

BACHELOR OF APPLIED ENGINEERING (ELECTRICAL)

Pre-requisite

Advanced Diploma in Electrical Engineering

ASSESSMENT

The learning and assessment system involves two parts

- (1) Completion of the course works- submission of the assignments (Theory/ Practical/ Calculations) for the competency units of the subject
(Grading—Complete or Incomplete)
- (2) Completion of the course works- submission of the assignments Theory/ Practical/ Calculations) for the over all knowledge of the subject
(Grading—Complete or Incomplete)
- (3) 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.

The following is the list of the subjects and competency units

BACHELOR OF APPLIED ENGINEERING (ELECTRICAL)

Subjects	Points	Competency Units
BAE 401 Advanced Engineering Mathematics	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)
BAE 402 Calculus	3	Maths 304 Integration and Differential Equations. (1 pt) Maths 403 Second Order Ordinary Differential Equations

		(1 pt) Maths 303 Engineering Mathematics (1 pt)
BAE 403 Engineering Mechanics	1	ME 301 Applied Mathematics (1 pt)
BAE 404 Engineering Materials & Thermodynamics	3	ME 334 Engineering Thermodynamics (1 pt) ME 434 Wind Turbines (1 pt) ME 634 Pneumatics (1 pt)
BAE 405 Advanced Circuit Analysis	3	EE 301 Electrical Circuits (1 pt) EE 303 Engineering Circuit Analysis (1 pt) EE 404 Electrical Measurement (1 pt)
BAE 406 Electro-mechanics	2	EE 502 Electrical Machines (1 pt) ME 301 Machine Principle (1 pt)
BAE 407 Advanced Electromagnetics Field & Materials	1	EE 407 Electromagnetism (1 pt)
BAE 408 Analogue & Digital Electronics	5	EE 403 Introduction to Electronic Engineering (1 pt) EE 524 Power Electronics & Applied Electronics (1 pt) EE 405 Digital System (1 pt) EE 526 Digital Signal Processing (1 pt) EE 527 Digital Image Processing 1/ 2 (1 pt)
BAE 501 Advanced Power Systems & Power Transmission Networks	3	EE 512 Power System (1 pt) EE 302 Power System Technology (Optional) EE 402 Electrical Power (1 pt) EE 513 Power Transmission and Distribution Lines (1 pt)
BAE 502 Linear System	1	EE 304 Computer Mathematics (1 pt)
BAE 503 Control System	4	EE 601 Non Linear Control Applications (1 pt) EE 601 Control Engineering , Feedback and Control System , P ID_ Control (1 pt) EE 624 Process Control (1 pt)

		ME 534 Numerical Control Part 1 / 2 (1 pt)
BAE 504 Power System Analysis	1	EE 614 Power System Analysis
BAE 505 Power System Optimization	1	EE 613 Power System Optimization
BAE 506 Power System Stability & Protection	2	EE 615 Power System Stability & Power Quality (1 pt) EE 616 Power System Protection (1 pt)
BAE 507 Electro-mechanical Energy Conversion	2	EE 602 Motor Control Electronics (1 pt) ME 434 Mechtronics & Robotics (1 pt)
BAE 508 Industrial Engineering & Industrial Management	1	Mgt 501 Basic Management & Communication Skills (1 pt)
BAE 601 Computer Programming	3	IT 401 Object Oriented Programming (1 pt) IT 402 Structured Programming (1 pt) IT 403 Visual Basic Programming (1 pt)
BAE 602 Computer Network	1	ICT 202 Information Systems Principles and Networking (1 pt)
BAE 603 Software Engineering	3	ICT 106 Software Engineering (1 pt) ICT 203 Information Systems, Analysis and Design (1 pt) EE 626 Nano Technology (1 pt)
BAE 604 Telecommunication Engineering	2	EE 525 Data Communication (1 pt) EE 603 Electronics Telecommunication (1 pt)
BAE 605 Engineering Management	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)

BAE 606 Building Service Electrical & Mechanical Engineering	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)
BAE 607 Radio Wave Propagation & Microwave Techniques	2	EE 625 Radio Wave Propagation (1 Pt) EE 626 Microwave Technique (1pt)
Total Credit points	60	