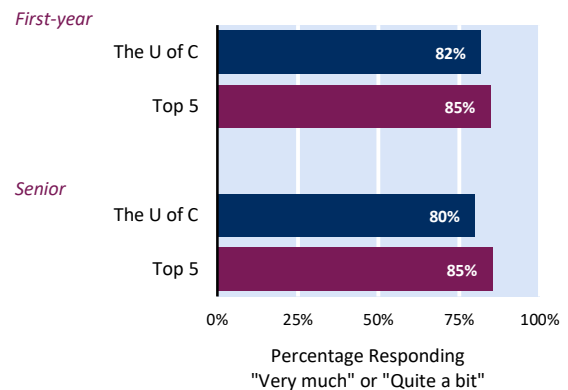
#### Challenging Students to Do Their Best Work

To what extent did students' courses challenge them to do their best work? Response options ranged from 1 = "Not at all" to 7 = "Very much."



#### Academic Emphasis

How much did students say their institution emphasizes spending significant time studying and on academic work? Response options included "Very much," "Quite a bit," "Some," and "Very little."



### Item Comparisons

By examining individual NSSE questions, you can better understand what contributes to your institution's performance on the Engagement Indicators. This section displays the five questions<sup>a</sup> on which your students scored the highest and the five questions on which they scored the lowest, relative to students in your comparison group. Parenthetical notes indicate whether an item belongs to a specific Engagement Indicator or is a High-Impact Practice. While these questions represent the largest differences (in percentage points), they may not be the most important to your institutional mission or current program or policy goals. For additional results, see your *Frequencies and Statistical Comparisons* report.

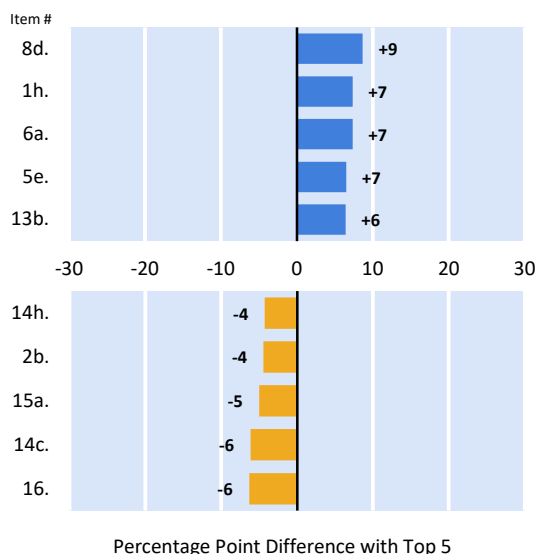
#### First-year

##### Highest Performing Relative to Top 5

- Discussions with... People with political views other than your own<sup>b</sup> (DD)
- Worked with other students on course projects or assignments<sup>b</sup> (CL)
- Reached conclusions based on your own analysis of numerical information (...)<sup>b</sup> (QR)
- Instructors provided prompt and detailed feedback on tests or completed assignments<sup>c</sup> (ET)
- Quality of interactions with academic advisors<sup>d</sup> (QI)

##### Lowest Performing Relative to Top 5

- Institution emphasis on attending campus activities and events (...)<sup>c</sup> (SE)
- Connected your learning to societal problems or issues<sup>b</sup> (RI)
- Spent more than 15 hours per week preparing for class
- Institution emphasis on using learning support services (...)<sup>c</sup> (SE)
- Spent more than 10 hours per week on assigned reading<sup>f</sup>



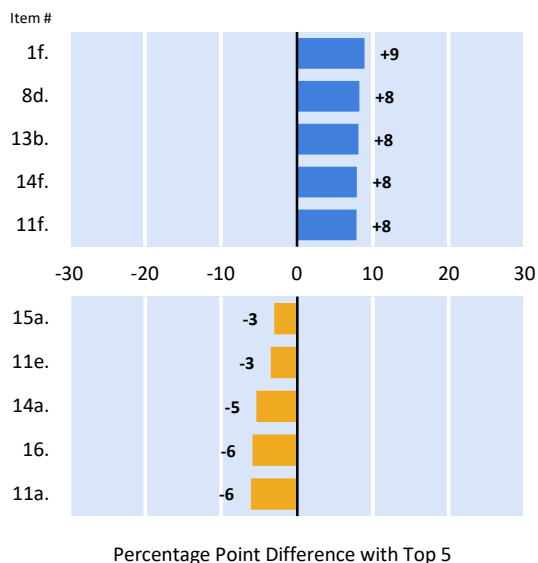
#### Senior

##### Highest Performing Relative to Top 5

- Explained course material to one or more students<sup>b</sup> (CL)
- Discussions with... People with political views other than your own<sup>b</sup> (DD)
- Quality of interactions with academic advisors<sup>d</sup> (QI)
- Institution emphasis on providing support for your overall well-being...<sup>c</sup> (SE)
- Completed a culminating senior experience (...)<sup>c</sup> (HIP)

##### Lowest Performing Relative to Top 5

- Spent more than 15 hours per week preparing for class
- Worked with a faculty member on a research project (HIP)
- Institution emphasis on studying and academic work<sup>c</sup>
- Spent more than 10 hours per week on assigned reading<sup>f</sup>
- Participated in an internship, co-op, field exp., student teach., clinical placemt. (HIP)



- 
- a. The displays on this page draw from the items that make up the ten Engagement Indicators (EIs), six High-Impact Practices (HIPs), and the additional academic challenge items reported on page 2. Key to abbreviations for EI items: HO = Higher-Order Learning, RI = Reflective & Integrative Learning, LS = Learning Strategies, QR = Quantitative Reasoning, CL = Collaborative Learning, DD = Discussions with Diverse Others, SF = Student-Faculty Interaction, ET = Effective Teaching Practices, QI = Quality of Interactions, SE = Supportive Environment. HIP items are also indicated. Item numbering corresponds to the survey facsimile available on the NSSE website.
  - b. Combination of students responding "Very often" or "Often."
  - c. Combination of students responding "Very much" or "Quite a bit."
  - d. Rated at least 6 on a 7-point scale.
  - e. Percentage reporting at least "Some."
  - f. Estimate based on the reported amount of course preparation time spent on assigned reading.
  - g. Estimate based on number of assigned writing tasks of various lengths.
-

### How Students Assess Their Experience

Students' perceptions of their cognitive and affective development, as well as their overall satisfaction with the institution, provide useful evidence of their educational experiences. For more details, see your *Frequencies and Statistical Comparisons* report.

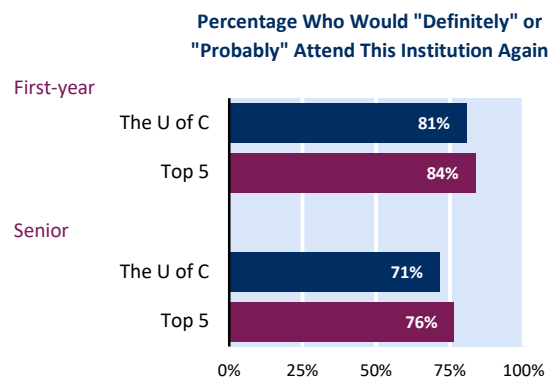
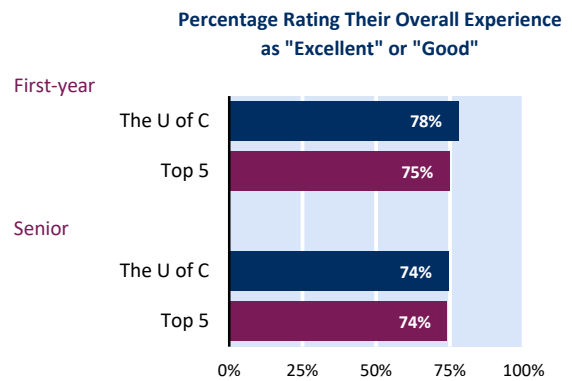
#### Perceived Gains Among Seniors

Students reported how much their experience at your institution contributed to their knowledge, skills, and personal development in ten areas.

Perceived Gains (Sorted highest to lowest)	Percentage of Seniors Responding "Very much" or "Quite a bit"
Thinking critically and analytically	83%
Working effectively with others	69%
Writing clearly and effectively	68%
Analyzing numerical and statistical information	67%
Speaking clearly and effectively	61%
Understanding people of other backgrounds (econ., racial/ethnic, polit., relig., nation., etc.)	54%
Solving complex real-world problems	54%
Developing or clarifying a personal code of values and ethics	53%
Acquiring job- or work-related knowledge and skills	48%
Being an informed and active citizen	47%

#### Satisfaction with The U of C

Students rated their overall experience at the institution, and whether or not they would choose it again.



### Administration Details

#### Response Summary

	Count	Resp. rate	Female	Full-time
First-year	2,881	45%	65%	99%
Senior	2,177	44%	62%	93%

See your *Administration Summary* and *Respondent Profile* reports for more information.

#### Additional Questions

Your institution administered the following additional question sets:

#### First-Year Experiences and Senior Transitions G13-x-Ontario

See your *Topical Module* and *Consortium* reports for results.

### What is NSSE?

NSSE annually collects information at hundreds of four-year colleges and universities about student participation in activities and programs that promote their learning and personal development. The results provide an estimate of how undergraduates spend their time and what they gain from attending their college or university. Institutions use their data to identify aspects of the undergraduate experience that can be improved through changes in policy and practice.

NSSE has been in operation since 2000 and has been used at more than 1,600 colleges and universities in the US and Canada. More than 90% of participating institutions administer the survey on a periodic basis.

Visit our website: [nsse.indiana.edu](https://nsse.indiana.edu)

PSIS: 48005000

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## UNIVERSITY OF CALGARY | Institutional Report

NSSE 2020: Summary of the Qualitative Comments in the National Survey of Student Engagement

March 4, 2021

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## Introduction

The National Survey of Student Engagement (NSSE) collects information from students studying in undergraduate and four-year degree-granting colleges and universities in North America to assess their levels of engagement and their post-secondary experience. [The survey](#) is fully administered by the Center for Postsecondary Research, Indiana University, in close collaboration with the University of Calgary (UCalgary). The NSSE survey is targeted to first year and senior-year students. NSSE results are used for institutional improvement, public reporting, and ultimately to enhance students' learning experiences.

### NSSE Survey Distribution

At UCalgary, the survey is distributed on a 3-year cycle, with the latest reporting year being 2020, where 6,439 first year and 4,904 senior-year undergraduate students were invited to participate. Approximately 45% of first year students and 44% of senior-year students completed the 2020 survey, which is the highest level of participation recorded out of Canadian NSSE participating institutions.

The 2020 NSSE survey opened to participating UCalgary students on February 13, 2020 and closed on May 22, 2020. 89% of NSSE responses were completed by the week of March 8-14, 2020 with the remaining 10% completed during the week of March 15-21. NSSE provided institutions with the option to exclude post-disruption survey responses from their reports due to the COVID-19 global pandemic. UCalgary elected not to exclude post-disruption survey responses as participation was almost complete at the time we moved to remote and online teaching and learning in mid-March as a result of public health measures for the pandemic.

### Qualitative Data Analysis

NSSE reports on ten (10) engagement indicators calculated from 47 core NSSE items. Indicators are grouped within four (4) theme areas: academic challenge, learning with peers, experiences with faculty and campus environment. In addition to the main survey for 2020, UCalgary added a module on academic advising, another on First-Year Experiences and Senior Transitions, and a set of consortium questions of the U15 institutions (outside Ontario).

There are three open-ended questions within the NSSE 2020 survey. Below we have summarized students' qualitative comments for these questions:

- 1) Please describe the most significant learning experience you have had so far at this institution.
- 2) Regarding academic advising, who has been the most helpful and in what way?
- 3) Is there anything your institution could have done better to prepare you for your career or further education?



The first two questions (significant learning experiences and academic advising) were distributed to both first year and senior-year students, while the third question (recommendations for improvement) was only distributed to senior-year students. The qualitative responses of the NSSE 2020 survey were analyzed using the NVivo 12 software, which is a program for qualitative data analysis. The NVivo software helped organize the raw data and texts into codes/themes. An inductive approach was also carried out for developing the themes and identifying the patterns of meaning within the data. Finally, to test the reliability of the developed themes, repeated and detailed reading of the raw data (text) and coding queries were implemented.

