

STAGE (1) DIPLOMA IN MECHANICAL ENGINEERING (30 Pt) (Each unit has 1 point)

Maths 101 Engineering Mathematics (1 pt)

Maths 301 Introductory Finite Difference Methods-for-partial differential equations(1 pt)

Maths 302 Elementary-Linear-Algebra(1 pt)

Maths 403 Engineering-Mathematics(1 pt)

Maths 501 Linear Algebra (1 pt)

Maths 303 Introductory Finite Volume Methods-for- partial differential equations(1 pt)

ME 103 Engineering Mechanics (2pt)

ME 101 Applied Mathematics (1 pt)

ME 107 Heat Transfer (1 pt)

ME 306 Theory-of-waves-in-materials (1 pt)

ME 102 Engineering Thermodynamics (2pt)

ME 234 Wind Turbines (1 pt)

ME 634 Pneumatics (1 pt)

ME 105 Electrical Principle (1 pt)

ME 106 Electrical Circuits (1 pt)

ME 104 Machine Principle (2 pt)

ME 304 Introduction to Nonlinearity-in-control-systems (1 pt)

ME 203 Control Engineering (1 pt)

EE 624 Process Control (2 pt)

ME 534 Numerical Control (1 pt)

ME 434 Mechtronics-Robotics (1 pt)

Mgt 501 Basic Management (1 pt)

EE 617 Building Electrical and Mechanical System Part 1 (2 pt)

ME 334 Airconditioning and Refrigeration (2 pt)

STAGE (2) BASIC ELECTRICAL & ELECTRONICS ENGINEERING (17 Pt)

Files--Certificate in Electrical Engineering, Diploma in Electrical Engineering, Advanced Diploma in Electrical Engineering , see the following contents

EE101 DC Circuit Problems

EE102 Basic Electrical Fitting & Wiring

EE103 Basic Electrical Drafting

EE104 Electrical Equipments Safety Protection

EE105 Electrical Installation Design

EE107 Electrical Equipments

EE106 Advanced Electrical Wiring

EE108 Electrical Fault Finding

EE109 Electrical Control Circuits

EE111 Electromagnetism & Basic Electrical Machines

EE112 Alternating Current Principle

EE113 Electrical Fundamental

EE115 Basic Analogue & Digital Electronics

EE116 Process Control System

EE117 Solar Electrical System

EE119 Electrical Risk Assessment

EE120 Electrical Contracting & Specifications

STAGE (3) ADVANCED MECHANICAL ENGINEERING STUDY (13 Pt)

GROUP (1) (7 pt)

ME 108 Principle of Engines

ME 109 Engineering Drawing

ME 201 Introduction to Fluid Mechanics

ME 202 Introduction to Aero Dynamics

ME 204 Engineering Fluid Mechanics

ME 206 Introduction to Turbo Machinery

ME 301 Fluid Dynamics

GROUP (2) (4 pt)

ME 205 Manufacturing Processes-and-Materials

ME 302 Automation-and-Robotics

ME 303 Computer Aided Design and Manufacturing

ME 305 Corrosion Prevention

GROUP (3) (2 pt)

ME 207 Chemical Thermodynamics

ME 208 Hydrocarbons

STAGE (4) ADVANCED ELECTRICAL & ELECTRONICS ENGINEERING STUDY

(ADVANCED DIPLOMA) (10 pt)

Files--Certificate in Electrical Engineering, Diploma in Electrical Engineering, Advanced Diploma in Electrical Engineering , see the following contents

EE121 Electronics Power Control Devices

EE201 Engineering Mathematics

EE202 Electrical Circuits

EE203 Three Phase Power Circuits

EE204 Engineering Physics

EE206 AC Machines

EE207 DC Machines

EE208 Operational Amplifiers

EE209 Analogue Electronics

EE301 Advanced Electrical Drafting

EE302 Advanced Engineering Mathematics (Optional)

STAGE (5)BACHELOR OF APPLIED ENGINEERING (MECHTRONICS) DEGREE

Subjects	Points	Competency Units	Page
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 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)	
Subjects	Points	Competency Units	Page

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 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 , PID_Control (1 pt) EE 624 Process Control (1 pt) ME 534 Numerical Control Part 1 / 2 (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)	
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)	
Total Credit points	50 Pt		

Stage	Points
Stage 1—Diploma in Mechanical Engineering	30
Stage 2	17
Stage 3	13
Stage 4	10
Stage 5	50
Total (Bachelor of Applied Engineering-Mechtronics)	120