

ENGINEERING PROGRAMME ADVISORY COMMITTEE MEETING

**MINUTES OF EPAC HELD ON WEDNESDAY 27TH OCTOBER
FROM 4.00PM to 6.00PM VIA ZOOM**

Attendees

Prof Maurizio Cirrincione – Head of School - STEM
Dr Mansour Assaf – Discipline Coordinator – Electrical/ Electronics Engineering, STEM
Prof. Ahmed Rafiuddin – Discipline Coordinator – Mechanical Engineering, STEM
Dr Alvin Lal – Discipline Coordinator – Civil Engineering, STEM
Ali Mohammadi – Senior Lecturer, STEM
Daniel Wood – Senior Fellow
Mr. Partarp Singh – Entec Pte. Limited
Atunaisa Nayago – Civil Works Solutions Pte Ltd
Cyrille Mainguy – Mainguy Consulting Engineer & Project Management
Prashant Chand – Student rep
Blessing Elaise – Student rep
Luvkesh Naidu – Student rep
Maurice Ruggiero – Tritech Consulting Engineers
Epeli Malo - Energy Fiji Limited
Andrew Kumar – Vodafone Fiji Limited
Warren Yee – Irwin Alsop Pacific Limited
Michael Lynch – Fiji Water
Antoine Boudier – Vate Electrics
John Macarthur – Land Transport Authority

In Attendance

Professor Pal Ahluwalia – VCP, USP
Richard Phelps
Nayzel Jannif – Assistant Lecture - USP
Deepika Lal – Executive Officer – USP
Afshana Anzeg – Student Learning Specialist - USP
Oliana Nayago – Industry Liaison Officer
Zahra Nizbat – Accreditation Officer

1. Welcome and Election of new chair

- a. The Head of School, Professor Cirrincione welcomed all the stakeholders to the first EPAC meeting for STEMP. He then asked everyone to introduce themselves at the ICT VCR1 and those present on zoom
- b. The VCP, Professor Ahluwalia was asked to say a few words. He thanked all stakeholders for attending and emphasized the importance of such meeting where USP gets a chance to listen to views of stakeholders and take into consideration ways to better the programs offered by USP.

2. Election of new chair

- a. Mr. Partarp Singh proposed Mr. Maurice Ruggiero as the chair for this meeting however, he did not accept to chair the meeting as it was harder to do so virtually and through a phone. Mr. Ruggiero proposed Mr. Singh to chair this meeting as he was the only external member of the EPAC that was present in ICT VCR1. All members agreed with the nomination and Mr. Singh accepted the chair position.

3. Introduction

- a. The HoS presented regarding the history of Engineering programmes at USP, while the Discipline Coordinators (DC's) presented regarding their discipline's programs and research initiatives.
- b. Mr. Imran Jannif presented regarding the EN001 Industrial Work Experience (IWE). Due to the covid crisis, there has been a huge impact on the availability of industries for attachment for students. There has been lay - down of current staff in these industries as well. Many students were unsuccessful in securing an attachment and this was communicated with Engineering New Zealand (ENZ). Hence, they allowed students to graduate with 400 hours of work attachment only. Students are however, encouraged to do 800 hours where possible. If they are unable to then 400 hours of attachment in their field while 400 hours in a related field can be undertaken. If this is also not possible, they only 400 hours of IWE can be approved. This is done on a case-by-case basis and will be reviewed next year when the economy picks up and industries are able to take up attaches as previously practiced.
- c. The 2019 accreditation team had noted the following in their report. Requirement1: That USP implement strategies and processes to improve the level of English language expression across both programs, with a particular focus on addressing comments around

the level of English language and communication skills identified by the final year projects external reviewers.

- d. Ms. Afshana briefed the members in regards to the actions taken to address this. All Engineering students take a placement test with Clarity English to determine the level of English for each student. After the test, students will immediately get a certificate with a ranking according to the Common European Framework of Reference for Languages (CEFR) – an international standard for describing language ability. Approx. 300 students have done the test so far and have been put modules to improve their English according to their results.

