

# **Faculty of Engineering and Applied Science Response to the Academic Unit Review Report**

(Research, Graduate Studies and Services)

April 21, 2020

This document presents the responses of the Faculty of Engineering and Applied Science (FEAS) to the Report of the Review Committee (Research, Graduate Studies and Services) following a site visit conducted on May 6-7, 2019. All Engineering programs through Program Chairs and Graduate Program Coordinators had the opportunity to provide feedback on the recommendations made in the review report. Also, the FEAS Dean's Executive Group shared their thoughts on the recommendations made by the review committee (RC). This report reflects all the opinions and feedback received from FEAS members.

This report draft focuses on providing responses to the comments made by the Review Committee (RC) under the "Opportunities & Recommendations" addressed in a SWOT format in the review report for each of the seven topics:

- 1.0 Workload Management
- 2.0 Graduate Students Teaching & Learning
- 3.0 Space Challenges
- 4.0 Research Programs & Institutes
- 5.0 Service & Staff
- 6.0 Financial Resources
- 7.0 Fit to University Strategic Plan

## 1.0 Workload Management

### 1.1 Student Numbers

#### 1.1.1 Undergraduate enrollment should be kept stable for the time being until new resources become available

We welcome and agree with the RC recommendation to keep the student numbers stable for the time being. It is the FEAS estimates that enrollment beyond 1,000 undergraduate students with normal distribution among programs are unsustainable and should not be encouraged until new resources become available and are allocated to the FEAS. The majority of the programs are having healthy and stable enrollment. Low undergraduate enrollment seems to be more pronounced in the PSE program. The petroleum program is particularly facing testing times as enrollments are low and students are migrating to other programs within Engineering in response to the oil and gas downturn and scarce after-graduation job opportunities. Efforts are being made by FEAS to attract and maintain reasonable levels of enrollment for the Faculty in general but in particular for the PSE program. A Director of Outreach and Recruitment position was recently created to address this very challenge and improve enrollment levels, especially in PSE. The numbers FEAS saw three years ago (>1,400 students) were not sustainable. This was naturally corrected and stabilized at the ~900 level, we currently have, which seems to be the right number to sustain. FEAS is also working on a number of undergraduate student exchange programs with China and Taiwan. On the other hand, enrollment at the graduate level is very healthy and low enrollment is nonissue.

#### 1.1.2 Increase the class size of certain courses and give double credit to instructors who teach these courses

At the undergraduate level, this suggestion has already been addressed by limiting the class sizes for bigger classes and allowing teaching the same course with multiple sections and/or multiple offerings. At the graduate level, class size for graduate courses are reasonable and manageable the way they are. Additionally,

graduate courses can be taught in shorter than normal formats to allow research time to faculty members.

1.1.3 Consider synergies and make changes to achieve 1.5 years common for undergraduate programs, which will reduce the overall number of courses taught and can significantly impact the workload and release pressure on the system. This is not applicable at the graduate level. For the undergraduate programs, FEAS already has a common first year after which students apply to the program of their choice.

1.1.4 Increase Capstone project group size from 2-3 students to 3-4 students  
Capstone project group size is decided by the individual programs. This would typically depend on the level of enrollment and the number of faculty members in the program. Programs with large numbers of students like ISE, have groups of 3 to 4 students. Programs will be advised to look into increasing the size of their capstone project groups to encourage team work among students and, as such, ensuring fewer groups. The FEAS will look into the possibility of giving credit/incentive to faculty members, who supervise 3 groups or more, in the form of special recognition (i.e. certificate of appreciation) during Project Day. Normally, professors meet with their capstone project groups to discuss project progress, review project materials, ensure there is measurable deliverable with considerable design components, conduct presentation rehearsals to prepare them for the presentation day, review final technical reports, and participate in the program evaluation process. Considerable time and efforts are required hence the suggestion of special recognition.