### Relationship to the 2020 NSSE Quantitative Data Report

This report focuses directly on the qualitative responses to the three open-ended questions described above. Because the open-ended questions are not structured as opportunities to elaborate specifically on the 47 core NSSE items, the qualitative data summarized in this report do not directly correspond to the quantitative data but do provide valuable insights into student experiences and engagement. The themes evident in this report can help inform the interpretation of the quantitative data.

For context, the quantitative NSSE results reveal that across most engagement indicators, UCalgary's average engagement indicator scores are similar to or exceed those of the U15 and Canadian comparator groups. Average scores for most engagement indicators also exceed UCalgary's 2017 and 2020 results. In terms of student ratings of their overall experience, UCalgary now out-performs or ties with the Top 5 comparator institutions (McGill University, Université de Montréal, University of Alberta, University of British Columbia, University of Toronto), for both first-year and senior students, an improvement over the 2017 results. On the question of whether students would choose to attend UCalgary again, we lag slightly behind the Top 5 comparator group, but the gap in percentages has narrowed for senior students. UCalgary average scores for the Supportive Environment indicator are lower than the Top 5 average among both first- and fourth-year students. Our average scores for this indicator also lag behind our 2014 and 2017 results. This is an area of NSSE that warrants further exploration to better understand the factors affecting student experience and perceptions of support in the indicators surveyed, which include areas such as helping students succeed academically, use of learning support services, opportunities for social involvement, support for overall well-being, and attending campus activities and events and/or events that address important social, economic and political issues.

## Findings

The following section provides an overall summary of the qualitative comments for the above three open-ended questions included in the 2020 NSSE survey. For each question, the corresponding table includes the top 5 themes and/or subthemes starting with those most frequently mentioned. As these lists of themes are not exhaustive and because some lengthy

responses were coded in multiple themes (e.g., a single response may include comments about more than one themed topic), the numbers in the tables do not reflect the total number of responses received per question. The numbers are provided as indicators of how many student comments were related to a given theme rather than as an indication of the comparative importance of a theme.

### Question 1: Significant Learning Experiences

Coming at the conclusion of the core 47 question survey, there were 2,052 responses recorded for the first open-ended question: **Please describe the most significant learning experiences that you have had so far at this institution.** The responses were grouped inductively into separate themes that capture the sentiment of students' comments regarding their university learning experiences. Table 1 includes the themes of high-quality learning experiences, faculty-student Interactions, personal growth, sense of community, and areas of concern.

*Table 1: The top 5 themes, sub-themes and examples of participant comments on their most significant learning experiences at the University of Calgary (NSSE 2020).*

TOP 5 THEMES BY FREQUENCY	SAMPLE QUOTES
<p data-bbox="253 940 727 1003"><b>1. High-Quality Learning Experiences (850 references)</b></p> <p data-bbox="253 1045 781 1465"><b>Description:</b> By far, the most frequently noted responses refer to a variety of high-quality learning experiences they have had at the University of Calgary. The theme includes 11 sub-themes to describe specific activities students mentioned as enhancing their learning experiences (such as field trips, studying abroad, coursework, conferences, capstones etc.). While these comments reveal students' appreciation of their learning experiences, they also suggest a desire to have even more learning experiences related to professional skills development and to "real" world applications.</p> <p data-bbox="253 1497 386 1528"><b>Sub-Themes</b></p> <ul data-bbox="253 1539 756 1894" style="list-style-type: none"> <li>- Excellent coursework, class and lectures</li> <li>- Other Experiences</li> <li>- Service-Learning Experiences</li> <li>- Labs</li> <li>- Honours thesis and research opportunities</li> <li>- Case Competition, Programs and Projects</li> <li>- Capstone Courses</li> <li>- Fieldwork—Field-study</li> <li>- Study Abroad</li> </ul>	<p data-bbox="824 940 1268 972"><b><u>Excellent Coursework, Class and Lectures</u></b></p> <p data-bbox="824 1010 1398 1136">"One of the valuable things that I enjoyed from my experience at this school in my program is that as the classes became more specialized—that's when I had learned the most."</p> <p data-bbox="824 1167 1409 1398">"Any course that has made connections between the course material and realistic explanations for why it is relevant in a real-world setting. Some research-based courses are good but for the most part I feel that I get more out of course that actively connect what I'm learning and why I should be learning it, other than for research. Especially at a senior level."</p> <p data-bbox="824 1430 1295 1461"><b><u>Honours Thesis and Research Opportunities</u></b></p> <p data-bbox="824 1461 1409 1692">"The most significant learning moment I have had so far is conducting my own research project. I've been able to complete all the skills that I have developed throughout my degree, and I am able to put them to use while answering my research question. It is effective because it prepares me well to do research in the future."</p> <p data-bbox="824 1724 971 1755"><b><u>Study Abroad</u></b></p> <p data-bbox="824 1755 1382 1818">"My best experience was going abroad and learning about many countries and how business is done."</p>

<ul style="list-style-type: none"> <li>- Cohort Based Programs</li> <li>- Opportunities to attend conferences</li> </ul>	<p><b><u>Labs</u></b>            “The most significant experience would be the X labs, where the goal was to be able to experience sport (especially for those not involved in athletics) and be able to apply the theories learned in lecture to our own experiences. This really helped with understand and believing in the course material.”</p> <p><b><u>Service-Learning Experiences</u></b>            “The combination of learning the theory behind such a broad technical field, while discovering through trial-and-error how to interact and understand Canadian and other cultures and individuals from those cultures.”</p> <p><b><u>Competition, Programs and Projects</u></b>            “Participating in clubs and case competitions has helped me the most. They have allowed me to push myself out of my comfort zone and improve my communication and interpersonal skills.”</p>
<p><b>2. Faculty-Student Interactions (225 references)</b></p> <p><b><u>Description:</u></b> Many students commented on how the quality of their interactions with professors, instructors, and GATs supported their learning. This theme highlights the value of engaging teaching activities and respectful relationships in the learning environment.</p> <p><b><u>Sub-Themes</u></b></p> <ul style="list-style-type: none"> <li>- Help from Instructor and TA</li> <li>- Instructor Approachability/Support</li> </ul>	<p><b><u>Instructor Approachability/Support</u></b>            “Having a very good professor makes a big difference”</p> <p>“The amount of collaboration the professors encourage in class make learning memorable. The lectures are less like lectures, but a large discussion among the whole group. Professors often give time for students to critically think of a solution before teaching how it works.”</p> <p><b><u>Help from Instructor and TA</u></b>            “My professor accommodated me very well when I was super sick with strep throat. After taking the statutory declaration he was happy to find a perfect time once I was feeling better to allow me to write my midterm.”</p> <p>“Personal investment and kindness from professors, TAs, lab techs etc. means that world coming out of a high school with incredibly compassionate teachers. it provides motivation you otherwise lack and gives value to the university experience”</p>
<p><b>3. Personal Growth, Reflection and Skill Development (217 references)</b></p> <p><b><u>Description:</u></b> Personal development is a general term to describe all those activities that develop one’s capabilities and potential. The comments under this theme underline how specific experiences at the university led to self-reflection and personal development. Participants’ comments suggest that both</p>	<p>“The most significant for me was being able to pick myself back up again after a poor exam. It has heled me build character and resilience as well as learn how to study effectively.”</p> <p>“Being here has made me rethink a lot of the values and has allowed me to grow as a person. That’s something I am very thankful for”</p> <p>“Learning how to improve myself, especially to take criticism. How to manage life in general.”</p>

<p>positive and negative experiences have been an impetus for further reflection and growth.</p>	<p>“I’ve learned to have confidence in my skills and abilities and working well with peers to obtain success. I believe that even if I don’t maintain a career related to my degree, it has taught me significant social skills and willingness to take risks in order to learn.”</p>
<p><b>4. Areas of Concern (140 references)</b></p> <p><b>Description:</b> The comments in this theme include students' dissatisfaction with various experiences at the university as well as concerns about teaching approaches and academic advising services. Comments in this theme also include descriptions of when students' expectations for learning practical or transferrable skills was not met.</p>	<p>“The majority of other courses feel like textbook learn style (memorization of theories and models) and little to do with real-life experiences”</p> <p>“The most significant learning experience is learning that the school doesn’t do a good enough job of preparing students to face challenges they will inevitably come across in the workplace”</p> <p>“Learning that you can’t rely on faculty to tell you what you need to know, and you need to find things out for yourself”</p> <p>“Learning to think for myself because information present in class was incorrect, misleading or not the entire picture.”</p>
<p><b>5. Sense of Community (124 references)</b></p> <p><b>Description:</b> In this theme, students express appreciation for social activities and interactive learning experiences (such as clubs, projects, extracurricular) that support their learning and help create a sense of community and belonging.</p>	<p>“How to generally associate with people within the community, care about health systems such personal hygiene, how to be more prosperous and how to be more focus. How to relate with people, connecting to people, assisting and have social interaction with the community and others”.</p> <p>“most significant learning experience so far is that connection matters and being part of various clubs gets you opportunities.”</p> <p>“Learning to build connection”</p> <p>“Just the overall interaction with such a diverse community of people. The interaction between students really elevates the experience academically and socially”.</p>

## Discussion

The [University of Calgary Academic Plan \(2018-2023\)](#) highlights the commitment to design relevant, meaningful learning experiences which encompass all aspects of students’ university engagements, including curricular and co-curricular learning experiences. Students’ responses in the themes of high-quality learning experiences, faculty-student Interactions, personal growth, sense of community, and areas of concern reflect the fact that they, too, value learning both in and beyond the classroom.

Many students referenced the excellent learning experiences they had through formally designed academic opportunities starting with courses and labs. This was by far the most

frequently noted theme in responses from both first year and senior year students. As one student put it, *“...as the classes became more specialized—that’s when I had learned the most.”* Labs were also frequently mentioned as providing valuable opportunities *“to be able to apply the theories learned in lecture to our own experiences.”* While first year students frequently commented on other practical learning, such as time management, which enhanced their educational success, senior year students more frequently mentioned activities such as work-integrated learning and research opportunities that would enhance their career success: *“The most significant learning moment I have had so far is conducting my own research project.”* Comments from senior year students particularly highlighted the value of experiential learning activities such as research opportunities, study abroad, and service-learning experiences. While students did not use the term “experiential learning,” they frequently highlighted activities such as study abroad, service-learning, and field work which are also foregrounded in the [Experiential Learning Plan for the University of Calgary 2020-2025](#).

Another frequently noted theme was the positive impact of having approachable, supportive instructors and teaching assistants (GATs). Students commented on teaching approaches like discussion and collaboration which *“make learning memorable”* as well as the positive impact of *“personal investment and kindness from professors, TAs, lab techs, etc.”* Fewer, but still notable, comments described concerns about these same areas. Some students commented on teaching strategies that had *“little to do with real-life experiences,”* and some expressed frustration that *“you can’t rely on faculty to tell you what you need to know.”* Students frequently expressed both appreciation for learning opportunities that were connected to the “real world” as well as a desire to have more of these experiences.

Many students also reflected on their university experience more broadly. They described their time at the University of Calgary as promoting personal growth and development in areas such as resiliency, self-reflection, and confidence. One student wrote, *“The most significant for me was being able to pick myself back up again after a poor exam. It has helped me build character and resilience as well as learn how to study effectively.”* Student responses also emphasized the value of belonging to a community which parallels the strategic focus of creating and sustaining a supportive campus environment in the [Campus Mental Health Strategy](#). Students frequently linked their most significant learning experiences to *“the interaction between students [which] really elevates the experience academically and socially.”*

## Question 2: Academic Advising

The second question—**Regarding academic advising, who has been the most helpful and in what way?**—received 2,114 valid responses. The qualitative responses highlight satisfaction with academic advising provided by UCalgary services as well as the support received through students’ personal networks. The top five themes are student services, family and friends, academic and support staff, university peers/classmates, and online resources (Table 2).

