FACULTY OF SCIENCE & TECHNOLOGY

Mona

Year ending July 31, 2013

PROFESSOR ISHENKUMBA KAHWA

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DEAN

– *Dean's Overview* –

PREPARATION OF THE DISTINCTIVE UWI GRADUATE – INITIATIVES, NOTABLE ACHIEVEMENTS

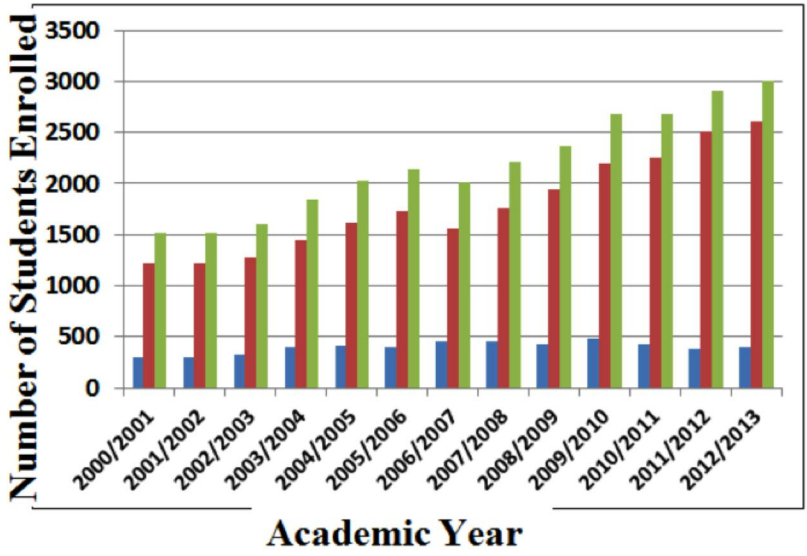
Student Enrolment and Access to Faculty Programmes

The number of undergraduate students enrolled in our Faculty has steadily grown over the period 2001–2013 as shown below. The sluggish growth in recent years is due to hard financial times which make it difficult for students to raise funds to support their school costs.

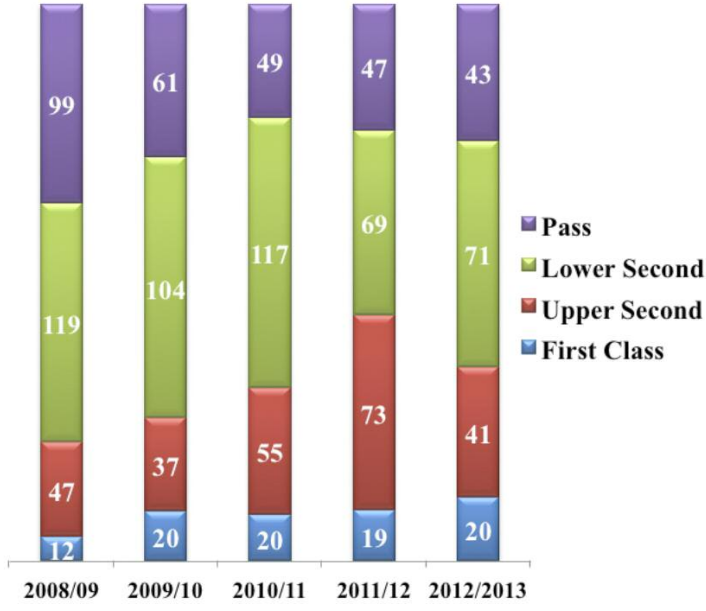
Of a worrisome trend is enrollment in postgraduate programmes as shown below. This has to be reversed as a matter of priority.

Graduation data show an increasing number of students earning honours degrees with proportionately less earning pass degrees.

The respective Departments in the Faculty continue to be innovative and flexible in dealing with the large student numbers by adding extra class and laboratory streams, including weekend and evening classes, and adding equipment to improve throughput in laboratory sessions.



Students Enrolled in the Faculty. For each year from left to right: Graduate students, Undergraduate students and Total.