## 1.2 Provide Incentives

1.2.1 Consider giving a one-class teaching relief to a top performer in each program (not including CRCs and Program Chairs) on a yearly basis. It will create a very healthy competitive environment in the Faculty and significantly boost morale. It should not be a significant burden as it will require allocation of 5 different courses to

sessional/instructors. It is anticipated that some of this cost can be recovered through increased research overhead.

The FEAS recently established the Research and Teaching Mentorship Award to provide additional time for academic staff to focus and engage in research; to develop a major proposal or work on major research projects. The award consists of a single undergraduate teaching relief. The intention is to grant a minimum of three awards to an academic staff member each year. All academic staff with research duties are eligible to apply for this award. Based on its success and available budget, the number of awards may be increased. The cost will be covered through the operating budget of FEAS.

### 1.3 CRC Teaching Loads

#### 1.3.1 Allow buy-out for one undergraduate course to Research Chairs

FEAS will explore the feasibility of a buy-out option. CRC's and Industry Chairs in FEAS get teaching relief of two courses per year. Each year, they have the option to teach two graduate courses, two undergraduate courses, or a combination of the two.

### 1.4 Marketing and Business Development

#### 1.4.1 A dedicated full-time new position in this area could be very helpful for FEAS revenue growth

A dedicated new position for a Faculty Advancement Coordinator (3-years full-time term position) has been created by the University to directly benefit the FEAS and assist with marketing and business development efforts. FEAS will work with the University to ensure that this position is permanently assigned to FEAS beyond the 3-year term.

## 1.5 Electronics Systems Engineering

- 1.5.1 It was mentioned that Electronic Systems Engineering were promised a Tier II CRC which subsequently did not materialize. This should be made the highest priority of FEAS if a CRC Chair becomes available to the Faculty

This Chair position was lost during the CRC Secretariat re-allocation process, decisions regarding Chairs are determined at the University level and not to any specific faculty/program in particular. In addition to ESE, PSE lost one CRC Tier II under the same unfortunate circumstances. When a CRC is available, FEAS solicits applications from all programs, screen and rank applications, and submit the top ones to the VPR for consideration by the University through the Council Committee on Research (CCR). The FEAS will encourage programs to apply for future CRC opportunities through this internally competitive process.

- 1.5.2 Investigate whether a name change for Electronics Systems Engineering might help address their perceived issue of disfavor by their NSERC Evaluation Group. The ESE program will be discussing rebranding and name modification with input from all stakeholders over the next year.

## 1.6 FEAS Strategic Planning

- 1.6.1 Bring in a facilitator to help with FEAS strategic planning

The FEAS is already working with personnel from HR and the VPR Office to help facilitate strategic planning sessions for the Faculty and to solicit stakeholders' input.

## 2.0 Graduate Students Teaching & Learning

### 2.1 Graduate Course Offerings

- 2.1.1 The faculty should take advantage of Western Canada Dean's Agreement that allows students to take approved online courses for credit

The FEAS is already taking advantage of the Western Canada Dean's Agreement that allows our students to take approved online courses for credit. Many Engineering graduate students have taken advantage of this agreement.

- 2.1.2 It is recommended that FGSR should coordinate and explore options for video conferencing of specific graduate courses which are high in demand but not offered at U of R

The FEAS appreciates and agrees with the RC recommendation, and would support actions taken by FGSR in this regard.

- 2.1.3 FEAS should also work with other Faculties on campus (especially Science) to jointly offer courses of common interest.

FEAS students take graduate courses from other faculties such as Science, Business, and Arts. Likewise, students from other faculties take graduate courses from FEAS.