*Table 2: The top 5 themes, sub-themes and examples of participant responses regarding who has been most helpful in academic advising and in what way (NSSE 2020)*

TOP 5 THEMES	SAMPLE QUOTES
<p><b>1. Student Services (713 references)</b></p> <p><b>Description:</b> The largest number of responses described on-campus services that helped students with academic advising. Some of these services are Student Success Centre, Career Advising, Counsellors, Student Accessibility Services, Academic Advisors and others. The comments suggest a broad recognition of the quality advising received through the services; however, some students also noted that they wished appointments were more readily available.</p> <p><b>Sub-themes</b></p> <ul style="list-style-type: none"> <li>- Academic Advisor</li> <li>- Student Success Centre</li> <li>- Career Advising</li> <li>- Student Accessibility Services</li> <li>- Counsellors</li> <li>- Other</li> <li>- General Advice</li> <li>- Wellness Services</li> <li>- Writing Centre</li> </ul>	<p><b>Academic Advisor</b>          “The advisors in the undergrad office because they know exactly what courses I can take and are super helpful to plan my next few years.”</p> <p>“The academic advising staff. Although they can be difficult to book an appointment with during peak seasons, they offer excellent long-term advising for the completion of your degree.”</p> <p><b>Student Accessibility Services</b>          “The accessibility services for students have been most helpful because they routinely check in with me and provided many resources. the regular communication has been most helpful.”</p> <p><b>Career Advising</b>          “Career services have helped me sharpen my resume, cover letter, and interviewing skills—a critical step in job-hunting process.”</p> <p><b>Student Success Centre</b>          “Advisors at UCalgary student success centre. They have been helped me prepare for professional opportunities and have supported me academically (study strategies, course selection).”</p>
<p><b>2. Family and Friends (590 references)</b></p> <p><b>Description:</b> Comments associated with this theme highlight the academic support received from students’ personal networks. The comments suggest that family and friends who have been through similar experiences (i.e., completed an undergraduate degree) provided advice which helped students make decisions about courses and future direction.</p>	<p>“Family and friends because they have gone through parts of university and have the experience to help guide me.”</p> <p>“My Dad. Since he has gone through the same degree as me and knows generally what are good /interesting courses are to take. He has been able to help guide me in deciding what courses to take.”</p> <p>“Family, they know me best, able to suggest things that match my work ethic and goals with personality.”</p> <p>“Friends. We all help each other with our knowledge from past experiences.”</p>
<p><b>3. Academic and Support Staff (434 references)</b></p> <p><b>Description:</b> This theme includes responses related to support received from professors, instructors, department staff and GATs. These comments underscore a sense of satisfaction and gratitude for the general advising support</p>	<p><b>Teaching Assistants</b>          “TAs and staff outside of class because they share their advice and their path with me.”</p> <p><b>Supervisor, Honours PI, Faculty Assigned as an Advisor</b>          “My supervisor who is also teaching a class at the university this term. He has talked to me about future goals and taught me many things”.</p>

<p>received from professors and instructors through their teaching approaches.</p> <p><b>Sub-themes</b></p> <ul style="list-style-type: none"> <li>- Professors and Instructors</li> <li>- Supervisor, Honours PI, Faculty assigned as an advisor</li> <li>- Teaching Assistants</li> <li>- Staff</li> </ul>	<p><b>Staff</b></p> <p>"A member of staff within my faculty has been the most helpful. She's guided me and encouraged me to pursue my interests. She took a genuine interest in my career path..."</p> <p><b>Professors and Instructors</b></p> <p>"Theory and Musicianship prof X, always will help you thoroughly understand the subject matter and make time to help you"</p> <p>"Faculty. By giving me realistic expectations about the workforce, academic life as an instructor/professor, etc. and by helping me know how to prepare and what to do to succeed in the workforce in the future".</p>
<p><b>4. University Peers/Classmates (184 references)</b></p> <p><b>Description:</b> The comments under this theme describe how peers in similar classes and programs support academic decision-making.</p>	<p>"Peers in my own program—having someone go through the same experiences, knowing the difficulties, struggles, and helping each other emotionally + studying together".</p> <p>"Students in my program. Getting ideas from them and having conversations about what to do".</p> <p>"Fellow students encourage each other and help each other in stressful times".</p> <p>"The most significant learning experience I have had so far at this institution is that being able to connect with your peers and have people in each class that can help you and are reliable is important to one's success".</p>
<p><b>5. Online Resources (150 references)</b></p> <p><b>Description:</b> Comments in this theme centre around online resources and highlight how students found university student portals, university websites, and other online services accessed to be helpful in providing academic advising.</p>	<p>"Online resources because they are applicable and accessible at all times. Information is easy to find and use".</p> <p>"Probably the online resources providing the necessary resources to figure out what needs to be taken next".</p> <p>"Online (My UCalgary) generating the report so I can see which I should enroll in".</p> <p>"Calendar because it's told me what I need to complete my degree."</p>

## Discussion

In the same way that student responses to Question 1 on significant learning experiences reflect a broad appreciation of learning both in and beyond the classroom, responses to Question 2 about advising refer to both formal and informal avenues for seeking academic



advice and guidance. Student responses in the themes of student services, family and friends, academic and support staff, university peers/classmates, and online resources demonstrate that there are many different people to whom they turn for advising support.

By far, the most frequently mentioned sources of advising support were University of Calgary services such as those provided by faculty and department academic advisors, the Student Success Centre, Career Services, and Student Accessibility Services. Responses highlighted appreciation for these services which provide immediate guidance – *“they know exactly what courses I can take”* – as well as long term planning by helping students *“prepare for professional opportunities.”*

Students also frequently commented on the advising support received from family and friends who *“know me best”* and *“have the experience to help guide me.”* First year students actually mentioned family and friends more frequently than any other source of academic advising. While clearly of great value for those who have this option, this theme also highlights the importance of campus resources for the many students, particularly first generation and international students, who may not have these kinds of networks. While senior year students did frequently mention family and friends, they most frequently referenced campus services.

Students also referred to informal advising support from instructors, teaching assistants, and classmates in addition to online resources. There were many positive responses about individual academic and support staff who *“shared their advice and their path,” “took a genuine interest in my career path,”* and *“talked to me about future goals.”* Students also commented on support from campus peers, especially those in their own programs who *“encourage each other and help each other in stressful times.”* In addition to the many sources of personalized support, students also commented on the value of having advising resources online *“because they are applicable and accessible at all times.”*

### Question 3: Recommendations for Improvement

This question was posed to senior-year students, and 707 valid responses were recorded: **Is there anything your institution could have done better to prepare you for your career or further education?** Students highlighted what has helped them in their learning experiences and commented on areas where the University of Calgary can improve and provide more learning opportunities. The top five themes are informal and formal advising, course learning experiences, work-integrated learning opportunities, skills growth and development, and unknown.

*Table 3: The top 5 themes and examples of participant comments on what the institution could have done better (NSSE 2020).*



TOP 5 THEMES	SAMPLE QUOTES
<p>1. Informal and formal Advising (229 references)</p>	<p><b>Academic Advising</b></p>
<p><b>Description:</b> This theme captures a range of student concerns about awareness of and availability of both formal and informal advising and support. As noted in responses to Question 2 (see Table 2), many students expressed appreciation for academic support from their professors and advisors; however, others expressed dissatisfaction with the support and stated that professors and advisors seemed unhelpful, and less passionate about teaching.</p>	<p>“Have more advisors follow up on students, also have more non-coursework opportunities (e.g., internships, assistant jobs at labs, etc.), be more available for students.”</p>
<p><b>Sub-themes</b></p>	<p><b>Awareness about advising</b></p>
<ul style="list-style-type: none"> <li>- Academic Advising</li> <li>- Professor and Instructor Advising</li> <li>- Awareness about advising</li> <li>- Student Success Centre Services</li> </ul>	<p>“Probably let students know everything the campus has to offer...”</p>
	<p>“not a whole lot of information provided unless you really go digging for it.”</p>
	<p><b>Professor and Instructor Advising</b></p>
	<p>“Care about your students and providing professors who actually care about their students and the material they teach”.</p>
	<p>“The school does offer a lot of opportunities for students. Even though the faculty members are kind and somehow willing to help, but they don’t feel the pain. They can’t give you the emotional support or any practical advice.”</p>
	<p><b>Student Success Centre Services</b></p>
	<p>“Student services does not have the outreach to effectively aid all students, and these combined factors can leave students lost for direction post-graduation”.</p>
<p>2. Course Learning Experiences (227 references)</p>	<p><b>Coursework, Class and Lecture</b></p>
<p><b>Description:</b> The comments in this theme around learning and teaching opportunities express students' desire and willingness to participate in more research-related projects, field trips, course content connected to industry and the "real" world.</p>	<p>“More classes should emphasize assignments that are relevant to research and scientific work, i.e., grant applications, project planning, literature reviews, instead of just midterms and final exams.”</p>
<p><b>Sub-themes</b></p>	<p>“Include content in courses or entire courses which cover important information and skill domains that are used in the industry.”</p>
<ul style="list-style-type: none"> <li>- Coursework, class and lecture</li> <li>- Other experiences</li> <li>- Competitions, projects, and programs</li> <li>- Labs</li> <li>- Research opportunities and honours thesis</li> <li>- Service-learning experiences</li> <li>- Capstone courses</li> <li>- Cohort- based programs</li> <li>- Fieldwork opportunities</li> </ul>	<p>“More classes focused on real world applications”.</p>
	<p><b>Capstone Courses</b></p>
	<p>“Have more open-ended capstone like project courses.”</p>
	<p><b>Other Experiences</b></p>
	<p>“There are a lot of things that should be changed regarding the system of the education as it uses an old style and not a modern way to help students explore opportunities.”</p>

	<p>“smaller classes.”</p> <p><b><u>Competitions, Projects, and Programs</u></b>          “More exposure to programs that are necessary for getting hired in my field.”</p> <p><b><u>Labs</u></b>          “Some labs were very simple and seemed to need updates or more budget.”</p>
<p><b>3. Work-Integrated Learning Opportunities (204 references)</b></p> <p><b><u>Description:</u></b> The comments in this theme demonstrate an awareness of and appreciation for the learning opportunities received through co-op and internships. A large number of students expressed a desire for more of such learning experiences.</p>	<p>“During my time in the program, more could have been done to provide undergraduates with work experience relevant to their field. I wish there were more opportunities to gain field work experience and co-op opportunities”.</p> <p>“I think UofC could also help students who aren’t in the co-op program more to find internships or employment...it would be helpful if there were guides to help with internships outside if the co-op program”.</p> <p>“it would be nice to been talk about more options for careers and opportunities in my field because I am not confident in what my degree will do for me, career wise”.</p> <p>“Provide more opportunities to work with potential employers during coursework”.</p>
<p><b>4. Skills Growth and Development (76 references)</b></p> <p><b><u>Description:</u></b> This theme is related to Theme 3. Work-Integrated Learning Experiences and highlights students’ focus on employment and employability. While co-ops and internships usually occur outside of regular courses, this theme focuses on responses from students who expressed the desire for course-based learning that is more practical and connected to industry and work settings.</p> <p><b><u>Sub-themes</u></b></p> <ul style="list-style-type: none"> <li>- Professional Skills</li> <li>- Programming Language based Courses</li> </ul>	<p><b><u>Programming Language-based Courses</u></b>          “After completing my internship, I realized that none of my courses applied to real world careers and I used very little of what I learned in school out in the workplace. I feel like core courses regarding people skills or leaderships/communication skills or management skills should be required courses for all degrees”.</p> <p>“Our classes could have done a better job of providing more practical examples instead of strictly learning and memorizing theory. A lot of practical skills I have related to my degree I learnt in my practicum or at work...”</p> <p>“A more integrated curriculum that allows students to have confidence in their skills while heading to a work setting would have been much appreciated”.</p> <p><b><u>Professional Skills</u></b>          “I think education system needs to change in general, not just at university level, even secondary schools. For example, teaching students what actually will be useful to them in the industry. Coding should be taught in</p>

	schools at a very young age because it is a growing field". "more emphasis on skill building instead of theoretical work."
<b>5. Unsure (49 references)</b>	"I won't know until I'm in my graduate program and I find out what I am lacking".
<b>Description:</b> Some students were unsure of how to respond to this question and responded with comments like 'unsure' or 'not sure.'	"unsure, this is the only experience I know". "N/A"
	"Nothing".

## Discussion

Question 3 was posed only to senior year students. In response to this question, students elaborated on many of the same themes they had affirmed as valuable in Questions 1 and 2 by describing ways their expectations were not met as well as how the University of Calgary can continue to strengthen student learning experiences. The most frequent themes in the responses were informal and formal advising, course learning experiences, work-integrated learning experiences, skills growth and development, and unsure.

