

**BHARATH INSTITUTE OF HIGHER EDUCATION AND RESEARCH**

Faculty of Engineering and Technology  
Department of Electrical and Electronics Engineering

C.C	Year/ Sem	Sub Code & Sub Name		Sub Code & Sub Name	
				Pre-Requisite	Co-Requisite
HS	I/I	BEN101	English – I	+2 Level English	NIL
BS	I/I	BMA101	Mathematics – I	+ 2 Level Mathematics	NIL
BS	I/I	BPH101	Engineering Physics - I	+2 level Physics	NIL
BS	I/I	BCH101	Engineering Chemistry – I	+2 Level Chemistry	NIL
ES	I/I	BCS101	Fundamentals of Computing and Programming	+2 level Computer Science	NIL
ES	I/I	BME102	Engineering Graphics – C	+2 Level Mathematics	NIL
ES	I/I	BEE101	Basic Electrical& Electronics Engineering	+2 Level Mathematics, Physics	NIL
ES	I/I	BCS1L1	Computer Practice Laboratory	NIL	Fundamentals of Computing and Programming
ES	I/I	BEE1L1	Basic Electrical & Electronics Engineering Practices Laboratory	NIL	Basic Electrical& Electronics Engineering
HS	I/II	BEN201	English – II	BEN101 - English – I	NIL
BS	I/II	BMA201	Mathematics – II	BMA101 - Mathematics – I	NIL
BS	I/II	BPH201	Engineering physics – II	BPH101 --Engineering Physics - I	NIL
BS	I/II	BCH201	Engineering Chemistry – II	BCH101 -Engineering Chemistry – I	NIL
HS	I/II	BFR201	French	+2 Level English	NIL
HS	I/II	BGM201	German	+2 Level English	NIL
HS	I/II	BJP201	Japanese	+2 Level English	NIL
HS	I/II	BKR201	Korean	+2 Level English	NIL
HS	I/II	BCN201	Chinese	+2 Level English	NIL
HS	I/II	BSS201	Personality Development	+2 Level Knowledge	NIL
BS	I/II	BBT202	Biology for Engineers	Basic Science	NIL
ES	I/II	BME203	Basic Mechanical Engineering	+2 Level Maths & Physical Science	NIL
ES	I/II	BCE201	Basic Civil Engineering	+2 Level Math's & Physical Science	NIL
ES	I/II	BCM2L1	Basic Civil & Mechanical Engineering Practices Laboratory	NIL	Basic Mechanical Engineering & Basic Civil Engineering
BS	I/II	BPC2L1	Physics And Chemistry Laboratory	NIL	Physics And Chemistry-I & II

BS	II/III	BMA301	Mathematics – III	BMA101/Maths-I & BMA201/Maths-II	NIL
PC	II/III	BEE301	Circuit Theory	BEE101 –Basic Electrical & Electronics Engg	NIL
PC	II/III	BEE302	Electrical Machines – I	BEE101 - Basic Electrical & Electronics Engg	NIL
PC	II/III	BEE303	Electron Devices	BEE101 - Basic Electrical & Electronics Engg	NIL
PC	II/III	BEE304	Electromagnetic Theory	BEE101 - Basic Electrical & Electronics Engg	NIL
PC	II/III	BEE306	Digital Electronics	BEE101 - Basic Electrical & Electronics Engg	NIL
PC	II/III	BEE3L2	Electrical Machines – I Laboratory	NIL	Electrical Machines – I
PC	II/III	BEE3L5	Electron Devices Laboratory	NIL	Electron Devices
BS	II/IV	BMA401	Applied Probability and Statistics	BMA201- Maths-II	NIL
PC	II/IV	BEE401	Electrical Machines - II	BEE302 - Electrical Machines – I	NIL
PC	II/IV	BEE402	Electrical Network Analysis & Synthesis	BEE301 - Circuit Theory	NIL
PC	II/IV	BEE403	Linear Integrated circuits	BEE306 - Digital Electronics	NIL
PC	II/IV	BME405	Thermal Engineering & Fluid mechanics	BME203 - Basic Mechanical Engineering	NIL
HS	II/IV	BCE406	Environmental Studies	BCH201 - Engineering Chemistry – II	NIL
PC	II/IV	BME4L3	Thermal Engineering & Fluid Mechanics Laboratory	NIL	Thermal Engineering & Fluid mechanics
PC	II/IV	BEE4L2	Linear & Digital Integrated Circuits Laboratory	NIL	Linear Integrated circuits
PC	II/IV	BEE4L1	Electrical Machines - II Laboratory	NIL	Electrical Machines - II
BS	III/V	BMA502	Numerical methods	BMA101 - Mathematics – I	NIL
PC	III/V	BEE501	Control System	BMA101 - Mathematics – I	NIL
PC	III/V	BEE5L1	Control System Laboratory	NIL	Control System
PC	III/V	BEE502	Power Electronics	BEE303 - Electron Devices	NIL
PC	III/V	BEE5L2	Power Electronics Laboratory	NIL	Power Electronics
PC	III/V	BEE504	Electrical Machine design	BEE302 - Electrical Machines – I	NIL
PC	III/V	BEE505	Power Generation Systems	BME203 - Basic Mechanical Engineering	NIL
CE-I	III/V	BEE015	Electrical Special Machines	BEE302/EM-I & BEE40/EM-II	NIL
CE-I	III/V	BEE051	Distributed generation and Micro grid	BME203 - Basic Mechanical Engineering	NIL
CE-I	III/V	BEE012	Solid State Relays	BEE101 –Basic Electrical & Electronics Engg	NIL
CE-I	III/V	BEE053	Power System Protection and Switch Gear	BEE101 - Basic Electrical & Electronics Engg	NIL
CE-I	III/V	BEE013	High Voltage Engineering	BEE101 - Basic Electrical & Electronics Engg	NIL