## 2.2 Graduate Student Funding

- 2.2.1 An effort should be made to ensure a minimum funding model to attract and retain top quality grad students, especially at the PhD level

Currently the University has no requirements to accept students with any minimum funding model. This decision is made exclusively by the supervisor in consultation with the student. A large number of faculty members will have limited opportunity to attract graduate students if funding is required for acceptance. The FEAS will work with the University to explore the possibility of developing a funding model that provides minimum funding for PhD students. Nonetheless, there is an approved and implemented policy by the FEAS that allocates a total of \$35,000 to new tenure track faculty members. Of these funds, a minimum of \$20,000 has to be allocated to financially support, attract and retain graduate students. Likewise, the M.Eng. funds received by FEAS are distributed as follows: 45% to Dean's Office, 40% to Program, and 15% to supervisors. The latter two amounts could be used for student stipend. Finally, the line faculty funds

received from FGSR are directly used for graduate student stipend. FEAS has encouraged faculty members to apply for MITACS grants and the number of successful grants is increasing exponentially.

## 2.3 Domestic Students

### 2.3.1 FEAS should consider a 4+1 fast-track Masters Program to attract more domestic students to research-based degrees

FEAS will look into the plausibility of such option to first establish if it is technically applicable and economically feasible. This will also include assessing the impact of such option on undergraduate programs, dilution of the quality of our graduate degrees, and utility for students. Also, this option adds complexity to the process as FGSR is a major stakeholder when it comes to graduate studies and will need to be fully onboard.

### 2.3.2 Also consider developing more mainstream academic programs to allow Regina to compete with University of Saskatchewan.

The FEAS at the U of R distinguishes itself and takes pride in its systems approach to engineering education. We do not see any apparent value in replicating what the U of S is already offering. Our FEAS was founded on the principle that we are not to duplicating what U of S has already implemented. Extensive efforts over the years have ensured that our programs get accredited by the Canadian Engineering Accreditation Board (CEAB) and any drastic change to our systems engineering approach should be avoided. Nonetheless, the FEAS has already started discussing plausible options for rebranding some of its programs considering limited resources (extra courses offerings, new faculty hiring, etc.), without losing our systems approach identity.

## 2.4 International Students

- 2.4.1 Diversify countries that students are recruited from. This should be part of the international recruitment strategy

The FEAS recognizes the significance of diversity in the student body. As such, FEAS would welcome and work with UR International to diversify student recruitment.

- 2.4.2 Consider a PhD partial tuition waiver for international students

The FEAS recognizes that full or partial tuition waiver at the PhD level would attract and retain high quality students and help us compete with other universities that offer similar incentives. Attracting and retaining international students is not presently of any concern as most of our graduate students are international. The FEAS will work with the University to explore the possibility of providing partial tuition waiver to international graduate students at the PhD level. It is worth noting that graduate students including PhDs are able to apply to a wide array of scholarships to assist with their tuition fees. Some funding is provided, although partial and not to all students, in the form of teaching assistantships (TAs) from FEAS and graduate teaching assistantships (GTAs) from FGSR.

- 2.4.3 To avoid ethnic segregation, FEAS should frequently organize cultural programs

FEAS organizes a monthly gathering with graduate students which includes fun activities such as bowling and social activities that encourage integration. Also, other similar activities are being developed to encourage our students share their talents with fellow students through a talent show event that will be organized regularly. Also, UR International organizes an annual International Night in which international students from all over the university take part. Engineering students represent about 50% of the participants in this popular UR International event.

## 2.5 Graduate Student Empowerment

- 2.5.1 Consider adding a PhD student to all hiring committees including faculty and staff

FEAS includes a student representative in all hiring committees. Graduate students may be subject to influence by their supervisors which could result in conflict of interest. Also, based on previous experiences, students' representatives tend to miss a significant number of hiring meetings resulting in them not being able to make informed decisions/opinions and hence to be excluded from voting. FEAS will consider adding a non-voting PhD student to hiring committees to be able to provide feedback only.

- 2.5.2 A students' representative should be invited to Faculty Council as non-voting members to improve communications

It has already been the practice of the FEAS that students' representative from both the Regina Engineering Student Society (RESS) and the Engineering Graduate Student Association (EGSA) are listed members of Faculty Council in the terms of reference approved on September 16, 2014.