Student comments frequently referenced a desire for more advising support. In some responses, the concern was a lack of awareness of existing opportunities and supports – *"Probably let students know everything the campus has to offer"* – while other comments highlighted concerns about the limitations of existing supports, such as *"Have more advisors follow up on students"* and *"Student services does not have the outreach to effectively aid all students."*

The concept of practical, relevant, career-focused learning is evident across the themes of course learning experiences, work-integrated learning experiences, and skills growth and development. Many students expressed a desire for *"more classes that focussed on real world applications"* and *"courses which cover important information and skills domains that are used in the industry."* In addition, many students commented on the desire for more *"opportunities to gain field work experience and co-op opportunities"* along with internships and career exposure. Other students noted their desire to develop more work-oriented skills alongside discipline-based learning. For example, students described wanting to learn more *"people skills or leadership/communication skills or management skills," "coding,"* and practical applications of theory that could provide more *"confidence in their skills while heading to a work setting."*

Students also frequently expressed their uncertainty about what the University of Calgary could do better to prepare them for their future career or education. As one student put it, *"I won't know until I'm in my graduate program and I found out what I'm lacking."* For another student, *"this is the only experience I know."*

## Overview and Next Steps

The University of Calgary NSSE 2020 qualitative results gave us rich data to consider as an institution. The survey, together with the added modules, contained three long-answer questions for first year and senior year students to complete that related to significant learning experiences, academic advising and recommendations for improvement. A qualitative analysis team grouped responses for each question into five top themes. These themes reiterate the importance of academic experiences that provide opportunities for active learning, student engagement, experiential and work-integrated learning, as well as skills development. The findings also highlight the importance of ensuring ample access to informal and formal advising, developing further awareness of supports and opportunities available to students, and fostering a strong sense of community and belonging. The themes are meant to help guide the University to understand how to enhance student supports moving forward, while also indicating current or past work that has been received well from this undergraduate population.

For a more holistic institutional analysis, this qualitative data report can be paired with the NSSE 2020 Snapshot and detailed engagement indicator analysis of the quantitative data. While there are acknowledged limitations of either data set, together these data give a high-level overview of undergraduate experiences at the University of Calgary that encourages us to dive deeper into what is currently effective as well as how to continue to strengthen student engagement.

‘Making sense’ of the data from a faculty perspective is a critical piece to implementing change based on our NSSE results. Further extrapolation of faculty/unit-level data will be distributed to NSSE teams for each participating unit. Teams will gather to help make meaning of and contextualize student NSSE responses within their faculties and programs with the goal of developing action plans to further strengthen student experiences across UCalgary.



UNIVERSITY OF  
CALGARY

**GENERAL FACULTIES COUNCIL  
INFORMATION BRIEFING NOTE**

**SUBJECT:** Equity, Diversity and Inclusion Dashboard

**PROPONENT(S)**

Dru Marshall, Provost and Vice President (Academic)  
Malinda Smith, Vice Provost (Equity, Diversity, and Inclusion)  
Bruce Evelyn, Vice Provost (Planning & Resource Allocation)

**PURPOSE**

To share the University of Calgary's Equity, Diversity and Inclusion (EDI) dashboard with General Faculties Council (GFC). The dashboard and associated webpages will provide the campus community with information about students, academic staff, non-academic staff, and postdoctoral scholars based on the four (4) designated groups outlined in the federal [Employment Equity Act](#). In addition to the website and dashboard, an annual report is being developed to provide the community with an update on the status of EDI initiatives at the University of Calgary.

**KEY POINTS**

**Employment Equity Act**

Development of the dashboard has been guided by the federal *Employment Equity Act* (i.e., the Act). The purpose of the Act is to achieve equality in the workplace so that no person shall be denied employment opportunities or benefits for reasons unrelated to ability. In the fulfilment of that purpose, the Act is intended to correct the conditions of disadvantage in employment experienced by women, Aboriginal peoples, persons with disabilities and members of visible minorities by giving effect to the principle that employment equity means more than treating persons in the same way but also requires special measures and the accommodation of differences. It should be noted that all levels of government, the national granting councils (SSHRC, NSERC, CIHR), and many other organizations are now looking beyond the four (4) designated groups identified in the Act to take a more comprehensive approach to creating and sustaining a workplace that is equitable and inclusive of the LGBTQ2+ community and other equity-seeking groups. Consistent with this trend, the University of Calgary has added a fifth "gender identity" group to the dashboard.

**Website**

A dedicated website has been developed within the overall University of Calgary website to present the EDI dashboard and associated information to the community. Visitors to the website will be presented with infographics and key messages that tell the story of EDI at UCalgary. Visitors will also be able to link to the interactive, EDI dashboard from these pages. Regularly scheduled updates to the website will be made as new developments emerge.

**Dashboard**

The dashboard will allow visitors to view EDI information in an aggregated format at the institutional level. Visitors will also be able to tailor information based on the federally designated *Employment Equity Act* categories. EDI performance measures have been grouped within four (4) academic categories (i.e., students, academic staff, non-academic staff, and postdoctoral scholars). Metrics within these four categories have been further grouped along several dimensions (e.g., accessibility, representation, progression, retention, climate, and outcomes). Together, these measures

will monitor progress toward the elimination of systemic discrimination, and equitable pathways toward the inclusion of designated group members, and the achievement of diversity at the University of Calgary.

The information contained in the dashboard is intended to help the University of Calgary avoid a “one-size fits all” approach to EDI measurement as it tracks and validates when policies and procedures are making a measurable difference. The list of EDI performance measures included in the dashboard is unchanged since it was first shared with GFC in June 2019.

For the purposes of the data reported within the dashboard, the current information does not yet permit an intersectional analysis of individuals who are part of more than one designated group. The dashboard also does not present the personal experiences of those who make up the campus community. Additionally, because students are not required to report their status by federally designated group, detailed information about students in the dashboard is not yet as complete as that available about employees. As the EDI dashboard is refined, its data tracking abilities will be expanded to dive deeper into the demographics to help guide EDI work at the University of Calgary.

## **BACKGROUND**

On April 7, 2018, General Faculties Council (GFC) approved a list of fifty-three (53) metrics to monitor progress against the 2018-23 Academic Plan and 2018-23 Research Plan. Thirty-one (31) were categorized as primary metrics. Twenty-two (22) were categorized as secondary metrics. Primary metrics allow for inter-institutional comparisons. Secondary metrics allow for measurement of strategic initiatives specific to the University of Calgary. In addition to primary and secondary metrics, eight (8) dashboards were approved to monitor specific strategies. Equity, Diversity and Inclusion was one of the dashboards identified at the time. It was expected that these eight dashboards would include some primary and secondary measures, as well as measures specific to each strategy or plan. A small group consisting of 10 individuals identified key metrics for the EDI dashboard. In June 2019, the list of measures that were identified to monitor EDI at the University of Calgary was brought forward to GFC and the Board of Governors for discussion. Since this time, a team of communications specialists and institutional analysts led by the Vice-Provost (Equity, Diversity, and Inclusion) and the Vice Provost (Planning and Resource Allocation) have worked to collect and analyze data to create the EDI dashboard.

## **ROUTING AND PERSONS CONSULTED**

In addition to the routing below, this information was shared with the Dimension committee, the EDI network, the Provost Team and Deans’ Council.

<u>Progress</u>	<u>Body</u>	<u>Date</u>	<u>Approval</u>	<u>Recommendation</u>	<u>Discussion</u>	<u>Information</u>
X	General Faculties Council	March 11, 2021				X

## **NEXT STEPS**

The dashboard is being presented for information and discussion. A test environment will be made available to GFC members. Comments can be shared with the EDI dashboard team through the proponents. Once it is ready for release later in March 2021, a UToday story will be drafted to share the EDI dashboard with the UCalgary community. At that time, the dashboard will be posted on the University of Calgary’s website so that the community is informed about the status of EDI initiatives at the University of Calgary.

## **SUPPORTING MATERIALS**

Equity, Diversity and Inclusion dashboard (to be projected at meeting)



**UNIVERSITY OF  
CALGARY**

**GENERAL FACULTIES COUNCIL  
INFORMATION BRIEFING NOTE**

**SUBJECT:** High Performance Computing / Secure Research Computing

**PROPONENT(S)**

Susan Skone Associate Vice-President Research  
Abdel Yousif Director, Research Computing Services

**PURPOSE**

To inform the General Faculties Council about High Performance Computing (HPC) and advanced research computing platforms and services.

**OVERVIEW**

Our researchers are increasingly dependent on advanced research computing, with hundreds of research teams implementing data science, analytics and visualization, and applied machine learning techniques across all disciplines. Our research demand for scientific computing cycles and data storage is running at an all-time high. Over the past several years UCalgary has enhanced our advanced research computing platforms and services to meet such demands. We provide an update on progress and plans, and the leveraging of federal opportunities, to serve our broader research and innovation communities.

**KEY POINTS**

In the attached document we describe context and status regarding institutional HPC, data storage, research software support, and secure computing. Key points include the following:

- Our central Research Computing Services team currently supports over 700 researchers and over 80 projects across all disciplines.
- We have some of the highest intensive computational research needs of any institution in Canada, with our research teams ranking second nationally in CPU/GPU usage of Compute Canada infrastructure.
- We take a hybrid approach: building local capacity aligned with our strategies (e.g. secure compute for precision health) while capitalizing on national opportunities for resources, funding and staffing.
- Our managed HPC services and secure computing are two unique offerings that differentiate UCalgary on the national landscape.
- Considerations for the future include the evolving national landscape, new institutional strategies in innovation and entrepreneurial thinking, and trends in artificial intelligence and machine learning.

**BACKGROUND**

A focused effort commenced 2017 to build centralized resources in advanced research computing. By engaging with researchers to define research needs, and by leveraging our West Grid and Compute Canada partnerships, we aimed to develop a top-five national platform. The simple objective was to ensure no research team would be limited in its future endeavors by lack of computational resources. In this context we provide an update on platforms and services, with supporting material provided in the attached document for information.

**ROUTING AND PERSONS CONSULTED**

<u>Progress</u>	<u>Body</u>	<u>Date</u>	<u>Approval</u>	<u>Recommendation</u>	<u>Discussion</u>	<u>Information</u>
	Research and Scholarship Committee	2021-02-18				X
X	General Faculties Council	2021-03-11				X

**SUPPORTING MATERIALS**

Internal Document: Advanced Research Computing Platforms and Services





## Advanced Research Computing Platforms and Services

*This document summarizes institutional HPC, data storage, research software support, and secure computing aligned with our research and innovation strategies and Growth through Focus objectives.*

### ACRONYMS

CFI	Canada Foundation for Innovation
CPU	Central Processing Unit
GPU	Graphics Processing Unit
HPC	High Performance Computing
IT	Information Technology
(m)ARC	(Medical) Advanced Research Computing
NDRIO	New Digital Research Infrastructure Organization
RCS	Research Computing Services
RDM	Research Data Management
WD	Western Diversification

## 1. Summary

Our researchers are increasingly dependent on advanced research computing, with hundreds of research teams implementing data science, analytics and visualization, and applied machine learning techniques across all disciplines. Advances in digital technologies have generated a massive quantity of research data that must be stored and managed in compliance with federal funding guidelines. Targeted efforts are underway to accommodate such needs through our advanced research computing centralized platforms and services. Great advances have been achieved over the past several years with UCalgary now providing compute capacity and services amongst the top tier nationally. Going forward, strategies must continue to address the exponentially growing needs with creative and sustainable solutions leveraging federal opportunities and serving our broader research and innovation communities.

## 2. Background

A focused effort commenced 2017 to build centralized resources in advanced research computing including HPC, data storage, research software support, and secure computing. By engaging with researchers to define research needs, and by leveraging our West Grid and Compute Canada partnerships to access deep vendor discounts, we aimed to develop a top-five national platform. The simple objective was to ensure no research team would ever be limited in its future endeavors by lack of computational resources. This researcher-centric core principle continues to inform and guide our strategies.

