



Yashoda Technical Campus, Satara

(Approved by AICTE, Delhi/Approved by Govt of Maharashtra DTE) Email: principalengg_vtc@yes.edu.in
Web : www.yes.edu.in NH-4, wadhe, Satara, Tele Fax-02162-271238/39/9172220775

Faculty of Engineering

Department of Electrical Engineering

Semester- ODD

COURSE DETAILS

Structure of Course

Class	B. Tech. Sem. –V
Course Code and Course Title	BTEEC503 Power Electronics
Prerequisite/s	Basic Electrical and Electronics Engineering
Teaching Scheme: Lecture/Tutorial/Practical	03/02/00
Credits	04
Evaluation Scheme: CA / MSE / ESE	20/20/60

Course Outcomes:

Course Outcomes (COs): Upon successful completion of this course, the student will be able to:		Blooms Level
BTEEC503_1	Introduction basics of Power Electronics Devices,	L2
BTEEC503_2	Ability to express characteristics of SCR ,BJT ,MOSFET ,IGBT	L3
BTEEC503_3	Design of Power Electronic Converters in Power Control Application	L4
BTEEC503_4	Ability to Design Inverter circuit and chopper circuit	L4
BTEEC503_5	Ability to Design AC Voltage Controller and Cycloconverter	L4

Mapping of Course Outcomes to Program Outcomes:

Course Outcomes	Programme Outcomes															
	1	2	3	4	5	6	7	8	9	10	11	12	PSO1	PSO2	PSO3	
BTEEC503_1	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BTEEC503_2	2	2	-	3	-	-	-	-	-	-	-	-	-	-	-	-
BTEEC503_3	2	3	3	2	-	-	-	-	-	-	-	-	2	2	-	-
BTEEC503_4	2	3	3	2	-	-	-	-	-	-	-	-	2	2	-	-
BTEEC503_5	2	3	3	2	-	-	-	-	-	-	-	-	2	2	-	-
Total	10	13	9	11	-	-	-	-	-	-	-	-	6	6	-	-
Average	2	2.6	3	2.25	-	-	-	-	-	-	-	-	2	2	-	-
BTEEC503	2	2.6	3	2.25	-	-	-	-	-	-	-	-	2	2	-	-

Vision of the Department

To emerge as a center of excellence in Electrical Engineering education producing knowledgeable, employable, and ethical engineering graduates to serve industry/society

Mission of the Department

We, at Department of Electrical Engineering, are committed to achieve our vision by-
M1: Preparing technically and professionally competent engineers by imparting quality education through effective teaching learning methodologies.
M2: Developing professional skills and right attitude among students that will help them to succeed and progress in their personal and professional career.
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Semester- ODD

COURSE DETAILS

Structure of Course

Class	T.Y B. Tech. Sem. –V
Course Code and Course Title	BTEEOE505B Electrical Safety
Prerequisite/s	BTES106/206
Teaching Scheme: Lecture/Tutorial/Practical	03/00/00
Credits	03
Evaluation Scheme: CA / MSE / ESE	20/20/60

Course Outcomes:

Course Outcomes (COs): Upon successful completion of this course, the student will be able to:		Blooms Level
BTEEOE505B_1	Explain primary and secondary electrical hazard and protective measures for safety.	L3
BTEEOE505B_2	Discuss necessity of electrical grounding and different bonding mechanism.	L3
BTEEOE505B_3	Describe Electrical safety programmer structure and step wise procedures.	L3
BTEEOE505B_4	Discuss step and procedures to be followed during maintenance of electrical equipment's.	L3
BTEEOE505B_5	Differentiate various codes and standards for ensuring electric safety to prevent from hazards.	L3

Mapping of CO's with PO's and PSO's:

Course Outcomes	Programme Outcomes														
	1	2	3	4	5	6	7	8	9	10	11	12	PSO 1	PSO 2	PSO 3
BTEEOE505B_1	2					2		2		2			2		2
BTEEOE505B_2	3					2		2		2			2		2
BTEEOE505B_3	3					2		2		2			2		2
BTEEOE505B_4	3					2		2		2			2		2
BTEEOE505B_5	3					2		2		2			2		2
Total	13					10		10		10			10		10
Average	2.6					2		2		2			2		2
BTEEOE505B	3					2		2		2			2		2

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Faculty of Engineering

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Semester- ODD

COURSE DETAILS

Structure of Course

Class	T.Y. B. Tech. Sem. –V
Course Code and Course Title	BTEEL509 Power Electronics Lab
Prerequisite/s	BTES206, BTBS404, BTBSL409
Teaching Scheme: Lecture/Tutorial/Practical	00/00/02
Credits	1
Evaluation Scheme: CA / ESE	60/40

Course Outcomes:

Course Outcomes (COs): Upon successful completion of this course, the student will be able to:		Blooms Level
BTEEL509_1	Understand the operating principles and characteristics of various power electronic converters.	L2
BTEEL509_2	Analyze and choose the appropriate converters for various applications	L2
BTEEL509_3	Use power electronic simulation packages & hardware to develop the power converters.	L2
BTEEL509_4	Perform individually or in a team to solve open ended problems in electrical engineering and communicate effectively to represent.	L2

Mapping of CO's with PO's and PSO's:

Course Outcomes	Programme Outcomes														
	1	2	3	4	5	6	7	8	9	10	11	12	PSO 1	PSO 2	PSO 3
BTEEL509_1	2				3			2	2	2		1		2	
BTEEL509_2	3				3			2	2	2		1		2	
BTEEL509_3	3				3			2	2	2		1		2	
BTEEL509_4								2	2	2		1		2	
Total	8				6			8	8	8		4		8	
Average	2				1.5			2	2	2		1		2	
BTEEL509	2				2			2	2	2		1		2	

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Semester- EVEN

COURSE DETAILS

Structure of Course

Class	B. Tech. Sem. –VI
Course Code and Course Title	Electrical Machine Design (BTEEC602)
Prerequisite/s	EM-I, EM-II, BEE
Teaching Scheme: Lecture/Tutorial/Practical	03/01/00
Credits	4
Evaluation Scheme: CA / MSE / ESE	20/20/60

Course Outcomes:

Course Outcomes (COs): Upon successful completion of this course, the student will be able to:		Blooms Level
BTEEC602_1	Analyze principle of design of machines.	L3
BTEEC602_2	Gain knowledge of Design of Simple Electrical Apparatus & AC and DC Windings	L3
BTEEC602_3	Gain knowledge of Design of Stator and rotor of Induction Motor	L3
BTEEC602_4	Analyze the Heating and Ventilation of Electrical Machines	L3
BTEEC602_5	Describe Design of Transformer	L4

Mapping of Course Outcomes to Program Outcomes:

Course Outcomes	Programme Outcomes														
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
BTEEC602_1	2	2	3	2								2	2	2	
BTEEC602_2	2	2	3	2								2	2	2	
BTEEC602_3	2	2	3	2								2	2	2	
BTEEC602_4	2	2	3	2								2	2	2	
BTEEC602_5	2	2	3	2								2	2	2	
AVG	2	2	3	2								2	2	2	

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Semester- EVEN

COURSE DETAILS

Structure of Course

Class	T.Y. B. Tech. Sem. –VI
Course Code and Course Title	BTEEC603 CONTROL SYSTEM ENGINEERING
Prerequisite/s	BTBS301
Teaching Scheme: Lecture/Tutorial/Practical	03/01/02
Credits	04
Evaluation Scheme: CA / MSE / ESE	20/20/60

Course Outcomes:

Course Outcomes (COs): Upon successful completion of this course, the student will be able to:		Blooms Level
BTEEC603_1	Classify control systems and represent in various models	L2
BTEEC603_2	Apply standard test signals to a system to determine their characteristics	L3
BTEEC603_3	Make use of stability concepts to obtain the desired characteristics	L3
BTEEC603_4	Determine the effect of PID controller on system performance	L3
BTEEC603_5	Examine the system behavior using state variable techniques	L4