## 2.6 Professional Masters Program

- 2.6.1 This should only be expanded when appropriate support is available

Creation of a professional Masters program would need the full support from the University to ensure appropriate resources are in place for the success of the program. Some of the proposed courses can be setup to be offered online. It is worth noting that FEAS already has an MEng program that is well subscribed. A proposal for the establishment of a professional certificate in carbon capture and storage is in discussion.

## 2.7 Re-Branding of Petroleum Systems Engineering Program

- 2.7.1 Petroleum program should use this downturn as an opportunity to re-brand and re-market itself as "Energy Systems Engineering" to attract a wide-range of students both at UG and graduate levels

The FEAS recognizes that current rates of enrollment in PSE are low at the undergraduate level. However, at the graduate level the PSE program enrollment

has not been significantly affected by the oil and gas downturn and maintains rates of enrollment similar to previous years. PSE graduate student numbers are actually good and do not have an enrollment issue. One option could be to add an Energy and Resources or Process Engineering routes to the existing PSE program, which could attract graduate students who are interested in research pertaining to non-fossil fuels and natural resources. Historically, the oil and gas markets fluctuate and go through high and low cycles. We believe the bottom of the low cycle has been reached and oil and gas prices would soon be on their way up. Also, our PSE program has expanded research and teaching areas from conventional oil and gas resources to unconventional resources, even to refinery and pipeline engineering. This allows PSE to expand research from upstream to the middle and downstream to meet future challenging and/or unexpected oil and gas markets change.

Our PSE program discussed the rebranding/renaming of PSE and suggestions were made to combine PSE with the existing Process Engineering (Process and Petroleum Systems Engineering) or rebrand as (Energy Systems Engineering). However, there was a major concern with respect to the effect on the program accreditation. Also, the branding to Energy Systems Engineering would require additional resources to be allocated (hiring additional professors with broader Energy-related backgrounds, new labs development, recruiting students for branded program, etc.). It is unlikely the University would make an investment in rebranding when the enrolments are low. However, the FEAS is investing in trying to attract more students with the Director of Outreach position and the Faculty rebranding exercise. University investment likely happens through attrition when retired profs get replaced by profs with the broader energy/process background.

Graduate programs can be considered for rebranding, depending on the program research strength. We do not see the need at this point in time to rebrand the graduate program as enrollments are high, and our acceptance rate very low. Our views that rebranding our undergraduate program should not be pursued at this

point of time due to anticipated complications with accreditation and additional resources that would be required. We believe that in a few years the PSE program will recover and starts attracting more students. Our PSE program is the only program which is specialized in petroleum engineering and distinctive from the other two programs in Canada (i.e., University of Calgary and University of Alberta). Nonetheless, PSE would work on gradually incorporating more diverse energy components into the current PSE program. Rebranding discussion is under way in PSE.

## 2.8 Environmental Systems Engineering Program

2.8.1 Another possible name is “Environmental and Water Resource Engineering”, based on the program’s current curriculum and research

It is not clear why a change of name would be required for our Environmental Systems Engineering (EVSE) Program. EVSE maintains a healthy level of graduate students enrollment, and historically, graduates of the program have done very well in the job market and landed positions in their area of background. Some faculty members in EVSE seem to be open to the idea of program name change at the graduate level to “Environmental and Infrastructure Engineering.”

## 2.9 Collaboration with other Faculties

2.9.1 Closer cooperation between Software Systems Engineering and the Computer Science department on the ‘Digital Future’ cluster is recommended, particularly in Machine Learning and AI areas

Collaboration between programs within engineering, and in other departments within the University, are greatly encouraged by the FEAS. However, it is ultimately up to the individual professors themselves to decide whether or not to pursue such collaboration opportunities. The FEAS will continue to encourage and raise awareness of collaboration opportunities between our programs and different university departments. FEAS meets on a regular basis with the Faculty of

Science discuss various area of common interest including fostering research collaboration.

