

## DIPLOMA IN CIVIL ENGINEERING

### Pre-requisite

Trade Certificate or Certificate in Civil Engineering/ Building / Brick Laying/ Carpentry /Surveying etc or work experience.

### ASSESSMENT (DIPLOMA)

Completion of the course works- submission of the assignments Theory/ Practical/ Calculations) for the over all knowledge of the subject  
(Grading—Complete or Incomplete)

## BACHELOR OF APPLIED ENGINEERING (BUILDING SERVICE)

### Pre-requisite

Diploma in Civil Engineering

### ASSESSMENT

The learning and assessment system involves two parts

(1) **Part (1)**

Completion of the course works- submission of the assignments Theory/ Practical/ Calculations) for the over all knowledge of the subject  
(Grading—Complete or Incomplete)

(2) Completion of the course works- submission of the assignments (Theory/ Practical/ Calculations) for the competency units of the subject  
(Grading—Complete or Incomplete)

(3) **Part (2)**

Sitting the final test for the subject by either online or paper based test- -Grading—In accordance with St Clements University Higher Education School-Niue Students Handbook.

**STAGE (1) DIPLOMA IN CIVIL ENGINEERING ( Each 2.5 Credits) ( 30 Pt)**

**Certificate in Construction Studies**

CE 106A Detailed Construction & Building Construction Materials

CE 104 A Building Drawing

CE 101 Mathematics

CE 102 Physics

CE 108 Electrical Principle

**DIPLOMA IN CIVIL ENGINEERING**

CE 104 Fluid Dynamics

CE 105 Hydraulic

CE 106 Hydrology

CE 107 Sanitation-and-Water-supply

CE 109 Energy Efficient Building Design

CE 110 Building Construction

EE102 Basic Electrical Fitting & Wiring

**Year (2) Advanced Diploma in Civil Engineering Program(30 pt) (Each 2.5 pt)**

**YEAR (2) SEMESTER (1)**

CE103-Surveying

CE111A-Road+Bridges

CE113 Structure 1

CE114 Structure 2

CE115 Estimating & Specification

**YEAR (2) SEMESTER (2)**

EE104 Electrical Equipments Safety Protection

EE105 Electrical Installation Design

ME 102 Engineering Thermodynamics

ME 334 Airconditioning and Refrigeration

EE106 Advanced Electrical Wiring

CE 111 Engineering Mechanics+ ME 301 Applied Mathematics

EE308 Sustainability

### Year (3) Part 1 ADVANCED GENERAL CIVIL ENGINEERING DEGREE LEVEL

<b>Subjects</b>	<b>Points</b>	<b>Competency Units</b>	<b>Page</b>
<b>BAE 401 Advanced Engineering Mathematics</b>	9	Maths 301 Introduction to Complex Variables ( 1 pt) Maths 302 Elementary Linear Algebra ( 1 pt) Maths 401 Continuous Distributions ( 1 pt) Maths 402 Discrete Distributions ( 1 pt) Maths 403 Engineering Mathematics ( 1 pt) Maths 501 Introduction to Probability( 1 pt) Maths 501 Linear Algebra & Matrices ( 1 pt) Maths 502 Finite Difference Methods for Partial Differential Equations & Mathematical Modelling (1 pt) Maths 601 Random Variables ( 1 pt)	
<b>BAE 402 Calculus</b>	3	Maths 304 Integration and Differential Equations ( 1 pt) Maths 403 Second Order Differential Equations ( 1 pt) Maths 303 Engineering Mathematics ( 1 pt)	
<b>BAE 403 Engineering Mechanics</b>	1	ME 301 Applied Mathematics ( 1 pt)	
<b>BAE 404 Engineering Materials &amp; Thermodynamics</b>	3	ME 334 Engineering Thermodynamics ( 1 pt) ME 434 Wind Turbines ( 1 pt) ME 634 Pneumatics ( 1 pt)	
<b>BAE 508 Industrial Engineering &amp; Industrial Management</b>	1	Mgt 501 Basic Management & Communication Skills ( 1 pt)	
<b>Total Credit points in this group</b>	17 pt		

**Year (3) Part 2 ADVANCED GENERAL CIVIL ENGINEERING DEGREE LEVEL ( 18 Pt)**

BAE421 Building Construction Engineering ( 4 pt)

BAE422 Estimating ( 2 pt)

BAE423 Fluid Mechanics ( 2 pt)

BAE424 Reinforced Concrete ( 2 pt)

BAE425 Timber Engineering ( 2 pt )

BAE521 Road & Bridge ( 2 pt )

BAE522 Rock Mechanics ( 2 pt )

BAE523 Soil Mechanics ( 2 pt )

**TOTAL 35 Pt**

**Year (4) Part 1**

<b>BAE 601 Computer Programming</b>	3	IT 401 Object Oriented Programming ( 1 pt) IT 402 Structured Programming ( 1 pt) IT 403 Visual Basic Programming ( 1 pt)
<b>BAE 605 Engineering Management</b>	5	Mgt 502 Operation Management ( 1 pt) Mgt 503 Production & Operation Management ( 1 pt) Mgt 504 Project Management ( 1 pt) Mgt 505 Quality Management and Manufacturing Engineering ( 1 pt) Mgt 506 Strategic Financial Management ( 1 pt)
<b>BAE 606 Building Service Electrical &amp; Mechanical Engineering</b>	2	EE 617 Building Electrical and Mechanical System ( 1 pt) ME 334 Airconditioning and Refrigeration ( 1 pt) CE 301 Building Construction (Optional) CE 301 Conceise Hydroulics (Optional)
<b>BAE 609 Design Project</b>	3	
<b>Total Credit points in this group</b>	13 Pt	

## **Year (4) Part 1**

**( 12 Pt)**

BAE621 Structural Engineering ( 3 pt )

BAE623 Surveying & Traffic Engineering ( 2 pt)

BAE624 Water Supply , Sanitation & Finishing ( 2 pt )

BAE 608 Engineering Competency Demonstration Report Writing (2pt)

### **SELF STUDY**

BAE622 Architecture ( 3 pt )

**TOTAL 25 pt**