Number of Graduates and Degrees for the period 2008-2013

INITIATIVES FOR ENHANCING THE LEARNING EXPERIENCE FOR 2012–2013

New Programmes and Courses:

BSc Computer Systems Engineering

The three year new BSc in Computer Systems Engineering consists of 113 credits. It was developed and approved for delivery in 2013/14 by the Department of Computing in collaboration with the Department of Physics (Engineering Programmes). The programme is designed to serve students who are desirous of pursuing a career path in designing computer systems and devices that rely on embedded computing. The structure of this three (3) year programme allows for exposure to foundation courses in computing, electronics, electrical engineering, physics, engineering mathematics, ethics and professional practices in year one. The second and third year courses provide the core material required for this discipline; all students are required to complete a capstone project during the final year.

BSc in Civil Engineering

Civil Engineering is concerned with the provision of many of the basic services required for the development of modern society. The BSc programme in Civil Engineering has been adopted from the UWI Faculty of Engineering at the St. Augustine Campus. It provides core competency in the essential engineering sub-disciplines and project management, and offers a wide choice of specialization within any of the five sub-disciplines in the final year of the programme. These sub-disciplines are highway, soils, structures, concrete and environment. Two coursework-based one-year courses are assigned at level two in structural designs and civil engineering designs. There is a capstone 1-year project during the final year coupled with a special investigative project. Readiness to offer this programme in 2013/2014 was achieved through the assistance of an engineering private company, GENTECH.

A Clash Free Timetable for the Faculty of Science and Technology

Preparation of teaching timetables in the Faculty of Science and Technology is at present a tedious, inefficient, and error prone process. Ricoche, a software application that was developed by 2012/2013 final year students of the Department of Computing as a timetabling solution for examinations, has been adapted to solve class timetabling woes in the Faculty. The application uses prior year student registration data along with stated constraints on the use of rooms, relations among courses, and other user configurable parameters to generate a clash free schedule of teaching activities and allocation of rooms in the Faculty. Ricoche is currently under testing and evaluation.

NOTABLE ACCOMPLISHMENTS OF GRADUATES

Jamaica Rhodes Scholar

The University of the West Indies (UWI) once again won the prestigious Jamaica Rhodes Scholarship for 2013. Vincent Taylor, a 22-year-old computer scientist from the Mona Campus of the UWI, was selected from a field of 11 finalists, after two grueling days of interviews. The holder of a double major degree in Computer Science and Electronics, Taylor is reading for a Masters in Philosophy (MPhil) at the Mona Campus, specializing in wireless network sensor security. In the sixty-four years since the founding of the UWI, more than 60 of its graduates have won the highly regarded Rhodes scholarship.

SERVICE TO THE WIDER COMMUNITY, INCLUDING THE OPEN CAMPUS COMMUNITY; NOTABLE ACHIEVEMENTS

Agreement between the Government of Jamaica and the Government of the Republic of South Africa on Scientific and Technological Cooperation.

The Agreement between the Government of Jamaica and the Government of the Republic of South Africa on Scientific and Technological Cooperation was signed on February 26, 2013. This agreement is aimed at promoting and supporting the development of cooperation in the

fields of science and technology between the two countries. The UWI and specifically the FST is seen as a central player in the activities of the agreement.

Consultancy and Outreach Activities

- A number of Departments are involved in consultancy work and outreach activities that promote and enhance UWI's impact.
- Several departments ran workshops to enhance the understanding of important science concepts and the competitiveness of sixth formers for entry into University programmes. These include the Departments of Physics and Chemistry and the Electronics Unit.
- A number of schools were visited as customary. Departments volunteered to assist with the recruitment of High School students across the island, including parishes such as St. James, Portland and St. Catherine. Other activities included the Faculty carrying out CXC workshops in May, 2013 for students in Portland for the following subject areas: Mathematics, Physics and Life Science.
- For the first time, the Faculty participated in "Relay for Life" in June 2013, an event organised by the Jamaica Cancer Society to increase cancer awareness and celebrate survivorship. The department also had a tent display featuring current research trends in bone cancer treatment.

ADDRESSING THE FUNDING CONSTRAINT

Resource Mobilization Unit – The unit was established to develop information that would assist the Campus to structure and resource its research enterprise. Following success at helping entities across the Campus to increase their competitiveness in grant fund sourcing, the unit's findings were used to conceptualize a new Campus entity called the Mona Office of Research and Innovation (MORI) which will start its work on August 1, 2013. The Resource Mobilization Unit will continue to support and lead the work of MORI in the Faculty.

Fund raising activities across the Faculty continued as shown by grants acquired and fully funded teaching activities described in the following individual Department's reports.