

## **DEPARTMENT OF CIVIL ENGINEERING**

### **ANNUAL REPORT**

#### **INTRODUCTION**

This annual report for the academic year 2015/2016 highlights the civil engineering department's accomplishments and constraints that impacted on the delivery of both the associate of science degree, diploma and BSc programmes.

The accomplishments and performance can be deemed successful when viewed against the backdrop of inadequate/minimal human and financial resources.

The department launched its two new programmes namely, the Associate of Science in civil engineering and the BSc in civil with environmental engineering. The diploma programme is being phased out. These tasks resulted from the commitment and dedication of the four (4) full-time lecturers, three(3) part-time lecturers and four (4) non-academic staff.

The industrial testing/Consultancy of the Department continue to be recognized by all local and foreign companies operating here in Guyana.

## **STUDENT AFFAIRS**

### **Student Population**

The Civil Engineering Department recorded the highest intake of students within the Faculty of Technology. For the year 2014/2015 one hundred and seventy two (172) students registered for the diploma programmes, sixty five for the associate of science while eighty seven (87) students registered for the degree programmes.

The student population for twelve (12) academic years is shown in *Table 1*.

**Table 1: Student Population**

PROGRAMME	ACADEMIC YEAR											
	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	12-13	14-15
Diploma in Technology Year 1	38	45	50	46	77	74	80	74	80	66	99	71
Year 2	99	63	76	80	75	77	85	89	100	96	123	101
Sub-Total	137	108	126	126	152	151	165	163	180	162	222	172
Bachelor of Engineering Year 1	16	31	23	24	28	45	40	32	26	26	34	35
Year 2	41	27	43	34	30	23	36	41	35	29	60	52
Sub-Total	57	58	66	58	58	68	76	73	61	55	94	
TOTAL	194	166	192	184	210	219	241	236	241	217	316	

### **STUDENTS' PERFORMANCE**

A total of ninety three (93) students graduated during the academic year 2014/2015. Details are tabulated in *Table 2*.

**Table 2: Students' Performance 2014/2015**

PROGRAMME	NUMBER OF STUDENTS			
	Distinction	Credit	Pass	Total
Degree	11	12	13	36
Diploma	3	15	39	57
Total	14	27	52	93

## STUDENT RESEARCH

**Table 3: Project titles -2015/2016**

<b>PROJECT TITLE</b>		<b>NAME OF STUDENTS</b>	
1	Investigation of the Properties of concrete using Sawdust as a Partial Replacement for sand	<i>Amjad</i>	<i>R</i>
2	The use of cement stabilization Improvement technique for the proposed Law School Building at the University of Guyana Turkeyen Campus	<i>Bunbury</i>	<i>T.</i>
3	A Feasibility study of foundation systems alternative to traditional piling techniques.	<i>Butters</i>	<i>L</i>
4	Condition Survey and cost Assessment of asphalt Modification using Forta Fi Fiberson Haags Bosch sanitary Land fill Access Road.	<i>Carryl</i>	<i>L</i>
5	The influence of Waste Glass as a Partial Replacement for Cement in concrete Production in Guyana.	<i>Clarke</i>	<i>C</i>
6	An Investigation on the Feasibility of using Bamboo Reinforcement in concrete pavement.	<i>Edwards</i>	<i>E</i>
7	The Chemical stabilization of Lateritic Soils using Lime, for the use in Hinterland Road Construction.	<i>Headley</i>	<i>J</i>
8	Geotechnical consideration in development of Open Pit Mines sites.	<i>Henry</i>	<i>S</i>
9	Design of Stabroek Wharf.	<i>Hollingsworth</i>	<i>K.B</i>
10	The Design of a New Administrative Building for the University of Guyana at the Turkeyen Campus	<i>Lewis</i>	<i>R</i>
11	Analysis of the Drainage Network System of Georgetown with focus on a Post Analysis on the Cummings canal.	<i>Liu and Ifill</i>	<i>S and G</i>
12	Feasibility study for a surface water treatment plant on the west Bank of Demerara	<i>Mangal</i>	<i>C</i>
13	An investigation into the failure of a section of the West Coast Demerara Highway between Harlem and Walters Delight spanning a distance of 610 meters	<i>Mangal</i>	<i>D</i>
14	Slope stability guidelines for small and medium scale Gold Mines	<i>McPherson</i>	<i>N.</i>
15	Analysis of the Industry/Ogle Side line Canal, Pump station, Outfall Basin and Ogle sluice	<i>Mobeen</i>	<i>S</i>

16	An investigation into the present condition of the Hope Canal Bridge Approach slabs.	<i>Ramgobin</i>	<i>G.C</i>
17	Design of a Private Housing Scheme in Village of Reliance on the Essequibo Cost Reg. #2.	<i>Robindra</i>	<i>N</i>
18	Foundation design for proposed Law School Building at the University of Guyana	<i>Sue</i>	<i>K</i>
19	The Modelling of Guyana's first Law School at the University of Guyana's Turkeyen Campus Utilizing a Steel Superstructure	<i>Takchandra</i>	<i>J</i>

### **PROGRAM DESIGN, DELIVERY AND DEVELOPMENT**

#### **Program and courses offered**

#### **Academic Programs**

The Department offered the Diploma in Technology and the Bachelor in Engineering Degree programs. Difficulty in attracting highly qualified and experienced professionals prevailed during the year.