### **3.0 Space Challenges**

#### **3.1 GHG Building**

##### **3.1.1 Explore the opportunity to accommodate more graduate students in the GHG building**

FEAS agrees that there could be opportunities to optimize use of space (office and research laboratories) within CETRi (formerly GHG). Now that CETRi is under FEAS management, we already started discussion around this point with stakeholders. FEAS will also look for ways to optimize research and office space utilization in all its research facilities (Education Building, PTRC, CETRi, and RIC) to try and accommodate as many existing/new faculty members requests for research and office spaces as possible.

#### **3.2 Swing Space**

##### **3.2.1 Find and promote swing spaces for the whole Faculty, which should not be allocated permanently to a professor but rather be allocated on a project basis**

This is a good idea but will be difficult to implement and requires a significant culture shift. FEAS would welcome the availability of open space first in order to attempt to swing. FEAS is considering different research labs accessibility models at the moment to enable research space swing. A database is being populated with information about each faculty member including the lab space the PI's research group occupies, the amount of funds the PI obtained, the size of the research group and the research outcome for the last three to five years.

#### **3.3 Graduate Student Desk Space**

##### **3.3.1 Prioritize desk spaces for research-based students; MEng students should be given lower priority**

Prioritizing desk spaces for research-based students is a practice that was already implemented by the FEAS 5 years ago and is still in effect. MEng are assigned a common office space (MEng lounge) equipped with study cubicles and computer systems.

### 3.4 Shared Spaces

- 3.4.1 Create and promote a research culture of shared spaces. The current practice employed by the DEG is a “gentle approach” in persuading faculty to share space. This could be extended by employing a productivity/merit system.

FEAS has already started the practice of touring its multiple research facilities to identify and better evaluate research spaces that can be shared and optimized. Also, FEAS is working on a merit/productivity-based system to extend our research space sharing approach, and will push forward for consultation and implementation. The ever-increasing requests for research space by newly hired faculty members, and even some existing professors and lecturers, started to become a real challenge as FEAS has very limited space to allocate. Also, FEAS is actively pursuing a new building for its faculty to address the root cause of the problem (i.e. having very tight research space). Trying to squeeze multiple researchers in a shared tight space will increase the likelihood of lab safety related incidents, which might lead to some serious consequences. The same issue also applies to limited office space for visiting scholars, international collaborators, and exchange graduate students. This puts many members of our faculty at a huge disadvantage trying to compete nationally and internationally in recruiting the best and brightest research minds from all over the world. There is also a concern that PTRC is running out of space and not able to accommodate new students, some of whom might need to be relocated to RIC or other buildings.

## 4.0 Research Programs & Institutes

### 4.1 Role of ADR

- 4.1.1 The Committee recommends that the ADR role be mandated to include “Research and Industry Partnerships”

FEAS will explore the feasibility of including “Research and Industry Partnerships” in the ADR role. The Research Office (RO) at the U of R is the entity that facilitates and develop research and industry partnerships for the entire campus. RO has recently added one more position to further enhance this component. The revised ADR role may include liaison with the new person in RO.

- 4.1.2 ADR should be relieved of day to day management of the MEng Program

The day to day management of the MEng program is not carried out by the ADR. FEAS has staff (two coordinators) dedicated to providing daily service to our graduate students including MEng students. One of these positions is a 1-year term (renewable) and the other one is 50% focusing on graduate studies. FEAS will work with the University to ensure that the term position is converted to a permanent position.

- 4.1.3 Position for a Professional Programs Coordinator (existing faculty member) should be created to facilitate this change

The FEAS appreciates and supports the idea of a professional programs coordinator to facilitate the proposed changes. A solid business case will be made to justify the creation of such a position within our Faculty. FEAS would advocate to ensure University buy-in, commitment and full support.

- 4.1.4 Coordinator should take care of MEng, continuing education and fee-based professional development courses

To develop a business case, FEAS would mandate this position to take care of MEng, continuing education and fee-based professional development courses. FEAS may include other duties within this position.