Rapid investments were made in personnel and infrastructure to strengthen services for all disciplines that require computational science, big data analytics, and machine learning applications. Our IT Research Computing Services (RCS) team has since been at the forefront of HPC and data science at UCalgary in their offerings to researchers. Major progress has been made over the past two years in achieving our computational goals:

- Growth in number of researchers using RCS' HPC infrastructure and services: 150% year-over-year
- Growth in HPC workloads: 400% year-over-year
- Investment in HPC infrastructure: approx. \$6m over the last two years
- HPC capabilities built over the last two years: 17,000 CPU cores, 48 GPU Nodes and 8PB storage
- Expansion of Advanced Research Computing (ARC) cluster for level 1 & 2 of data security
- New Medical Advanced Computing Cluster (mARC) for secure data storage, file sharing and collaboration, data visualization and secure HPC for confidential data, including health information

Over 700 registered researchers have accessed our central HPC services in 2020, an increase of over 300% in the past two years, and more than 350 hold accounts to store or analyze confidential data. The new clusters ramped up rapidly in 2019, reaching 50% monthly utilization in eight months. As of April 2020, utilization of 75% monthly serves our researchers' immediate needs while sparing capacity for urgent resource allocations. For example, RCS responded rapidly to support more than 15 COVID-19 research projects in aspects of database and data pipeline design, deployment of machine learning software, and design and implementation of HPC/storage infrastructure.

### 3. Key Issues

#### 3.1 Researchers' Computing Needs and Service Requirements

Across all areas of research, our demand for and use of scientific computing cycles is running at an all-time high. The RCS team currently supports over 700 researchers and over 80 projects. Demands are driven increasingly by domain applications in almost every discipline. More than half of our recent CFI Innovation Fund proposals and CRC allocation requests require HPC support for computational approaches primarily in big data and machine learning. Of note, CFI requests for computing infrastructure generally are required to specify Compute Canada as the vendor, and Compute Canada's ability to host and/or analyse confidential data are extremely limited. This highlights the importance of continuing to build cutting-edge HPC capacity locally to support our researchers' CFI applications. Parenthetically, it also suggests that funding from sources other than CFI will be required to meet this goal.

In January 2020 RCS conducted a survey to assess researchers' satisfaction with central research computing services and assess their future needs. Approximately 100 responses were received for projects across ten faculties. Among those who identified themselves as team PIs, 80% indicated they could not have conducted their project without central research computing resources and 38% have leveraged these projects to attract new research funding in the past two years.

Growing research areas include image processing, health analytics and deep learning applied to genomics, biological sciences and computational neuroscience. Considerations for the future include the evolving national landscape, new institutional strategies in innovation and commercialization, and trends in artificial intelligence and machine learning. Demands for machine learning are notably outpacing national resources with Compute Canada able to support only 25% of received GPU requests. Our RCS projections include scaling up both CPU and GPU resources centrally, for strategic advantage to our research community, including migration of CSM data to central clusters and secure computing. Considerations going forward include projected usage and specialized needs: e.g.

- Even though the overall utilization of compute cycles is ~70%, the utilization factor on our new CPU/GPU is 100% with wait time of 5 hours for new HPC research jobs. Demand for new infrastructure is driven by high CPU performance and high RAM usage.
- Almost all of our BioInformatics research load has now moved to ARC HPC. This represents ~300 researchers transitioning into ARC over the last year.
- Large infrastructure projects (such as LSARP and TRex with \$20m+ CFI funding) increasingly require infrastructure builds for storage (multiple PB) and large compute (HPC and VM) which will not be accommodated by national host sites.

On average, RCS receives over 50 requests per week to support HPC needs of existing or new projects.

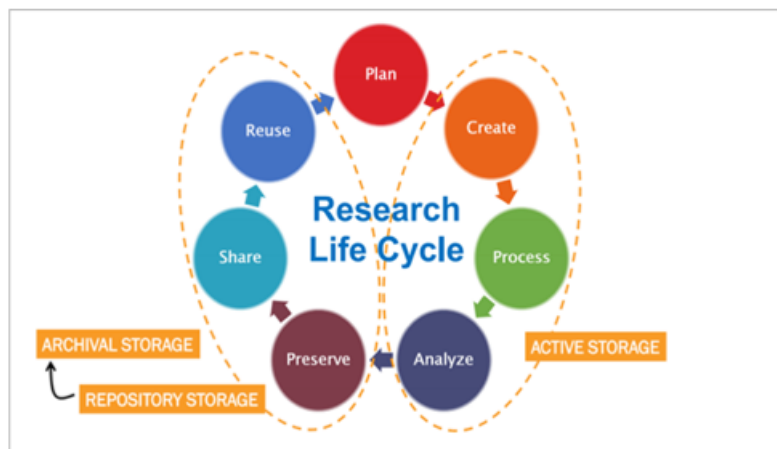
RCS HPC clusters live in two data centres on campus: MSPDC (basement of the Math Sciences building) the production data centre which houses all of IT's critical systems and CCIT (third floor) which mostly houses HPC compute servers. New servers for HPC compute and storage would still need to be housed in these two data centres. RCS would not deploy the new infrastructure in the cloud as in Amazon AWS or Microsoft Azure. Some of the reasons behind this decision are:

- IT receives a significant vendor discount that reduces on-site HPC hardware costs significantly.
- Unlike Enterprise applications, HPC keeps systems (CPUs, GPUs, RAM, Storage, etc) busy 100% of the time, thus requiring special power requirements (four times more than enterprise apps). Standard cloud services are built around performance requirements of enterprise apps, not HPC.
- In 2019, UCalgary HPC clusters ran jobs that used 4 Billion CPU core-hours. We trended higher than that number in 2020. Such utilization in the cloud would have cost UCalgary at least \$11.6M annually, even assuming 80% vendor discount. These HPC costs in the cloud are prohibitive.

### 3.2 Research Data Management Requirements

The tri-agencies of Canada have adopted a draft research data management policy applying to all grant recipients and to institutions administering tri-agency funds. The objective of this policy is to support Canadian research excellence by promoting sound data management and data stewardship practices. Under the new policy institutional strategies will be required, researchers will complete data management plans, and research data will be deposited on project completion.

Research Data Management (RDM) refers to the everyday handling and workflow of research data during the active phase of a project as well as the practices that support long-term preservation, access, and use after the project has been completed. These activities can include planning, documenting data, formatting data, storing data, anonymizing data, and controlling access to data.



In addition to complying with federal policy, a successful RDM deployment will help the University of Calgary achieve “Growth through Focus” by delivering:

- High quality research and publications by increasing data effectiveness throughout the research life cycle
- Data curation and metadata creation to allow data sharing for open scientific inquiry
- Data sharing to support the verification and replication of original results
- Lower cost of creating data
- Greater visibility and overall impact of research projects

The cost of data sharing is accumulative throughout the different phases of the research lifecycle. The FAIR (Findability, Accessibility, Interoperability and Reuse) guiding principle of digital assets makes it important to store data in discoverable and accessible ways. Responsibility of data management can shift as the data moves through its life cycle. Data curation from Create to Preserve life cycle phases generates costs that may be difficult to predict and allocate responsibility for. Complying with the new policy means that each research project will have to allocate these costs in the planning phase. These costs include infrastructure for data preservation, complex data management system, data curation team (data scientists and software programmers) and enterprise tools that manage the Use and Reuse phases in the life cycle.

The FAIR guiding principles point at the current gaps in tooling the RDM in research life cycle. There have been institutional and national initiatives to address some of these costs. Dataverse is an example of a database management RDM tool used in libraries in institutions including UCalgary to help researchers with 3GB or less of research data to be annotated and shared with other researchers. At a national level Portage, under the national digital infrastructure framework, is building a national data preservation platform for researchers who want to comply with the data sharing policy.

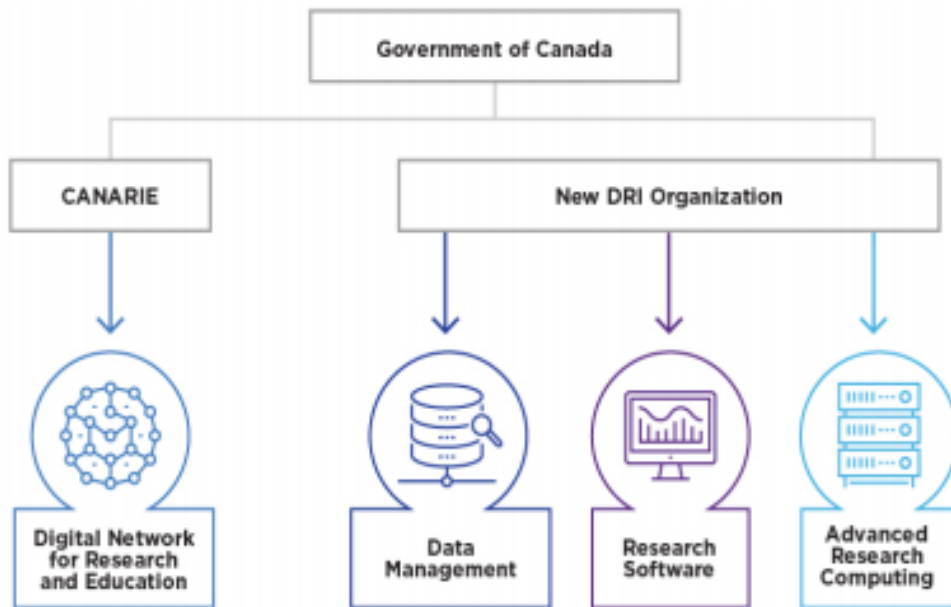
In summary, RDM cost is the main reason why most researchers steer away from the idea of sharing their data. The hidden costs in each phase in data life cycle are not well represented in the analysis of RDM costs which is a cause of great frustration in the research community. Since all Canadian institutions must comply with the policy and because there will likely be common challenges and economies of scale, partnership with other institutions will be important. Consideration could be given to creating a provincial platform that all Alberta institutes can share. Alternatively, UCalgary could position itself as a provider of RDM services to other institutions.

## **4. Context and Considerations**

### **4.1 Accessing National Resources**

We have some of the highest intensive computational research needs of any institution in Canada, and a history of successfully accessing national platforms and programs for project support. In 2018 UCalgary held three CANARIE Research Software Program grants, more than any other single institution in Canada, while our research teams rank second nationally in CPU/GPU usage of Compute Canada infrastructure. A large portion of this usage is supported through competitive programs such as the national research allocation competition which is increasingly unable to accommodate national demand.

The evolving national landscape is transitioning federal resources from Compute Canada to Canada's New Digital Research Infrastructure Organization (NDRIO). Federal budget 2018 committed \$572.5 million to the coordinated DRI strategy. At the time it was recognized that delivery of Canada's DRI ecosystem had become highly distributed across multiple delivery layers with an urgent need for new formal mechanisms to ensure coordination and planning. The new streamlined structure includes responsibilities for high-speed connectivity and research software development under CANARIE (\$125m), and coordinated data management, research software support and ARC under the NDRIO (\$350m). Federal investment of \$100m was also allocated immediately to enhance existing Compute Canada HPC host sites.



We are a member of the NDRIO which was launched March 2021 and began to develop strategy for delivery of its three focus mandates. National consultations are taking place and Compute Canada will transition fully to the NDRIO by 2022. Of direct impact for UCalgary is assurance of continued access, at the current level or greater, to the national platform; half of our computational HPC load typically runs on Compute Canada HPC clusters.

Opportunity exists to leverage our recent internal investments, our strong presence in national staffing, and our active research participation to compete for national host site status and resources going forward. Alberta is one of the few provinces lacking a nationally supported host site. We anticipate opportunity in the next several years to address this regional disparity. The NDRIO funding model is expected to support national initiatives at 100% total budget (no provincial match required) and regional initiatives at 25%.

While the new federal investments are positive, our national platforms are not intended to support all of Canada’s anticipated HPC and research data storage needs. National platform usage will continue to be awarded on a competitive basis to a fraction of the requests received. **We anticipate best supporting our research and innovation needs through a hybrid approach: building local capacity aligned with our strategies (e.g. secure compute for precision health) while capitalizing on NDRIO opportunities for resources, funding and staffing.**

#### 4.2 Research Computing Services (RCS) Model Expansion

Our current RCS team is funded (5.5 FTE) by Compute Canada to support the national platform for researchers across Canada; the magnitude of this central funding ranks in the top three nationally in such support activities among hundreds of data analysts nationwide. Such internal investments have paid off: they have contributed to UCalgary’s increased research revenue, and have been successfully leveraged to assert national leadership and access other sources of federal funding.