The table below shows the lecturers assigned to the respective courses and programs.

**Table 4: Teaching Assignment/courses- Academic Year 2014/2015**

<b>SEMESTER I</b>			
<b>COURSE #</b>	<b>COURSE NAME</b>	<b>CREDIT</b>	<b>LECTURER</b>
CIV 1101	Materials Technology	3	Maxwell Jackson
CIV 2100	Building Structures I	3	Safraw Sharief
CIV 2101	Engineering Materials II	3	Shanomae Eastman
CIV 2102	Geology	3	Evans Persaud
CIV 2103	Fluid Mechanics I	3	Shanomae Eastman
CIV 2105	Structures I	4	Safrawz Sharief
SRV 1101	Engineering Surveying I	3	Mewburn Amsterdam *
CIV 3100	Geotechnics I	3	Maxwell Jackson
CIV 3101	Hydrology	3	Maurice Veacock
CIV 3107	Structural Analysis I	4	Shanomae Eastman
CIV 3108	Structural Design I (Reinforced concrete)	4	Shanomae Eastman
SRV 3101	Engineering Surveying III	4	Mewburn Amsterdam *
CIV 4100	Geotechnics II	3	Maxwell Jackson
CIV 4101	Transportation Engineering	3	Maurice Veacock
<b>ELECTIVES</b>			
CIV 4103	Environmental Engineering I	3	Ranata Roberts
CIV 4105	Highway Engineering	3	Ranata Roberts
CIV 4106	Drainage and Irrigation	3	Maurice Veacock

<b>SEMESTER II</b>			
<b>COURSE #</b>	<b>COURSE NAME</b>	<b>CREDIT</b>	<b>LECTURER</b>
CIV 1201	Engineering Materials I	3	Maxwell Jackson
CIV 2200	Building Structures II	3	Safrawz Sharief
CIV 2202	Soil Mechanics	3	Maxwell Jackson
CIV 2203	Fluid Mechanics II	3	Safrawz Sharief
CIV 2205	Structures II	4	Safrawz Sharief
CIV 2206	Structural Draughting	3	Kelvin Thorne*
SRV 1201	Engineering Surveying II	3	Mewburn Amsterdam *
CIV 3201	Hydraulic Engineering	3	Maurice Veacock
CIV 3202	Water & Waste Water Engineering	3	Shanomae Eastman
CIV 3208	Structural Design II (Timber)	4	Shanomae Eastman
SRV 3201	Engineering Surveying IV	4	Mewburn Amsterdam *
CIV 4200	Civil Engineering & Construction	3	Maxwell Jackson
CIV 4206	Coastal Engineering	3	Ranata Robertson
CIV 4208	Structural Design III (Steel)	4	Dr. Inniss*
<b>ELECTIVES</b>			
CIV 4203	Environmental Engineering II	3	Maxwell Jackson
CIV 4204	Water Resource Planning & Development	3	Maurice Veacock

\* Part-time Staff

Δ Lecturer from another Department

### **PROGRAM IMPROVEMENTS**

Computer Aided lecturing continued to be used and available to all Civil engineering students and AUTO CAD program was installed and currently in use by students.

### **STUDENT ACTIVITIES**

- **OFF CAMPUS TRAINING AND FIELD TRIPS**

The second year students as part of the Fluid mechanics course, CIV 2103 visited the Soesdyke Linden Highway at Low creek to conduct stream flow measurements. The final year students also visited region six to observe sea defence structures along the Berbice and Corentyne coast. .

### **Professional Presentations**

A Geotechnical investigation was conducted on the campus using the wash boring method. The drilling terminated at a depth of sixty(60)feet after encountering the corpina structure.

### **DEVELOPMENT INITIATIVES/PLANS**

Continued improvement in the use of lecturing aids and computer software were achieved to in the Department. For example, the auto cad software is fully established as a course component for many of the courses.

### **Revenue Generation**

The Industrial Testing /Consultancy Arm of the department continue to earn income for the University during the reported period approximately four million Guyana dollars (\$4,000,000) were earned.

**Table 5: Staffing Establishment 2015/2016**

STAFF NAME	POSITION	REMARKS
<b>a) ACADEMIC (Full Time)</b>		
1. EASTMAN, Shanamae	Lecturer I	H.O.D
2. JACKSON, Maxwell	Lecturer II	
3. Ranata Robertson	Lecturer I	
4. SHARIEF, Safrawz	Lecturer I	
5. VEECOCK, Maurice	Senior Lecturer	
<b>b) NON-ACADEMIC</b>		
1. Quintyne, Collin		Attachment Student
2. Eastman,Nicole		Attachment Student
3. FITZGERALD, Kawall		
4. YARDE, Godfrey		
5. Simone Daniels		

**M. Jackson**

Head, Department of Civil Engineering