Course Number and Name

BCE080 - CONSTRUCTION PERSONNEL MANAGEMENT

Credits and Contact Hours

3 & 45

Course Coordinator's Name

Mr.S.Vinothkumar

Text Books and References

REFERENCES:

- James, J.O' Brian, Construction Inspection Handbook Quality Assurance and Quality Control, Van Nostrand, New York, 1989.
- Kwaku, A., Tena, Jose, M. Guevara, Fundamentals of Construction Management and Organisation, Reston Publishing Co., Inc., Virginia, 1985.
- Juran Frank, J.M. and Gryna, F.M. Quality Planning and Analysis, Tata McGraw Hill, 1993
- Hutchins.G, ISO 9000, Viva Books, New Delhi, 2000
- Clarkson H. Oglesby, Productivity Improvement in Construction, McGraw-Hill, 1989.
- John L. Ashford, the Management of Quality in Construction, E & F.N.Spon, New York, 1989.
- Steven McCabe, Quality Improvement Techniques in Construction, Addison Wesley Longman Ltd, England. 1998.

Course Description

• To create a complete understanding on quality planning, quality assurance, quality control and safety management

Prerequisites	Co-requisites
Personality Development	NIL

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

Course Outco	mes (COs)
CO1	Know the Quality plan and Quality Management Guidelines
CO2	Understand the Quality system and standard Documents and Quality related training
CO3	Know the quality planning, Contract and construction programming, Inspection procedures, Processes and products
CO4	Know the quality assurance, appraisals and quality control by reliability testing
CO5	Understand how the quality techniques can be improved.

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

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	COs/SOs	а	b	с	d	e	f	g	h	i	j	k	
	CO1						М	Μ	М				
	CO2						М	М	М				
	CO3						М	М	М		L		
	CO4						М	М	М				-
	CO5	L					М	М	М				-
Lis	t of Topics	Covere	ed				•		·		•		

UNIT I QUALITY MANAGEMENT

Introduction – Definitions and objectives – Factor influencing construction quality - Responsibilities and authority - Quality plan - Quality Management Guidelines – Quality circles.

UNIT II QUALITY SYSTEMS

Introduction - Quality system standard – ISO 9000 family of standards – Requirements – Preparing Quality System Documents – Quality related training – Implementing a Quality system – Third party Certification.

UNIT III QUALITY PLANNING

Quality Policy, Objectives and methods in Construction industry - Consumers satisfaction, Ergonomics -Time of Completion - Statistical tolerance – Taguchi's concept of quality – Codes and Standards – Documents – Contract and construction programming – Inspection procedures - Processes and products – Total QA / QC programme and cost implication.

UNIT IV QUALITY ASSURANCE AND CONTROL

Objectives - Regularity agent, owner, design, contract and construction oriented objectives, methods - Techniques and needs of QA/QC - Different aspects of quality - Appraisals, Factors influencing construction quality - Critical, major failure aspects and failure mode analysis, -Stability methods and tools, optimum design - Reliability testing, reliability coefficient and reliability prediction.

UNIT V QUALITY IMPROVEMENT TECHNIQUES

Selection of new materials -Influence of drawings, detailing, specification, standardization -Bid preparation -Construction activity, environmental safety, social and environmental factors -Natural causes and speed of construction -Life cycle costing -Value engineering and value analysis.

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