

Course Number and Name	
BME701 – INDUSTRIAL ENGINEERING	
Credits and Contact Hours	
3&45	
Course Coordinator's Name	
Ms.Sucharitha	
Text Books and References	
<p>TEXT BOOKS:</p> <ol style="list-style-type: none"> 1. Khanna.O.P. Industrial Engineering and Management, Khanna Publishers, New Delhi, 2000. 2. B.Kumar, Industrial Engineering, Hanna Publishers,2004 3. S.Ramachandran and K.Pandian Principles Of Management And Industrial Psychology, Air Walk Publishers, 2007. <p>REFERENCES:</p> <ol style="list-style-type: none"> 1. Gupta And Petal, Work Study- Khanna Publishers, 1998. 2. onlinevideolecture.com/ebooks/?subject=Industrial%20Engineering... 	
Course Description	
To impart knowledge in undertaking market research, demand forecasting and costing for designing plant, operation, production, maintaining standards of professional ethics.	
Prerequisites	Co-requisites
Manufacturing Engg	Nil
required, elective, or selected elective (as per Table 5-1)	
Required	
Course Outcomes (COs)	
CO1	Learn production & productivity
CO2	Demonstrate the knowledge of designing plants and scheduling
CO3	Study about work study techniques
CO4	A systematic understanding of industrial psychology
CO5	Learn quality control
CO6	Learn sampling and probability distribution

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

COs/SOs	a	b	c	d	e	f	g	h	i	j	k	l
CO1			H	H								
CO2				H					H			H
CO3	L						H					H
CO4		L					H		M			H
CO5												H
CO6									M			H

List of Topics Covered

UNIT I PRODUCTION AND PRODUCTIVITY	9
<p>Definitions-Productivity, Effectiveness, and Types-Factors Influencing Productivity-Techniques To Improve Productivity, Technology Based Techniques and material Based Productivity Improvement-Inventory Control-M.R.P-Quality Circles-Brainstorming-Pareto Analysis-Cause And Effect Analysis-TQM-Zero Defects-Flexitime-Just In Time-Ergonomics-Reliability Improvement-Modular Design-Maintainability.</p>	
UNIT II PLANT LAYOUT /LOADING AND SCHEDULING	9
<p>Types of Layout, Its Advantages and Disadvantages-Preference of Different Types of Layout, Plant Location and Decision-Definitions: Group Technology-Principles of Material Handling. Loading- Master Scheduling-Perpetual Loading-Order Scheduling-Loading By Scheduled Method-Index Method Of Scheduling-Factors Influencing Scheduling-Production Planning And Control-Routing And Dispatching-Job Card-Job Order-Order Control And Machine Load Chart.</p>	
UNIT III WORKSTUDY	9
<p>Techniques of Work Study-Procedure-Method Study, Types of Process Charts and Diagrams-Multiple Activity Chart-Utility-Time Study-Micro Motion Time Study-PMTS-Work Sampling-Job Analysis-Job Evaluation and Merit Rating-Wage and Wage Incentive.</p>	
UNIT IV INDUSTRIAL PSYCHOLOGY	9
<p>Introduction-Nature And Scope-Objectives-Hawthorne Studies And Its Conclusion-Individual Behaviour-Group Behaviour,Types Of Groups-Formal And Informal Organizations-Fatigue –Accident,Major Factors,Prevention-Importance And Methods Of Training To The Employees, Methods And Aids-Leadership And Leadership Styles-Communication And Its Importance.</p>	
UNIT V STATISTICAL QUALITY CONTROL	9
<p>Introduction to Quality Control-Statistical Measures-Control Chart-Types –Control Chart for Attributes-Control Chart for Number of Defects per Unit-Acceptance Sampling-Basic Probability-Normal Distribution-Acceptable Quality Level-Lot Tolerance Percent Defective-Average Outgoing Quality</p>	