## 4.2 Mitacs Representative

### 4.2.1 University Executives should consider a full-time position on campus and negotiate with Mitacs

The FEAS will strongly support a full-time position on campus and will negotiate with Mitacs to discuss our research needs and weigh our options. In the meantime Mrs. Zsuzsa Papp, Mitacs Officer, continues to provide support and represent both U of R and U of S out of her office in Saskatoon. For now, most of the interaction between researchers at the FEAS and the Mitacs officer is done over emails. The Mitacs officer makes herself available on campus on multiple occasions and when needed to address researchers' concerns.

## 4.3 Business Development

### 4.3.1. Create position of a business development (BD) person who can facilitate and harness relationships between faculty members and industry partners.

Three University Development Officer (UDO) and Faculty Advancement Officer positions were recently created and one of them (Mr. Doug O'Brien) is fully dedicated to advance the FEAS agenda and help liaise between the FEAS and industry/alumni. Also, the University Research Office provides support in the aspect of linking researchers from all faculties including FEAS with industrial partners to collaborate on research projects. As mentioned above, FEAS will explore the feasibility of expanding the ADR role to include liaising with the University RO.

## 4.4 CRC Advisory Board

### 4.4.1 The University administration should consider creating an Advisory Board comprised of UofR CRCs.

FEAS strongly supports this important recommendation. CRC's have a wealth of experience and can provide valuable advice especially on research and graduate studies related issues. The FEAS and its programs already have industrial advisory

boards/committees in place. FEAS and programs meet with their corresponding industrial advisory board/committees regularly on annual basis to share information, discuss challenges and opportunities for academic growth, provide directions and advice. These industrial advisory boards/committees have particularly enhanced our connections with industry, offered valuable evaluations and insight during Capstone Project Day, and helped us over the years become more relevant.

## **5.0 Service & Staff**

### **5.1 Administrative Support**

#### **5.1.1 Position (technical writer) was eliminated – can we gain this position back**

FEAS has started a discussion with the OR and the VP research and other faculties about sharing the cost of implementing such suggestion.

#### **5.1.2 Graduate students mentioned that having a lab instructor in every lab would be a priority**

FEAS labs are managed by professional lab instructors to provide hands-on teaching experience to our undergraduate students. Our undergraduate labs are all well-equipped and have their own dedicate lab technicians/instructor. Research labs within the FEAS are mainly managed by PIs and they decide the level of support (based mainly on need and availability of research funds). The FEAS Safety Office provides the mandatory safety training and works with PIs and graduate students to ensure Occupational Health and Safety in all laboratories. FEAS is hiring a Laboratory Technologist in the area of instrumentation and pressure vessels to support all of our labs. Hiring a dedicated technician in every research lab to provide support and run samples for graduate students on sophisticated instruments would be a good idea but needs extensive capital investment which the current fiscal state does not allow.

## 5.2 Communication

- 5.2.1 The RC recommends that the DEG focus on new faculty members since they should not have any pre-conceived notions. An official “buddy” program for newly recruited faculty could be an option.

FEAS is developing a Program Chair manual that will include clear plans to provide coaching/mentorship to new faculty. Also, the Dean, ADA and Program Chair typically meet with new faculty members within six months of hiring to listen to any concerns or any other feedback and to provide guidance and encouragement. After this first meeting, the Dean, ADA and Program Chair meet with new faculty members on annual basis. This program has been found to work effectively in FEAS over the last several years.

- 5.2.2 DEG group should meet with new faculty possibly by discipline in an environment where they feel they can speak freely

This is something DEG is already doing and will continue to do. There is an open-door policy that encourages all faculty members to approach the Dean’s Office for any advice/help/suggestion.

## 6.0 Financial Resources

### 6.1 General Recommendation

- 6.1.1 FEAS should try to negotiate a more favourable funding formula with UofR Central FEAS continues to put in budget requests annually. FEAS has been fortunate to receive reasonable funding support over the last several years.