Mapping of Course Outcomes to Program Outcomes:

Course Outcomes	Programme Outcomes														
	1	2	3	4	5	6	7	8	9	10	11	12	PEO1	PEO2	PEO3
BTEEC603_1	3	3	2			2				2			2	1	1
BTEEC603_2	2	3	2			2				2			2	1	1
BTEEC603_3	3	2	3			2				2			3	2	1
BTEEC603_4	2	3	2			2				2			2	2	1
BTEEC603_5	3	3	3			2				2			2	1	1
Total															
Average	3	3	2			2				1			1	2	1

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COURSE DETAILS

Structure of Course

Class	TY B. Tech. Sem. –VI
Course Code and Course Title	BTEEPE604B, SMART GRID TECHNOLOGY
Prerequisite/s	
Teaching Scheme: Lecture/Tutorial/Practical	03/00/00
Credits	03
Evaluation Scheme: CA / MSE ESE	20/20/60
Course Coordinator	Dr. N. M. Jamadar

Course Outcomes:

Course Outcomes (COs): Upon successful completion of this course, the student will be able to:	Blooms Level
BTEEPE604B_1 Describe Smart electric power grids, including definition, design criteria, and technology.	L3
BTEEPE604B_2 Explain smart grid architecture and necessary automation requirement for operation.	L3
BTEEPE604B_3 Discuss importance of distributed generation technologies and its economic aspects in micro grids.	L3
BTEEPE604B_4 Classify different communication technologies required in smart grid operation.	L4
BTEEPE604B_5 Select and explain different control and security mechanism implanted to control flow of electric power in smart grid.	L4

Mapping of Course Outcomes to Program Outcomes:

Course Outcomes	Program Outcomes														
	1	2	3	4	5	6	7	8	9	10	11	12	PSO1	PS O2	PSO 3
BTEEPE604B_1	2	2				2				2			2		2
BTEEPE604B_2	3	2				2				2			2		2
BTEEPE604B_3	3	2				2				2			2		2
BTEEPE604B_4	3	2				2				2			2		2
BTEEPE604B_5	3	2				2				2			2		2
Total	14	10				10				10			10		10
Average	3	2				2				2			2		2
BTEEPE604B	3	2				2				2			2		2

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COURSE DETAILS

Structure of Course

Class	T. Y. B. Tech. Sem. –VI
Course Code and Course Title	BTEEOE605B Power Plant Engineering
Prerequisite/s	BTEEPE405C
Teaching Scheme: Lecture/Tutorial/Practical	03/00/00
Credits	03
Evaluation Scheme: CA / MSE / ESE	20/20/60

Course Outcomes:

Course Outcomes (COs): Upon successful completion of this course, the student will be able to:		Blooms Level
BTEEOE605B_1	Explain the economics involved in Power Plant and explain the functions, control and excitation systems of conventional energy sources.	L3
BTEEOE605B_2	Discuss various components of thermal and hydro power plant and the factors influencing the site selection for the plant.	L3
BTEEOE605B_3	Describe the working, classification, types and applications of nuclear, diesel and gas power plant.	L3
BTEEOE605B_4	Explain the components, principles and working of renewable power plants.	L3
BTEEOE605B_5	Illustrate the various concepts of combined operation of power plant.	L3

Mapping of CO's with PO's and PSO's:

Course Outcomes	Programme Outcomes														
	1	2	3	4	5	6	7	8	9	10	11	12	PSO 1	PS O2	PSO 3
BTEEOE605B_1	2	1				2	2						2		2
BTEEOE605B_2	3	1				2	2						2		2
BTEEOE605B_3	3	1				2	2						2		2
BTEEOE605B_4	3	1				2	2						2		2
BTEEOE605B_5	3	1				2	2						2		2
Total	14	5				10	10						10		10
Average	2.8	1				2	2						2		2
BTEEOE605B	3	1				2	2						2		2

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