



GUJARAT TECHNOLOGICAL UNIVERSITY
Syllabus for Bachelor of Vocation (B.Voc), 6th Semester
Branch: Solar & Renewable Energy
Subject Name: Industrial Management
Subject Code: 1160704

Type of course: Core

Prerequisite: NA

Rationale: Technicians are expected to work during most of their career at middle level. They are also expected to deal with workforce and management problems. In the present era of competition, optimum utilization of the resources with achieving higher productivity is essential for any industry to survive. Quality and cost controls are also other important factors which contribute to the day to day supervision issues. This course aims to deal effectively with such issues along with familiarization of acts and laws applied to industries.

Teaching and Examination Scheme:

Teaching Scheme			Credits C	Examination Marks				Total Marks
L	T	P		Theory Marks		Practical Marks		
				ESE(E)	PA(M)	ESE(V)	PA(I)	
3	0	0	3	50	0	0	0	50

Sr. No.	Topic	No. of Hours	Module Weightage
01	Introduction to Management: Functions of management – Planning, Organizing, Staffing, Directing Controlling and Coordinating, Levels of management, Role of Manager, Skills of manager, – F.W. Taylor’s scientific management and Henry Fayol’s principles of management.	7	10%
02	Organization and Communication: Product design process-Process selection-Types of production system (Job, Batch and Mass Production). Plant location-factors-Urban & Rural sites comparison-Types of plant layouts-Design of product layout-Line balancing (RPW method). Value analysis: Definition-types of values-objectives-phase of value analysis-Fast diagram.	10	20%
03	Forms of business organizations: Salient features of Sole proprietorship, Partnership, Joint Stock Company, Private limited company and Public limited company, Government enterprises and Co-operative societies.	7	30%
04	Production operations management: Production planning and control, Plant location and factors affecting plant location, Plant layout and types of layout	10	20%
05	Human Resources Management: Basic functions of human resource management. Manpower planning, Recruitment, Selection, Training and Development, Placement, Compensation and Performance appraisal.	8	10%

Distribution of marks weightage for cognitive level:

Distribution of Theory Marks					
R Level	U Level	A Level	N Level	E Level	C Level
20	20	10	-	-	-

Legends: R: Remembrance; U: Understanding; A: Application, N: Analyze, E: Evaluate C: Create Above Levels (Revised Bloom’s Taxonomy)

Note: This specification table shall be treated as a general guideline for students and teachers. The actual distribution of marks in the question paper may vary slightly from above table.



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Reference Books:

1. Aryasri: Management Science, TMH, New Delhi.
2. O.P.Khanna: Industrial Engineering and Management, Dhanpat Rai Publishers.
3. K.C.Jain and L.N.Agarwal: Production Planning Control & Industrial Management, Khanna Publishers
4. R Paneerselvam: Production and Operations Management, 2nd edition, PHI Publications.
5. Anil Kumar Mukhopadhyay: Value Engineering Concept Technique and Application, SAGE Publishing.
6. T.R.Banga and S.C.Sarma: Industrial Engineering and Management Science, Khanna Publishers.
7. R. Dan Reid, Nada R. Sanders: Operations Management, 4th edition, Wiley
8. Ralph M Barnes: Motion and Time Study, John Wiley & Sons Publishers.
9. NVS Raju: Industrial Engineering Management, Cengage Learning.
10. Ravi Shankar: Industrial Engineering Management, Galgotia Publications.

NPTEL Web Course:

1. <http://nptel.ac.in/courses/112107217/>
2. <http://nptel.ac.in/courses/112107143/>
3. <http://nptel.ac.in/courses/110105067/>
4. <http://nptel.ac.in/courses/110105088/>

NPTEL Video Course:

1. http://nptel.ac.in/courses/nptel_download.php?subjectid=112107217
2. http://nptel.ac.in/courses/nptel_download.php?subjectid=112107143
3. http://nptel.ac.in/courses/nptel_download.php?subjectid=110105067
4. http://nptel.ac.in/courses/nptel_download.php?subjectid=110105088

Course Outcome:

Sr. No.	CO statement	Marks% weightage
CO1	Understand the concepts of Management	20
CO2	Gain basic understanding of management and to relate the concepts of management with industrial organizations and manage organizations efficiently	30
CO3	Have the basic knowledge of production management and make decisions proficiently	30
CO4	Have the knowledge in maintaining better human relations in the organizations	20