### 6.2 Industry Advisory Board

- 6.2.1 Concerted efforts should be made to engage more industry partners through existing advisory boards

FEAS strongly agrees with the RC recommendation to put more effort into developing industry partnerships through our existing advisory boards. Also, programs will be encouraged to revitalize and meet more frequent with their industry advisory boards/committees.

## 6.3 Alumni Outreach

### 6.3.1 No specific recommendation was made.

FEAS recently recruited a Faculty Advancement Officer (FAO) that started in early October 2019 and part of his mandate is alumni outreach. In addition, FEAS conducted a survey to seek feedback from alumni regarding outcome-based assessment (OBA) for our undergraduate program accreditation efforts.

## 7.0 Fit to University Strategic Plan

### 7.1 Strategic Plan

#### 7.1.1 Each department, in consultation with the Dean needs to complete their strategic plan as soon as possible, and hopefully within the next 12 months

All programs have been given directions to start working on their strategic plans as soon as possible. Programs have been advised to review the current University Strategic Plan (2015-2020), to ensure that their program-specific plans align with the University Strategic Plan. Many programs have already started discussing the strategic research plan in their meetings, coming up with concrete plans guided by the available stats and based on where they would like to see their programs in 5 years. FEAS has already prepared a draft Strategic Plan (2019-2024) based on consultation with students, faculty and staff.

#### 7.1.2 The faculty and University should provide facilitators to help in that process, for each program individually but also collectively

The FEAS is already making use of the available support through HR to facilitate development of its strategic plan. Also, programs are able to seek similar support to develop the program specific strategic plan.

## 7.2 Indigenization

### 7.2.1 Consider growing your own from your population of undergraduate and graduate students

FEAS population of self-declared undergraduate and graduate indigenous students is small to support growth from our own representation. Out of the approximately 300 graduate students, only two are self-declared indigenous students. We have contacted the Gabriel Dumont Institute Board of Governors Chair (Dr. Earl Cook) and asked him to help recruit more Métis students, and expand educational opportunities for Engineering.

### 7.2.2 FEAS need to identify talent in high school and undergraduate students. This will require that contacts be made in high schools and Indigenous communities

The FEAS's Educating Youth in Engineering & Science (EYES) team already started engaging in activities to raise interest among grades (2-8) students for engineering and science. EYES teams visited five different Aboriginal communities and spent one week to get kids engaged in science/engineering. EYES is applying for NSERC renewal this year to continue this program. Outside of EYES, this is done on an ad hoc basis. FEAS realizes that more regular effort needs to be made in this regard. However, this would also require commitment at the University level.

### 7.2.3 Put special supports in place and consider hiring an Indigenous Program

Counsellor in engineering whose job is to provide support for your Indigenous undergraduate and graduate students

We only have two self-declared indigenous students at the graduate level and the number of undergraduate students is small to justify hiring Indigenous Program Counsellor in FEAS.

### 7.2.4 Consider creating an Engineers without Borders like combined

undergraduate/graduate club whereby students take on at least one major project per summer which enhances health and wellness in a Saskatchewan Indigenous Community

FEAS has an Engineers Without Borders (EWB) club that the Faculty leadership will meet with to encourage them carry out projects that enhances health and wellness in Saskatchewan Indigenous Communities that FEAS will fund.

- 7.2.5 Given that you already have an Indigenous Engineer in Residence perhaps this individual could serve as the faculty mentor for the club

The FEAS does not currently have Indigenous Engineer in Residence. As per section 7.2.4, FEAS plans to get EWB engaged in projects that enhances the wellbeing of Saskatchewan Indigenous Communities.

### 7.3 Participation on University Wide Committees

- 7.3.1 Should have an engineering faculty member on the Strategic Planning Facilitation Team

Dr. Hussameldin Ibrahim is the FEAS representative to the Strategic Planning Facilitation Team.