4. Engagement and support from local and regional industries.

- a. The chair started the discussion on the importance of engagement and support from local and regional industries. He highlighted that the partnership with academia and private sector is not strong enough. He emphasized the need to find and fill the gaps – locally, regionally and internationally. More effort from the University end needs to be made to see that the placement for students for their IWE is done. He also requested to have more meetings – probably more than 2 per year.
- b. The entry requirement for the engineering program which is only a 50% pass in the major subjects is not viable. This entry requirement needs to be revised to see an increase in the quality of the students enrolled into the program. The HoS advised that a bridging course on mathematics is being developed for the students to undertake before being admitted into the engineering program to determine their level of knowledge in this subject area.
- c. The HoS recommended for the industries to meet with the University to discuss in regards to the engineering projects that are conducted their while for the final year projects to be made with the industries – probably Masters program too.
- d. The chair asked the stakeholders why there is a lack of interest from industry in working closely with the university Mr. Ruggiero began the discussion stating that engineering being such an important subject area, students taking the courses are not as excited in learning as one would be expected to be. Most of the students taking the course believe it involves too much of studying only. He recommended to get students excited by organizing visitations to industries frequently. These visits should be to different types of industries and it should be apart from the attachments they are to do under IWE. This will ensure that they get a good view and exposure to the field of engineering.
- e. Mr. Boudier highlighted that the technical skills are important for the graduates to have and that currently there is a disconnection between what we are trying to achieve and where we want to go. He also pointed out that the entry marks for Maths and Physics

have dropped which should not be done as industries are not looking for quantity but quality.

- f. The Chair advised the committee that the technical skills are something that is learned during the attachment rather than fully during the degree program.
- g. Mr. Lynch in the further discussion stated that the USP graduates lack common sense. The students need to understand what they are designing and how it will end up and that they should have an appreciation of this. Currently the graduates do not have these skills. Fiji Water is however, very supportive of student internships.
- h. The chair then commented that more technicians are needed by the industries who will be supervised by these engineers. The technicians are to handle the technical work. USP needs to work with the industry to figure out what is needed in Fiji and the region, if it is more technicians or engineers.
- i. Mr Lynch stated that the engineers need to learn to work with the rest of the team to which the chair replied that ethics and conduct needs to be taught to these engineers.
- j. Mr. Malo commented that the USP graduates are good, there are issues that exist which can be overcome with training in the industry. The industry needs to contribute as well as not everything can be taught in 4 yrs. Senior engineers in the industry also need to contribute by mentoring these graduate engineers.
- k. Ms. Kalo thanked the team for providing the important information during the meeting session. Students face difficulty finding industries to do their IWE in the Solomon Is. During Covid 19, students were allowed to stay in Fiji to complete their IWE. She informed of the intention to work closely with the IWE coordinator to find more suitable industries in the Solomons.

5. Availability of industry experts in presenting guest lecturers

- a. The chair started the discussion by stating that more attempt needs to be made to invite experts for guest lectures. One of the topics that can be covered by the experts is on contracts for students to be exposed to. Also, on what standards are being used here and the region. Having information on financial statement and budgets or accounting as a whole is important. Mr. Malo has given a lecture on project management which is a very important topic. Risk management needs to be covered as well.
- b. Dr Wood highlighted the important of industry involvement in such initiatives.

- c. There was a comment on zoom by Mr. Phelps where he stated that detailed training must lie with the eventual Employer. The duty of the university is to produce graduates with broad technical knowledge and a capacity to learn which was agreed by HoS as well.

6. Suggestions of new topics in current engineering units, or modification of current ones

- a. Mr. Lynch asked if sustainable energy modules have been added to which Dr. Assaf replied stating that a 3rd year course which covers energy has the topics on sustainable energy, renewable energy and energy distribution
- b. A comment from the stakeholders was that the English component needs communication and presentation skills taught and also on how to sell your product. Financial skills need to be taught as well. Mr. Jannif informed that financial skills are touched on in project management and engineering economics covers some budgetary aspects. Communication and presentation skills are covered in UU114. However, every project has mini project components where they write reports and prepare presentations while working individually or in teams.
- c. The chair wanted clarification regarding the courses on the design for concrete, timber and steel structures. Dr Lal informed that there is an optional course which focuses on steel structures. The chair then commented that the course on steel structures shouldn't be optional as the code for it is massive and hence, should be a core common course. He also asked regarding the design of geotechnical structures which Dr Lal stated is covered in soil mechanics.
- d. Ms Nayago informed on the issues for signing of MoU with industries. Due to the current covid – 19 situations, most companies cannot take on students for the IWE. Her suggestion was to venture into virtual internship where a student is assigned work in their homes to do projects for the industries. The chair highlighted that it will be challenging to train the graduates this way however, a questionnaire can be sent to get a better picture in regards to this. Standard MoU templates approved by Ministry of Labor need to be used.
- e. Mr. Phelps stated that the real problem is the low entry requirement for English/Maths courses which needs to be sorted out as soon as possible.
- f. Mr Yee asked if there is a cap on the number of students that are enrolled and that graduate from these programs as it seems that the demand and supply side is out of balance. There are a large number of graduates that are finding it difficult to find work. HoS informed the committee that capping is in discussion at SMT level and the decision should be made soon.

Vote of thanks

The HoS thanked everyone for attending the EPAC meeting. He informed the committee that a forum will be opened in moodle to discuss issues faced by the industries. He also stated that another PAC meeting will be organized either end of November or early December.

The meeting concluded at 6.17pm