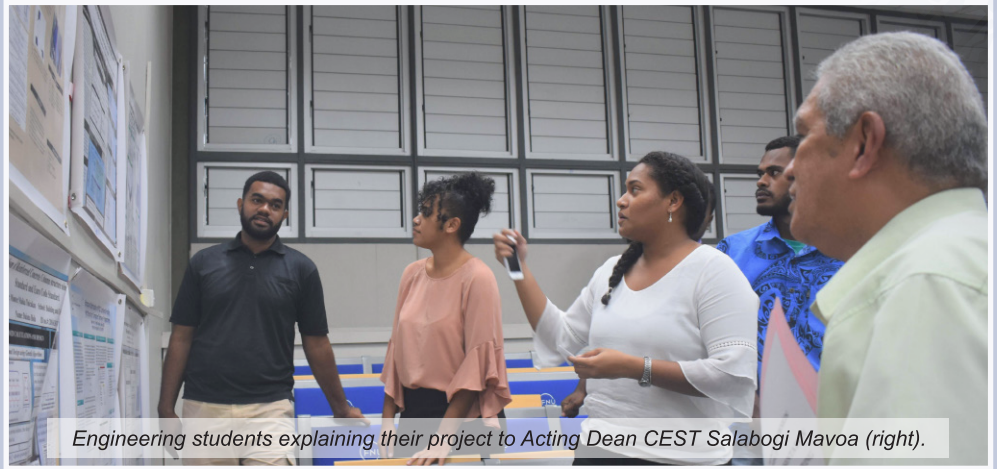# FNU Engineering students display capstone projects

Engineering students explaining their project to Acting Dean CEST Salabogi Mavoa (right).

Close to 120 future engineers studying at the Fiji National University's (FNU), College of Engineering, Science and Technology (CEST) exhibited their 'Capstone Design Project' poster presentations at Derrick Campus in Samabula.

The Capstone Design Project is a mandatory course for Bachelor of Engineering (Honours) students and requires them to design a project that solves an engineering issue. Students are required to display the project in a professional visual format which is judged by lecturers and representatives from the Industrial Advisory Committee (IAC).

The students who participated were from the College's School of Building and Civil Engineering, School of Electrical and Electronics Engineering and the School of Mechanical Engineering.

Adi Ana Valotu explains her capstone project to an assessor.

"The project involves the investigation of an engineering problem related to their discipline. During this course a student will plan the project, conduct a critical review of relevant published material, known as a literature review, and undertake sufficient work to produce initial findings to support further investigation in developing the design of the engineering system," said Dr Satyanand Singh, Capstone Design Project program co-coordinator.

"Student will be introduced to key research and development process through lectures and coursework on research methods and design reviews. The project work will require significant research/investigation and reflection. It will also include attention to aspects such as engineering analysis, design, testing and programming."

The Capstone Project presents an opportunity for students to integrate relevant knowledge and skills from preceding and concurrent courses in BE (Honours) programme. Each student or team had a different project and was expected to produce a report of professional standard, with a high degree of independence and project ownership.

Acting Dean CEST, Salabogi Mavoa acknowledged the presence of IAC members from the Construction Industry Council (CIC), Fiji Roads Authority (FRA), FMF Foods Limited, industry stakeholders and the University of the South Pacific (USP) Head of School Engineering and Physics.

Mavoa said being aligned to the needs of the industry enabled students to undertake projects that were relevant to current issues faced by the sector. "I challenge you engineers, because you will contribute and provide solutions to the needs of our country and fellow Fijians," he said.

"When we look at the projects we aim to see new ideas, innovation and knowledge. Just because we are from Fiji does not mean we can invent something that is not only useful here, but useful in other parts of the world."

School of Mechanical Engineering student Adi Ana Valotu said she decided to design an organic waste extraction machine for the Suva market.

"Right now at the composting site in Samabula, they are experiencing a foul smell that comes out of the composting so we decided to design an extraction machine that will shred the organic waste," Valotu explained.

"This will produce compost faster as it takes about three weeks for the current organic waste at the site to be composted."

"We are also concerned with the cost of transporting the waste all the way to Naboro landfill. It costs them $100 per load. In this case, if we are able to process all these waste then they would save money on carting it to Naboro." USP Head of School (Engineering and Physics) Professor Maurizio Cirrincione said he was impressed with the ideas and enthusiasm displayed by the Engineering students.

"The effort is very good. I like the enthusiasm and the way they approach things. They want to learn and this is very nice," Professor Cirrincione said.

"It confirms my trust in Fijian students here, as someone coming with experience from outside. At their level, they are already on the right track."

"I hope to reciprocate and invite FNU to come and see my students also. I think we should collaborate."

Capstone Design Project judging panel consisting of FNU academics, senior management group and IAC members.

For more pictures, please visit the FNU Facebook page.