Course Number and Name

BBA005 & Energy Engineering And Management

Credits and Contact Hours

3 & 45

Course Coordinator's Name

Ms.Venkateswari

Text Books and References

1. J.M. Senior, "Optical Fiber Communication – Principles and Practice", Prentice Hall of India,1 st edition,1985.
2. J. Wilson and J.F.B. Hawkes, 'Introduction to Opto Electronics', Prentice Hall of India, 2nd Edition,2001.

Course Description

To enlight the student in the field of energy engineering concern with energy efficiency, energy service and facility management

Prerequisites	Co-requisites
Professional Course	Nil

required, elective, or selected elective (as per Table 5-1)

Required

Course Outcomes (COs)

CO1: Understanding the different energy resources and their uses.
CO2: Understanding the different energy conservation techniques
CO3: Understanding the impact of energy on environment
CO4: Understanding the energy Management
CO5: Understanding the Engineering Economics

Student Outcomes (SOs) from Criterion 3 covered by this Course

COs/ POs	a	b	c	d	e	f	g	h	i	j	k	l
CO1		H				M	M					M
CO2	H							M			M	
CO3				H				M				
CO4			M				H		H			M
CO5		M			M						H	

List of Topics Covered

UNIT I INTRODUCTION TO ENERGY AND ENVIRONMENT 9

Definition – Fossil fuel reserves – Energy consumption – Green house effect, global warming – Renewable energy resources – Environmental aspects, utilization – energy prizes – Energy policies.

UNIT II ENERGY CONSERVATION 9

Need – different types of energy conservation schemes – industrial energy use – energy surveying and auditing – energy index – cost of energy – cost index-energy conservation in engineering and process industry in thermal systems, in buildings and non conventional energy resources schemes.

UNIT III ENERGY GENERATION BY TECHNOLOGY 9

Fuels and consumption – Boilers – Furnaces – Waste heat recovery systems – Heat pumps and refrigerators – Storage systems – Insulated pipe work systems – heat exchangers.

UNIT IV ENERGY MANAGEMENT 9

Energy management principles – energy resource management – energy management information systems – Instrumentation and measurement – Computerized energy management.

UNIT V ENGINEERING ECONOMICS 9

Costing techniques – Optimization cost – Optimal target investment schedules – Finance appraisal – Profitability – Project management.