

Teaching and Evaluation Scheme for First Year B. Tech. (All Branches)

Group A

Semester I									
Course Code	Course Title	Teaching Scheme			Evaluation Scheme				Credit
		L	T	P	CA	MSE	ESE	Total	
Mandatory	Induction Program	3-weeks duration in the beginning of semester.							
BTBS101	Engineering Mathematics- I	3	1	-	20	20	60	100	4
BTBS102	Engineering Physics	3	1	-	20	20	60	100	4
BTES103	Engineering Graphics	2	-	-	20	20	60	100	2
BTHM104	Communication Skills	2	-	-	20	20	60	100	2
BTES105	Energy and Environment Engineering	2	-	-	20	20	60	100	2
BTES106	Basic Civil and Mechanical Engineering	2	-	-	50	-	-	50	Audit
BTBS107L	Engineering Physics Lab	-	-	2	60	-	40	100	1
BTES108L	Engineering Graphics Lab	-	-	4	60	-	40	100	2
BTHM109L	Communication Skills Lab.	-	-	2	60	-	40	100	1
		14	2	8	330	100	420	850	18
Semester II									
BTBS201	Engineering Mathematics-II	3	1	-	20	20	60	100	4
BTBS202	Engineering Chemistry	3	1	-	20	20	60	100	4
BTES203	Engineering Mechanics	2	1	-	20	20	60	100	3
BTES204	Computer Programming in C	3	-	-	20	20	60	100	3
BTES205	Workshop Practices	-	-	4	60	-	40	100	2
BTES206	Basic Electrical and Electronics Engineering	2	-	-	50	-	-	50	Audit
BTBS207L	Engineering Chemistry Lab	-	-	2	60	-	40	100	1
BTES208L	Engineering Mechanics Lab	-	-	2	60	-	40	100	1
BTES210S	Seminar	-	-	2	60	-	40	100	1
BTES211P	Field Training / Internship/Industrial Training (minimum of 4 weeks which can be completed partially in first semester and second Semester or in at one time).	-	-	-	-	-	-	-	Credits To be evaluated in III Sem.
		13	3	10	430	80	440	950	19
		27							

Teaching and Evaluation Scheme for First Year B. Tech. (All Branches)

Group B

Semester I									
Course Code	Course Title	Teaching Scheme			Evaluation Scheme				Credit
		L	T	P	CA	MSE	ESE	Total	
Mandatory	Induction Program	3-weeks duration in the beginning of semester.							
BTBS101	Engineering Mathematics- I	3	1	-	20	20	60	100	4
BTBS102	Engineering Chemistry	3	1	-	20	20	60	100	4
BTES103	Engineering Mechanics	2	1	-	20	20	60	100	3
BTES104	Computer Programming in C	3	-	-	20	20	60	100	2
BTES105L	Workshop Practices	-	-	4	60	-	40	100	2
BTES106	Basic Electrical and Electronics Engineering	2	-	-	50	-	-	50	Audit
BTBS107L	Engineering Chemistry Lab	-	-	2	60	-	40	100	1
BTES108L	Engineering Mechanics Lab	-	-	2	60	-	40	100	1
		13	03	10	370	80	400	850	18
		25							
Semester II									
BTBS201	Engineering Mathematics-II	3	1	-	20	20	60	100	4
BTBS202	Engineering Physics	3	1	-	20	20	60	100	4
BTES203	Engineering Graphics	2	-	-	20	20	60	100	2
BTHM204	Communication Skills	2	-	-	20	20	60	100	2
BTES205	Energy and Environment Engineering	2	-	-	20	20	60	100	2
BTES206	Basic Civil and Mechanical Engineering	2	-	-	50	-	-	50	Audit
BTBS207L	Engineering Physics Lab	-	-	2	60	-	40	100	1
BTES208L	Engineering Graphics Lab	-	-	3	60	-	40	100	2
BTHM209L	Communication Skills Lab.	-	-	2	60	-	40	100	1
BTES210S	Seminar	-	-	2	60	-	40	100	1
BTES211P	Field Training / Internship/Industrial Training (minimum of 4 weeks which can be completed partially in first semester and second Semester or in at one time)	-	-	-	-	-	-	-	Credits To be evaluated in III Sem.
		14	02	09	390	100	460	950	19
		26							

BTES105/205 Energy and Environment Engineering

2 Credits

Course Objectives:

1. To Identify conventional ,non conventional energy sources.
2. To understand the power consuming and power developing devices for effective utilization and power consumption
3. To Identify various sources of air, water pollution and its effects.
4. To understand noise,soil, thermal pollution and Identify solid, biomedical and hazardous waste.

Course Outcomes:

Students will be able to:

1. Identify conventional ,non conventional energy sources.
2. Know and discuss power consuming and power developing devices for effective utilization and power consumption
3. Identify various sources of air, water pollution and its effects.
4. Know and discuss noise,soil, thermal pollution and Identify solid, biomedical and hazardous waste.

Unit 1: Conventional Power Generation:

(4 hours)

Steam power station, Nuclear power plant – Gas turbine power plant- Hydro power station: Schematic arrangement, advantages and disadvantages, Thermo electric and thermionic generators, Environmental aspects for selecting the sites and locations of power plants.

Unit 2: Renewable Power Generation:

(4 hours)

Solar, Wind, Biogas and Biomass, Ocean Thermal energy conversion (OTEC), Tidal, Fuel cell, Magneto Hydro Dynamics (MHD): Schematic arrangement, advantages and disadvantages.

Unit 3: Energy conservation

(4 hours)

Scope for energy conservation and its benefits Energy conservation Principle– Maximum energy efficiency, Maximum cost effectiveness, Methods and techniques of energy conservation in ventilation and air conditioners, compressors, pumps, fans and blowers, Energy conservation in electric furnaces, ovens and boilers.,lighting techniques.

Unit 4: Air Pollution

(4 hours)

Environment and Human health - Air pollution: sources- effects- control measures - Particulate emission, air quality standards, and measurement of air pollution.

Unit 5: Water Pollution

(4 hours)

Water pollution- effects- control measures- Noise pollution –effects and control measures, Disposal of solid wastes, Bio-medical wastes-Thermal pollution – Soil pollution -Nuclear hazard.

Reference/Text Books:

1. A Chakrabarti, M. L. Soni, P. V. Gupta, U. S. Bhatnagar, A Text book of Power System Engineering, Dhanpat Rai Publication.
2. Rai. G. D., Non Conventional Energy Sources, Khanna Publishers, Delhi,2006.
3. Rao S., Parulekar B.B., Energy Technology-Non conventional, Renewable And Conventional, Khanna Publishers, Delhi,2005.