Given this success to date and the inevitable further growth in demand for RCS services as research methodologies become increasingly complex, continued increases in investment will be needed. Besides investment in existing platforms, judicious expansion of our existing offerings will allow

further success. For example, an emerging focus is research software development and specialized technical and scientific support to work collaboratively with research teams. Consultations were recently conducted on campus with over 120 research PIs to determine tools that would solve the most common problems in HPC research projects. They identified the need for data pipeline management and alternatives to machine learning library tools that are prohibitively expensive or time-consuming to develop.

Our RCS team subsequently won a \$600k CANARIE national grant (over three years) to build a Local Research Software Support Team in data pipeline management. By facilitating the development and coordinating the implementation of research software services, we can open new pathways to currently inaccessible data at UCalgary and across Canada for computational research in medical and scientific fields. Ours is a collaborative model integrating central technical staff and academics to address practical data challenges and drive digital data innovations. This type of logical expansion of our existing RCS program will make us national leaders and elevate our capacity to access future federal opportunities.

We can expand our service model, building on our federal CANARIE grant, to more proactively facilitate researchers' data acquisition and curation, and implement novel computational approaches for advantage over their global peer groups. Under our central RCS model these new tools can be equally applied to confidential and non-confidential data enabling broad application for health/non-health databases – unlike the siloed approaches at other institutions. We can also capitalize on our ARC assets to more broadly serve the HPC needs of our innovation hubs, University Research Park (UIQ) and affiliated partners.

## 5. Opportunities

High-performance computing, networking and data management are critical to our research enterprise. UCalgary has made substantial investments in infrastructure and human capacity to build a strong RCS platform that has supported our researchers' success and returned tangible return on investment through federal funding opportunities. Given the increasingly data-intensive nature of research, our institution's research performance will increasingly be driven by, or limited by, our adoption of advanced computing and connectivity approaches. We strive to provide our research teams competitive advantage in harnessing the power of digital transformation. This will require sustaining and enhancing our current offerings as well as strategically expanding in areas that strengthen our research and innovation capacity. Some examples are provided here.

***Industrial HPC:*** HPC and other IT services could be offered to commercial entities that extend beyond research collaboration projects with the University. HPC would be the centre technology in this relationship since it represents a unique alternative to HPC cloud computing (Amazon AWS, Microsoft Azure and Google Cloud). Through Innovate Calgary our HPC related services could be offered to Alberta's industrial sector on a short-term cost recovery basis. WD funding could be pursued to support a pilot for building a better understanding of the size and needs of Canada's HPC market, helping software developers acquire the skills to operate HPC at an industrial scale, helping firms build their capacity to use HPC, and building new capacity for our innovation strategy. Once a business model is defined from the pilot stage, a sustainable approach to HPC and even expanded ICT testbeds could be formalized. In addition to such service offerings, our Industry Liaison Office would facilitate strategic industry collaborations with discipline-specific research teams for broader research and development efforts including internships for student research and co-invention.

**Research Collaboration:** UCalgary researchers have internationally recognized expertise in data science, and specifically in the discipline of health analytics. Opportunities exist to leverage this expertise. For example, Alberta has one of the largest, most mature, detailed and comprehensive health system data depositories in Canada, and UCalgary researchers are world leaders in the taxonomy/ontology, research design and analysis of confidential health data. This expertise and the associated access to high-quality health data are potentially attractive to partners in industry (e.g through the Real World Evidence Consortium or IMPACT) but also to researchers based at other academic institutions. Services offered could extend from secure storage and HPC analysis of confidential health data to research consulting and/or bespoke analytical services. Success would primarily depend on mechanisms to attract and retain additional highly qualified personnel who could support UCalgary faculty to provide these services.

**Research Data Management (RDM):** Every Canadian institution must comply with the Tri-Agency Research Data Management Policy, but our discussions with colleagues across the country reveal that few have made tangible steps toward compliance or even toward fully understanding the requirements. In addition, smaller institutions may struggle to comply with the policy on their own, given the requisite investments in infrastructure. This offers a significant opportunity for leadership as a provider of RDM services: including data storage, but also consulting on how to determine requirements, implement a solution, and support further growth. UCalgary's prior investments in RCS infrastructure and the associated human capacity have positioned us well for success in this.

## **6. Summary**

Overall we adopt a hybrid approach for resourcing HPC, research data management and research software support: continuing to make strategic internal investments while capitalizing on national resources and opportunities. This includes extending our managed HPC services and secure computing – two unique offerings that differentiate UCalgary on the national landscape – and exploring expanded models for industrial HPC and related advanced technology testbeds.



**GENERAL FACULTIES COUNCIL  
INFORMATION BRIEFING NOTE**

**SUBJECT:**           **Approved 2021-2022 and 2022-2023 GFC and GFC Standing Committees Meeting Schedules**

**PURPOSE**

The 2021-2022 and 2022-2023 meeting schedules for the General Faculties Council (GFC) and the GFC standing committees are presented to the Committee for information.

**KEY CONSIDERATIONS/POINTS**

The University Secretariat has prepared the schedules to allow for the efficient flow of items through the governance system. The schedules are very similar to the current schedule in terms of the number of meetings and the placement of those meetings.

Some of the factors considered when setting the schedules are as follows:

- The need for periodic meetings throughout the academic year to allow business to continue moving through the governance system at pace
- The Board of Governors calendars to ensure the proper flow of governance items
- Preparation and review time for business
- Time between committee meetings and between committee and GFC meetings that allows for revision of items before the next committee/board if required
- Recurring University events, such as convocation and term breaks
- Management schedules

**BACKGROUND**

The GFC Executive Committee approves the GFC and GFC standing committees meeting schedules.

**ROUTING AND PERSONS CONSULTED**

<u>Progress</u>	<u>Body</u>	<u>Date</u>	<u>Approval</u>	<u>Recommendation</u>	<u>Discussion</u>	<u>Information</u>
	GFC Executive Committee	2021-02-24	X			
	Academic Program Subcommittee	2021-03-08				X
X	General Faculties Council	2021-03-11				X
	Academic Planning and Priorities Committee	2021-03-15				X
	Teaching and Learning Committee	2021-03-16				X

Graduate Academic Program Subcommittee	2021-03-17	X
Calendar and Curriculum Subcommittee	2021-03-18	X
Research and Scholarship Committee	2021-03-18	X
GFC Executive Committee	2021-03-24	X
Campus and Facilities Development Subcommittee	2021-04-20	X

### **NEXT STEPS**

Continuing members are asked to put the meetings in their calendars.

The schedules will be posted on the GFC webpage.

If adjustments to a meeting schedule are needed after approval, the University Secretariat will make the adjustments in coordination with the appropriate GFC standing committee Co-Chairs and communicate as appropriate.

### **SUPPORTING MATERIALS**

1. GFC and GFC Standing Committees Meeting Schedule for 2021-2022
2. GFC and GFC Standing Committees Meeting Schedule for 2022-2023

<b>2021-22 University of Calgary General Faculties Council and Standing Committees Schedule</b>			
	<b>Date</b>	<b>Time</b>	<b>Location</b>
<b>General Faculties Council Meetings</b>			
GFC Orientation	Thursday, September 9, 2021	1:30 – 3:00 pm	TBD
regular meeting	Thursday, October 7, 2021	1:30 – 4:30 pm	TBD
regular meeting	Thursday, November 4, 2021	1:30 – 4:30 pm	TBD
regular meeting	Thursday, December 9, 2021	1:30 – 4:30 pm	TBD
regular meeting	Thursday, January 13, 2022	1:30 – 4:30 pm	TBD
regular meeting	Thursday, February 10, 2022	1:30 – 4:30 pm	TBD
regular meeting	Thursday, March 10, 2022	1:30 – 4:30 pm	TBD
regular meeting	Thursday, April 7, 2022	1:30 – 4:30 pm	TBD
regular meeting	Thursday, May 12, 2022	1:30 – 4:30 pm	TBD
regular meeting	Thursday, June 16, 2022	1:30 – 4:30 pm	TBD
<b>Standing Committee Meetings</b>			
Standing Committees Orientation	Wednesday, September 8, 2021	1:30 – 3:00 pm	TBD
Standing Committee Chairs Orientation	TBD		TBD
<b>Academic Planning and Priorities Committee</b>			
regular meeting	Monday, September 27, 2021	2:00 – 4:00 pm	TBD
regular meeting	Monday, October 18, 2021	2:00 – 4:00 pm	TBD
regular meeting	Monday, November 1, 2021	2:00 – 4:00 pm	TBD
regular meeting	Monday, November 22, 2021	2:00 – 4:00 pm	TBD
regular meeting	Monday, December 13, 2021	2:00 – 4:00 pm	TBD
regular meeting	Monday, January 10, 2022	2:00 – 4:00 pm	TBD
regular meeting	Monday, January 31, 2022	2:00 – 4:00 pm	TBD
regular meeting	Monday, February 14, 2022	2:00 – 4:00 pm	TBD
regular meeting	Monday, March 14, 2022	2:00 – 4:00 pm	TBD
regular meeting	Monday, March 28, 2022	2:00 – 4:00 pm	TBD
regular meeting	Monday, April 11, 2022	2:00 – 4:00 pm	TBD
regular meeting	Monday, May 2, 2022	2:00 – 4:00 pm	TBD
regular meeting	Monday, May 16, 2022	2:00 – 4:00 pm	TBD
regular meeting	Monday, June 6, 2022	2:00 – 4:00 pm	TBD
regular meeting	Monday, June 20, 2022	2:00 – 4:00 pm	TBD
<b>Academic Program Subcommittee</b>			
regular meeting	Monday, September 20, 2021	2:00 – 4:00 pm	TBD
regular meeting	Monday, October 4, 2021	2:00 – 4:00 pm	TBD
regular meeting	Monday, November 15, 2021	2:00 – 4:00 pm	TBD
regular meeting	Monday, December 6, 2021	2:00 – 4:00 pm	TBD
regular meeting	Monday, January 17, 2022	2:00 – 4:00 pm	TBD
regular meeting	Monday, March 7, 2022	2:00 – 4:00 pm	TBD
regular meeting	Monday, April 4, 2022	2:00 – 4:00 pm	TBD
regular meeting	Monday, May 9, 2022	2:00 – 4:00 pm	TBD
<b>Calendar and Curriculum Subcommittee</b>			
regular meeting	Thursday, September 23, 2021	9:00 – 11:00 am	TBD
regular meeting	Thursday, October 21, 2021	9:00 – 11:00 am	TBD
regular meeting	Thursday, November 18, 2021	9:00 – 11:00 am	TBD
regular meeting	Thursday, December 16, 2021	9:00 – 11:00 am	TBD
regular meeting	Thursday, January 20, 2022	9:00 – 11:00 am	TBD
regular meeting	Thursday, February 17, 2022	9:00 – 11:00 am	TBD
regular meeting	Thursday, March 17, 2022	9:00 – 11:00 am	TBD
regular meeting	Thursday, April 21, 2022	9:00 – 11:00 am	TBD
regular meeting	Thursday, May 19, 2022	9:00 – 11:00 am	TBD