PC	III/VI	BEE601	Transmission and Distribution	BEE304 - Electromagnetic Theory	Nil
PC	III/VI	BEE603	Microprocessor and Microcontroller	BEE306 - Digital Electronics	Nil
PC	III/VI	BEE604	Digital Signal Processing	BMA301 - Mathematics – III	Nil
PC	III/VI	BEE605	Measurement & Instrumentation	BEE501- Control System	Nil
PC	III/VI	BEE6L2	Measurement & Instrumentation Laboratory	Nil	Measurement & Instrumentation
PC	III/VI	BEE6L1	Microprocessor and Microcontroller Laboratory	Nil	Microprocessor and Microcontroller
HS	III/VI	BSS601	Value Education & Professional Ethics	Professional Courses	Nil
CE-II	III/VI	BEE052	Electrical Machine Modeling and Analysis	BEE504 - Electrical Machine design	Nil
CE-II	III/VI	BEE016	Flexible AC Transmission Systems	BEE505 - Power Generation Systems	Nil
CE-II	III/VI	BEE048	Renewable Energy Sources	BEE505 - Power Generation Systems	Nil
CE-II	III/VI	BEE003	Advanced Control System	BEE501 - Control System	Nil
CE-II	III/VI	BEE011	High Voltage DC Transmission	BEE101 –Basic Electrical & Electronics Engg	Nil
NE-I	III/VI	BEE045	Inst.& Control in power plant Industries	BEE501 - Control System	Nil
NE-I	III/VI	BEE049	Design of Embedded Systems	Nil	Nil
NE-I	III/VI	BEE009	Robotics and Automation	BEE501 - Control System	Nil
NE-I	III/VI	BEC612	Principles of communication Engineering	BEE306 - Digital Electronics	Nil
NE-I	III/VI	BEE042	Electronic Integrated Circuits	BEE403 - Linear Integrated circuits	Nil
BS	IV/VII	BMA701	Operations Research for Engineers	BMA502 - Numerical methods	Nil
PC	IV/VII	BEE701	Power System Analysis	BEE601 - Transmission and Distribution	Nil
PC	IV/VII	BEE703	Electrical Drives and Control	BEE302 - Electrical Machines – I	Nil
PC	IV/VII	BEE7L1	Power System Using PC Laboratory	Nil	Power System Analysis
PC	IV/VII	BEE7L3	Electrical Drives and Control Laboratory	Nil	Electrical Drives and Control
CE-III	IV/VII	BEE047	Power System Operation and Control	BEE601 - Transmission and Distribution	Nil
CE-III	IV/VII	BEE044	Power Quality Management	BEE601 - Transmission and Distribution	Nil
CE-III	IV/VII	BEE019	Smart Grid	BEE505 - Power Generation Systems	Nil
CE-III	IV/VII	BEE043	Solar Energy Utilization	BPH201 - Engineering physics – II	Nil
CE-III	IV/VII	BEE033	Electric and Hybrid Vehicles	BEE101 –Basic Electrical & Electronics Engg	Nil
NE-II	IV/VII	BEE007	Bio-Medical Instrumentation	BBT202 - Biology for Engineers	Nil
NE-II	IV/VII	BEE014	Fuzzy Logic and Neural Network	BCS101 - Fundamentals of Computing	Nil
NE-II	IV/VII	BEE027	Micro Controller Based System Design	BEE603 - Microprocessor and Microcontroller	Nil

NE-II	IV/VII	BBM405	Biosensors and Transducer	BBT202 - Biology for Engineers	Nil
NE-II	IV/VII	BEC013	Automotive Electronics	BEE603 - Microprocessor and Microcontroller	Nil
OE-I	IV/VII	BBA004	Engineering Economics and Financial accounting	Professional Courses	Nil
OE-I	IV/VII	BBA008	Total Quality Management	Professional Courses	Nil
OE-I	IV/VII	BBA001	Principles of Management and Organizational Behaviour	Professional Courses	Nil
OE-I	IV/VII	BEE031	Web Design	BCS101 - Fundamentals of Computing	Nil
OE-I	IV/VII	BEE046	Java Programming	BCS101 - Fundamentals of Computing	Nil
NE-III	IV/VIII	BEI704	Virtual Instrumentation	BEE603 - Microprocessor and Microcontroller	Nil
NE-III	IV/VIII	BEE026	Micro Electro Mechanical Systems	BEE501 - Control System	Nil
NE-III	IV/VIII	BEE050	Process control Engineering	BEE501 - Control System	Nil
NE-III	IV/VIII	BEE022	Fibre Optics and Laser Instrumentation	BEE501 - Control System	Nil
NE-III	IV/VIII	BBA005	Energy Engineering And Management	Professional Courses	Nil
OE-II	IV/VIII	BBA007	Engineering Economics and Cost Analysis	Professional Courses	Nil
OE-II	IV/VIII	BBA002	Entrepreneurship Development	Professional Courses	Nil
OE-II	IV/VIII	BBA003	Marketing Management	Professional Courses	Nil
OE-II	IV/VIII	BEE029	Cloud Computing	BCS101 - Fundamentals of Computing	Nil
OE-II	IV/VIII	BEE030	Cyber Security	BCS101 - Fundamentals of Computing	Nil

**Note:** C.C → Course Category,

CE-I → Core Elective I,

OE-I → Open Elective I

CE-II → Core Elective II,

OE-II → Open Elective II

CE-III → Core Elective III,

NE-I → Non Major Elective I,

NE-II → Non Major Elective II,

NE-III → Non Major Elective III