<b>Campus and Facilities Development Subcommittee</b>			
regular meeting	Tuesday, October 19, 2021	9:00 – 11:00 am	TBD
regular meeting	Tuesday, December 14, 2021	9:00 – 11:00 am	TBD
regular meeting	Tuesday, February 8, 2022	9:00 – 11:00 am	TBD
regular meeting	Tuesday, April 19, 2022	9:00 – 11:00 am	TBD
<b>GFC Executive Committee</b>			
regular meeting	Wednesday, September 15, 2021	2:00 – 4:00 pm	TBD
regular meeting	Wednesday, October 20, 2021	2:00 – 4:00 pm	TBD
regular meeting	Wednesday, November 24, 2021	2:00 – 4:00 pm	TBD
regular meeting	Wednesday, December 15, 2021	2:00 – 4:00 pm	TBD
regular meeting	Wednesday, January 26, 2022	2:00 – 4:00 pm	TBD
regular meeting	Wednesday, February 23, 2022	2:00 – 4:00 pm	TBD
regular meeting	Wednesday, March 23, 2022	2:00 – 4:00 pm	TBD
regular meeting	Wednesday, April 27, 2022	2:00 – 4:00 pm	TBD
regular meeting	Wednesday, May 25, 2022	2:00 – 4:00 pm	TBD
<b>Graduate Academic Program Subcommittee</b>			
regular meeting	Wednesday, September 22, 2021	2:00 – 4:00 pm	TBD
regular meeting	Wednesday, October 20, 2021	2:00 – 4:00 pm	TBD
regular meeting	Wednesday, November 17, 2021	2:00 – 4:00 pm	TBD
regular meeting	Wednesday, December 15, 2021	2:00 – 4:00 pm	TBD
regular meeting	Wednesday, January 19, 2022	2:00 – 4:00 pm	TBD
regular meeting	Wednesday, February 16, 2022	2:00 – 4:00 pm	TBD
regular meeting	Wednesday, March 16, 2022	2:00 – 4:00 pm	TBD
regular meeting	Wednesday, April 20, 2022	2:00 – 4:00 pm	TBD
regular meeting	Wednesday, May 18, 2022	2:00 – 4:00 pm	TBD
<b>Research and Scholarship Committee</b>			
regular meeting	Thursday, September 23, 2021	2:00 – 4:00 pm	TBD
regular meeting	Thursday, October 21, 2021	2:00 – 4:00 pm	TBD
regular meeting	Thursday, November 18, 2021	2:00 – 4:00 pm	TBD
regular meeting	Thursday, December 16, 2021	2:00 – 4:00 pm	TBD
regular meeting	Thursday, January 20, 2022	2:00 – 4:00 pm	TBD
regular meeting	Thursday, February 17, 2022	2:00 – 4:00 pm	TBD
regular meeting	Thursday, March 17, 2022	2:00 – 4:00 pm	TBD
regular meeting	Thursday, April 21, 2022	2:00 – 4:00 pm	TBD
regular meeting	Thursday, May 19, 2022	2:00 – 4:00 pm	TBD
<b>Teaching and Learning Committee</b>			
regular meeting	Tuesday, September 21, 2021	2:00 – 4:00 pm	TBD
regular meeting	Tuesday, October 19, 2021	2:00 – 4:00 pm	TBD
regular meeting	Tuesday, November 16, 2021	2:00 – 4:00 pm	TBD
regular meeting	Tuesday, December 14, 2021	2:00 – 4:00 pm	TBD
regular meeting	Tuesday, January 18, 2022	2:00 – 4:00 pm	TBD
regular meeting	Tuesday, February 15, 2022	2:00 – 4:00 pm	TBD
regular meeting	Tuesday, March 15, 2022	2:00 – 4:00 pm	TBD
regular meeting	Tuesday, April 19, 2022	2:00 – 4:00 pm	TBD
regular meeting	Tuesday, May 17, 2022	2:00 – 4:00 pm	TBD

<b>2022-23 University of Calgary General Faculties Council and Standing Committees Schedule</b>			
	<b>Date</b>	<b>Time</b>	<b>Location</b>
<b>General Faculties Council Meetings</b>			
GFC Orientation	Thursday, September 8, 2022	1:30 – 3:00 pm	TBD
regular meeting	Thursday, October 6, 2022	1:30 – 4:30 pm	TBD
regular meeting	Thursday, November 3, 2022	1:30 – 4:30 pm	TBD
regular meeting	Thursday, December 8, 2022	1:30 – 4:30 pm	TBD
regular meeting	Thursday, January 12, 2023	1:30 – 4:30 pm	TBD
regular meeting	Thursday, February 9, 2023	1:30 – 4:30 pm	TBD
regular meeting	Thursday, March 9, 2023	1:30 – 4:30 pm	TBD
regular meeting	Thursday, April 6, 2023	1:30 – 4:30 pm	TBD
regular meeting	Thursday, May 11, 2023	1:30 – 4:30 pm	TBD
regular meeting	Thursday, June 15, 2023	1:30 – 4:30 pm	TBD
<b>Standing Committee Meetings</b>			
Standing Committees Orientation	Wednesday, September 7, 2022	1:30 – 3:00 pm	TBD
Standing Committee Chairs Orientation	TBD		TBD
<b>Academic Planning and Priorities Committee</b>			
regular meeting	Monday, September 26, 2022	2:00 – 4:00 pm	TBD
regular meeting	Monday, October 17, 2022	2:00 – 4:00 pm	TBD
regular meeting	Monday, October 31, 2022	2:00 – 4:00 pm	TBD
regular meeting	Monday, November 21, 2022	2:00 – 4:00 pm	TBD
regular meeting	Monday, December 12, 2022	2:00 – 4:00 pm	TBD
regular meeting	Monday, January 9, 2023	2:00 – 4:00 pm	TBD
regular meeting	Monday, January 30, 2023	2:00 – 4:00 pm	TBD
regular meeting	Monday, February 13, 2023	2:00 – 4:00 pm	TBD
regular meeting	Monday, March 13, 2023	2:00 – 4:00 pm	TBD
regular meeting	Monday, March 27, 2023	2:00 – 4:00 pm	TBD
regular meeting	Monday, April 17, 2023	2:00 – 4:00 pm	TBD
regular meeting	Monday, May 1, 2023	2:00 – 4:00 pm	TBD
regular meeting	Monday, May 15, 2023	2:00 – 4:00 pm	TBD
regular meeting	Monday, June 5, 2023	2:00 – 4:00 pm	TBD
regular meeting	Monday, June 19, 2023	2:00 – 4:00 pm	TBD
<b>Academic Program Subcommittee</b>			
regular meeting	Monday, September 19, 2022	2:00 – 4:00 pm	TBD
regular meeting	Monday, October 3, 2022	2:00 – 4:00 pm	TBD
regular meeting	Monday, November 14, 2022	2:00 – 4:00 pm	TBD
regular meeting	Monday, December 5, 2022	2:00 – 4:00 pm	TBD
regular meeting	Monday, January 16, 2023	2:00 – 4:00 pm	TBD
regular meeting	Monday, March 6, 2023	2:00 – 4:00 pm	TBD
regular meeting	Monday, April 3, 2023	2:00 – 4:00 pm	TBD
regular meeting	Monday, May 8, 2023	2:00 – 4:00 pm	TBD
<b>Calendar and Curriculum Subcommittee</b>			
regular meeting	Thursday, September 22, 2022	9:00 – 11:00 am	TBD
regular meeting	Thursday, October 20, 2022	9:00 – 11:00 am	TBD
regular meeting	Thursday, November 17, 2022	9:00 – 11:00 am	TBD
regular meeting	Thursday, December 15, 2022	9:00 – 11:00 am	TBD
regular meeting	Thursday, January 19, 2023	9:00 – 11:00 am	TBD
regular meeting	Thursday, February 16, 2023	9:00 – 11:00 am	TBD
regular meeting	Thursday, March 16, 2023	9:00 – 11:00 am	TBD
regular meeting	Thursday, April 20, 2023	9:00 – 11:00 am	TBD
regular meeting	Thursday, May 18, 2023	9:00 – 11:00 am	TBD

<b>Campus and Facilities Development Subcommittee</b>			
regular meeting	Tuesday, October 18, 2022	9:00 – 11:00 am	TBD
regular meeting	Tuesday, December 13, 2022	9:00 – 11:00 am	TBD
regular meeting	Tuesday, February 7, 2023	9:00 – 11:00 am	TBD
regular meeting	Tuesday, April 18, 2023	9:00 – 11:00 am	TBD
<b>GFC Executive Committee</b>			
appointment-work meeting, if needed	Wednesday, August 31, 2022	2:00 – 4:00 pm	TBD
regular meeting	Wednesday, September 21, 2022	2:00 – 4:00 pm	TBD
regular meeting	Wednesday, October 19, 2022	2:00 – 4:00 pm	TBD
regular meeting	Wednesday, November 23, 2022	2:00 – 4:00 pm	TBD
regular meeting	Wednesday, December 14, 2022	2:00 – 4:00 pm	TBD
regular meeting	Wednesday, January 25, 2023	2:00 – 4:00 pm	TBD
regular meeting	Wednesday, February 22, 2023	2:00 – 4:00 pm	TBD
regular meeting	Wednesday, March 22, 2023	2:00 – 4:00 pm	TBD
regular meeting	Wednesday, April 26, 2023	2:00 – 4:00 pm	TBD
regular meeting	Wednesday, May 24, 2023	2:00 – 4:00 pm	TBD
<b>Graduate Academic Program Subcommittee</b>			
regular meeting	Wednesday, September 21, 2022	2:00 – 4:00 pm	TBD
regular meeting	Wednesday, October 19, 2022	2:00 – 4:00 pm	TBD
regular meeting	Wednesday, November 16, 2022	2:00 – 4:00 pm	TBD
regular meeting	Wednesday, December 14, 2022	2:00 – 4:00 pm	TBD
regular meeting	Wednesday, January 18, 2023	2:00 – 4:00 pm	TBD
regular meeting	Wednesday, February 15, 2023	2:00 – 4:00 pm	TBD
regular meeting	Wednesday, March 15, 2023	2:00 – 4:00 pm	TBD
regular meeting	Wednesday, April 19, 2023	2:00 – 4:00 pm	TBD
regular meeting	Wednesday, May 17, 2023	2:00 – 4:00 pm	TBD
<b>Research and Scholarship Committee</b>			
regular meeting	Thursday, September 22, 2022	2:00 – 4:00 pm	TBD
regular meeting	Thursday, October 20, 2022	2:00 – 4:00 pm	TBD
regular meeting	Thursday, November 17, 2022	2:00 – 4:00 pm	TBD
regular meeting	Thursday, December 15, 2022	2:00 – 4:00 pm	TBD
regular meeting	Thursday, January 19, 2023	2:00 – 4:00 pm	TBD
regular meeting	Thursday, February 16, 2023	2:00 – 4:00 pm	TBD
regular meeting	Thursday, March 16, 2023	2:00 – 4:00 pm	TBD
regular meeting	Thursday, April 20, 2023	2:00 – 4:00 pm	TBD
regular meeting	Thursday, May 18, 2023	2:00 – 4:00 pm	TBD
<b>Teaching and Learning Committee</b>			
regular meeting	Tuesday, September 20, 2022	2:00 – 4:00 pm	TBD
regular meeting	Tuesday, October 18, 2022	2:00 – 4:00 pm	TBD
regular meeting	Tuesday, November 15, 2022	2:00 – 4:00 pm	TBD
regular meeting	Tuesday, December 13, 2022	2:00 – 4:00 pm	TBD
regular meeting	Tuesday, January 17, 2023	2:00 – 4:00 pm	TBD
regular meeting	Tuesday, February 14, 2023	2:00 – 4:00 pm	TBD
regular meeting	Tuesday, March 14, 2023	2:00 – 4:00 pm	TBD
regular meeting	Tuesday, April 18, 2023	2:00 – 4:00 pm	TBD
regular meeting	Tuesday, May 16, 2023	2:00 – 4:00 pm	TBD



**GENERAL FACULTIES COUNCIL EXECUTIVE COMMITTEE**  
**Report to General Faculties Council**  
**for the meeting held February 24, 2021**

This report is submitted on behalf of the General Faculties Council (GFC) Executive Committee (EC).

**Approval of the GFC and GFC Standing Committees Meeting Schedules for 2021-2022 and 2022-2023**

The EC reviewed and approved the GFC and GFC standing committees meeting schedules for 2021-2022 and 2022-2023.

**2020-2021 GFC Evaluation**

The EC discussed a proposal that the GFC evaluation not be conducted for 2020-2021 and return for the 2021-2022 meeting year in light of COVID-19 and the shift to virtual meetings and alternative processes to accommodate the environment. The EC was reminded that the GFC member evaluation has been skipped from time to time in the past and it was noted that most of the feedback received last year related to the format of in-person meetings and this will be considered and addressed once in-person meetings are resumed. The EC heard that all GFC members are invited to provide feedback to the Chair and Secretariat at any time and that this will be communicated to members this year.

The EC discussed:

- Gathering feedback on the virtual meetings, and it was observed that attendance has been higher for virtual meetings and there might be an appetite for a hybrid of in-person and virtual meetings once the University returns to on-campus activities. The University Secretary reported that spaces are being reviewed in order to identify a location suitable for such a hybrid model for meetings, if possible.
- In response to feedback, during this year presenters have been asked to limit their presentations to five slides and ten minutes to allow more time for engagement of GFC members in discussions
- GFC evaluations are welcomed and useful for soliciting feedback, and when evaluations resume the format of holding an evaluation session at a meeting was encouraged

It was determined that a formal 2020-2021 GFC member evaluation would not be held. Any members of GFC who wish to provide feedback on the operations of GFC can communicate to the Chair, Vice-Chair or University Secretariat.

**Review of the Draft March 11, 2021 GFC Agenda**

The EC reviewed the draft agenda for the March 11, 2021 GFC meeting and made some suggestions for revision.







**ACADEMIC PLANNING AND PRIORITIES COMMITTEE**  
**Report to General Faculties Council (GFC)**  
**for the meeting held February 22, 2021**

This report is submitted on behalf of the Academic Planning and Priorities Committee (APPC).

**Approval of the Suspension/Termination of the Programs in Earth Science**

The APPC reviewed the proposal, learning that low enrolment in the Earth Science programs and a higher interest in Geology and Geophysics programs are key reasons for the programs' proposed closures.

The APPC learned that the Earth Science programs were, in the past, sometimes used as a stepping stone to the Geology and Geophysics programs, as Earth Science offered students preferential access to courses in these programs. Since the admission averages in the Earth Science and Geology and Geophysics programs are now comparable, interest in Earth Science has decreased significantly.

The APPC discussed the multidisciplinary nature of the course offerings, which will continue to be offered for students in other programs, that there will be no staffing implications as a result of the closure, and the student survey data used to measure program engagement and interest.

The APPC approved the suspension, effective for Fall 2022 admissions, and eventual termination of the following programs in Earth Science: Bachelor of Science (BSc), BSc Honours (Hons), BSc and BSc Hons with Co-operative Education, and Minor.

**Approval of the Consolidation of the Consolidation of Programs in German, Italian Studies, and Russian**

- **Suspension/Termination of the BA, BA Hons, BA and BA Hons Co-op in German**
- **Suspension/Termination of the BA and BA Co-op in Italian Studies**
- **Suspension/Termination of the BA, BA Hons, BA and BA Hons Co-op in Russian**
- **Creation of the BA, BA Hons, BA and BA Hons Co-op in Language and Culture**

The APPC reviewed the proposal, learning that the proposed program consolidates the majors in German, Italian Studies, Russian, and Arabic Language and Muslim Cultures into one Bachelor of Arts (BA) program, and that the program will contribute to an ethnically diverse city, integrate with key University strategies and frameworks, offer multidisciplinary and flexibility and prepare students for both the workforce and graduate studies.

The APPC discussed that there will be no staffing implications as a result of the programs' consolidation, that students are able to but do not often choose to complete both an Honours and Co-operative Education program, the available accommodations for students in-program, plans to incorporate other languages into the BA in the future, and enrolment estimates.

The Committee suggested minor editorial changes and that it be made clear to the Ministry of Advanced Education that enrolment estimates are intentionally conservative, with anticipated growth over time.

The APPC approved the suspension and termination of the programs in German, Italian Studies and Russian, as well as the creation of the BA, BA Honours (Hons), and BA and BA Hons with Co-operative Education programs in Language and Culture.

### **Approval of the Creation of a Non-Credit Marketing Fundamentals Certificate**

The APPC reviewed the proposal, learning that the proposed certificate will offer five core courses over 100 hours that are geared towards individuals with little to no experience with or knowledge about marketing, and that there is a strong appetite amongst Continuing Education students for concentrated programs that provide credentials in a short timeframe.

The APPC discussed Continuing Education's process for offering advanced standing to students, how open enrolment affects enrolment estimates in this program, and the use of Burning Glass Technologies for the purposes of labour market analyses.

The APPC approved the creation of a non-credit Marketing Fundamentals Certificate.

### **2020 National Survey of Student Engagement (NSSE) Institutional Results**

The Vice-Provost (Teaching and Learning) presented a report on the 2020 National Survey of Student Engagement (NSSE) Institutional Results, highlighting that the University conducts the survey every two to three years, that it targets first-year and senior undergraduate students, the nature and focus of the survey questions and how responses are analyzed and interpreted.

The APPC reviewed the 2020 survey results, discussing the few areas where the University came in below comparators and what factors might have impacted these results, such as the diversity of the student body, the number of first-generation students, the split between full and part-time registrants, the commuter campus, and the city's and province's challenging economic circumstances.

The APPC learned that it can be particularly difficult to see an increase in satisfaction with student services at large-scale institutions that already have well-established and robust student service offerings, and it was noted that the University has made great strides in recent years to connect various administrative units to encourage enhancements to student services and the overall student experience.

### **Report of the Student Ombuds**

The Vice-Provost (Student Experience) and the University Ombudsperson provided a report on the business of the Student Ombuds Office (SOO) for the 2019-2020 academic year, highlighting the history and function of the SOO, the SOO's partnerships with other units on campus, the busyness of the SOO, and an overview of the trends in case distribution.

The APPC discussed the role of the Ombudsperson on campus and the supports offered to satellite and remote campuses.

### **Approval of Changes to Section P. Tuition and General Fees in the University Calendar**

The APPC reviewed the proposed changes, which respond to the new 2021-2022 approved tuition rates, reorganize information for better flow, capture new programs offered, and ensure compliance with the Alberta tuition framework.

The APPC discussed differential general fees for distance education programs, noting that Social Work is the only Faculty pre-approved for partnerships across the province, which is why it is the only Faculty listed in this section of the Calendar.

The APPC approved the changes to Section P. *Tuition and Fees* in the University Calendar.

### **Approval of Changes to Indigenous Admission Regulations**

The APPC reviewed the proposed changes, which respond to a 2018 review to uncover key issues that Indigenous students face when applying for admission to the University. The proposed admissions regulations are divided into three streams: the Indigenous Admissions Process, which relates to a student's admission average; the Indigenous Student Access Program, which offers transition and bridging supports to students entering the University; and the Indigenous Admissions Supplementary Process, which encourages Faculty-specific admission requirements to support Indigenous students' success in particular programs.

The APPC discussed the Indigenous Admissions Principles, which were established in consultation with the Vice-Provost (Indigenous Engagement) and a Circle of Advisors, as well as with input from Elders and Knowledge Keepers within the University's Indigenous community, and how these Principles informed the proposed regulations. The APPC also discussed the risk of complexity in these processes, the Registrar's Indigenous recruiter and a support team who mitigate this, how requests for supplemental information are perceived by the Indigenous community and the flexibility built into these requests, and how these processes fit within the Indigenous Strategy.

The APPC approved the changes to the Indigenous Admission Regulations.

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Prepared by the University Secretariat on behalf of Dru Marshall, Co-Chair, and Tara Beattie, Academic Co-Chair





## **RESEARCH AND SCHOLARSHIP COMMITTEE**

### **Report to General Faculties Council for the meeting held February 18, 2021**

This report is submitted on behalf of the Research and Scholarship Committee (RSC).

#### **Research Impact Assessment**

The RSC was informed that the University became a signatory to the San Francisco Declaration on Research Assessment (DORA) in January 2021. The RSC then received a presentation reminding of the DORA principles and providing information on the University's Knowledge Engagement Impact Evaluation Framework Project which is funded by a Research Impact Canada grant. The RSC learned that this project will establish a research impact assessment framework, develop an impact evaluation tool for use by researchers, and produce a video series for training and to promote the use of the framework.

In response to questions, it was explained that:

- The University's Knowledge Engagement Unit is studying other research impact assessment frameworks, and will draw from these
- The Academic Staff Criteria and Processes Handbook aligns with the DORA principles for the assessment of research. It was noted that the Handbook is not a Research portfolio initiative, and it is expected that Faculties will be supported in its implementation by Human Resources.
- The Knowledge Engagement website is being rolled out in phases and will be fully functional during Summer 2021

The RSC discussed:

- How open access journals differ from other publication options, and that open access journals can promote research impact because of the accessibility
- That the University's research impact assessment framework can be customized to fit with the University's local, provincial and national context

#### **High Performance Computing/Secure Research Computing**

The RSC received a presentation on the high performance and secure computing initiative at the University, which serves to ensure that research teams are not limited by a lack of computing resources. The presenters reported on the office of Research Computing Services, provided an overview of what high performance computing is, highlighted the services provided, and presented statistics on the number of jobs done for Faculties and examples of supported projects.

In response to questions, it was reported that:

- The Research Computing Services high performance computing system includes the machinery housed in Math Sciences but not that in the Prairie Regional Research Data Centre
- Research Computing Services can assist in the preparation of grant proposals with high performance computing requirements

The RSC discussed that:

- The management services provided to Faculties by Research Computing Services is appreciated as a good partnership
- Researchers in the Arts are increasingly in the need for high performance computing, such as for video processing, large files, and Optical Character Recognition
- The Libraries and Cultural Resources unit operates the Prairie Regional Research Data Centre which archives data in a secure computer facility, and provides services such as for digitization

This presentation will be given at an upcoming GFC meeting.

### **Thoughts from the Growth Through Focus Congress**

At the request of a member, the RSC was given an opportunity to talk about the Growth Through Focus (GTF) Congress, and discussion included:

- The Faculty of Arts GTF Working Group is preparing a submission outlining concerns with GTF and would like to connect with similar groups from other Faculties so that the submission can reflect multiple perspectives
- Graduate students would like greater involvement in the development of GTF (graduate students are not represented in the GTF development working groups) and the work going forward
- Some of the language originally in GTF (e.g. “frontier” and “unstoppable”) was problematic,
- There is worry that some of the expressed concerns will not be reflected in the final version of GTF
- The University is experiencing a difficult time, with a provincial post-secondary system review underway, reduced funding, the impacts of COVID-19, and an economic recession, and it is necessary for the University to establish a plan for moving forward in a positive and strategic way. It is important that the persons participating in the GTF Congress and submitting comments through other means feel heard.
- There are three categories of feedback being heard: 1) comments about the GTF consultation process to date, 2) the importance of meaningfully weaving Equity, Diversity and Inclusion into GTF, and 3) comments on the Three Big Ideas in GTF (transdisciplinary scholarship, deeper community integration, and future-focused program delivery) and that the concept of entrepreneurship must be broadly defined
- The GTF Congress sessions opened with a pre-written statement about positive and charitable feedback, and some participants felt that this implied that they were being characterized as unconstructive naysayers rather than expressing genuine concerns.
- Some of the persons attending the GTF Congress sessions have conferred with their colleagues before attending, and represent the opinions of many people and not only themselves
- There is lack of clarity regarding if and how programs and units will be closed
- Some institutions are focusing on spending cuts, but the University is striving for revenue generation
- Continuing to cultivate a strong research enterprise at the University will draw researchers to the institution

## **Senate Meeting of February 10, 2021 – Report to GFC**

### **Remarks from the Chancellor**

Special thank you to Dru Marshall, as this was her last Senate meeting in her role as Provost.

### **Remarks from the President and Vice-Chancellor**

President Ed McCauley offered a general update on the University of Calgary's impact on the local economy, as noted in recent media reports. He emphasized the tremendous impact the university makes on the economy of the city, the province and beyond.

### **Honorary Degree Vote**

Possible candidates for honorary degrees were presented for voting. This item was conducted in camera.

### **Roundtable**

Calgary Youth Science Fair – Senators are encouraged to participate as judges.

GSA bursary for students during COVID. International students in particular are under financial stress during COVID.

### **Presentations (5:00 – 6:00 p.m.)**

**Chancellor's Circle.** Susan Wessels, Director, Student Awards and Strategic Initiatives presented on the impact of the Chancellor's Circle and changes to student scholarships that would benefit more students over time. Senators were invited to contribute financially, if possible.

**Creating a community of caring.** Meagan Podilchak, Associate Director, Individual Giving, presented on how the university is creating a community of caring, with a focus on how this work continues during the pandemic.

Respectfully submitted

Sarah Elaine Eaton, Rachel Lauer, & Ricky Ramadhane





# POLICY DEVELOPMENT PLAN (PDP) REPORT

as of 2021-03-01

Below is a list of all University Policies and Procedures currently in Consultation or recently Approved by the applicable Approval Authority.

Title	Stage	Drafting Team
Sexual Violence Policy	Consultation	Deborah Book; Carla Bertsch; Susan Barker; Mike Van Hee; Chris Stanley;
Student Non-Academic Misconduct Policy	Consultation	Deborah Book; Susan Barker; Jennifer Quin;

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