JCT College of Engineering and Technology

Pichanur Road, Off, NH 47, Pichanur, Tamil Nadu 641105

Approved by AICTE NEW DELHI, Affiliated to Anna University Chennai, Accredited by NAAC, UG Petrochemical, ME,EEE & CSE Accredited by NBA

ACTION TAKEN FOR THE ANALYSIS OF FEEDBACK COLLECTED FROM FACULTY, STUDENTS, ALUMNI ,EMPLOYER, ON CURRICULUM

Feedback collected from	Number of Questioners	Threshold	Questioners with response below Threshold	Action Taken	Evidence
Faculty	12	80% or 2.4	How do you rate the structure framed for entire program?	Being the affiliated college, the Institute cannot take any action. However gaps in curriculum identified and communicated to university through letter.	Letter sent to University regarding Gaps in Curriculum Sample copy attached.
			How do you rate the allocation of the credits and contact hours (L-T-P) to the courses?		
			Rate the Size of syllabus in terms of the load on the student		
			How do you rate the composition of the courses in terms of Basic science, Engineering science, Humanities, Discipline core, discipline elective, open elective, project etc.?		
			How do you rate the offering of the electives in terms of their relevance to the specialization streams and technological advancements?		
			How do you rate the relevance of the Text Books and reference books by their International recognition to the Courses?	Faculties are referring books recommended by University, AICTE, NIT, IIT for content delivery. NPTEL lecture notes and video lectures are also referred.	Course Data sheet and Lesson Plar sample copies attached.

PRINCIPAL
JCT College of Engineering & Technology
Pichanur, Coimbatore - 641105

			Rate the courses in terms of sequence of offering considering whether the preceding courses have been covered.	Lesson plan is prepared and course contents are delivered with proper sequence.	Syllabus for the subject where the sequence is not ok and lesson plan. for the same subject with topics arranged in sequence is attached.
			How do you rate the evaluation scheme designed for each of the course?	Internal Assessment tools like Quiz, Group task etc conducted	
			How do you rate the percentage of courses having LAB components and the domain used for designing the experiments for the LAB components?	• Additional Experiments in Lab • Industrial Certification courses and Value Added courses on Laboratory/ Design skill Conducted.	Minutes of meeting to conduct VAC courses attached .
Students	10	80% or 2.4	Rate the courses in terms of extra learning or self learning considering the design of the courses	• Topics beyond syllabus and Gaps in Syllabus are identified and addressed through extra classes or guest lectures. • Self Learning is promoted through learner centric approach such as Assignments, • Additional Experiments in Lab • Faculties and students are encouraged for NPTEL SWYAM MOOC certification.	Content beyond syllabus Subject code: GE 6757 Subject : Total Quality Management is attached.
			How do you rate the used for designing the experiments for the LAB components?	• Lab Manuals prepared by faculties for each lab is available • Additional Experiments in Lab	Web link for Lab manuals Sample :BS8161 -CHEMISTRY LABORATORY MANUAL is attached.
			How do you rate the percentage of courses having LAB components?	• Additional Experiments in Lab Industrial Certification courses and Value Added courses on	Minutes of meeting to conduct VAC courses attached .

PRINCIPAL
JCT College of Engineering & Technology
Pichanur, Coimbatore - 641105

				Laboratory/ Design skill Conducted.	
Alumni	10	80% or 2.4	How do you rate the competencies in relation to the course content?	Industrial Visits. Inter departmental VET programs, Industry Internship and Industrial certification courses are executed to enhance the skills of the students and make them competent.	
			How do you rate the offering of the electives in relation to the Technological advancements?	Value Added Courses offered	Sample copy of the Value added course details is attached.
			How do you rate the courses which are skills related suiting to the Industry included into the programs?	Industrial Certification courses, Guest lectures conducted	
			How do you rate the domain used for designing the experiments in terms of the suitability of the Tools to the domain?	Being the Affiliated college, no action can be taken directly for curriculum.	
			How do you rate the experiments in terms of their relevance to the real life application?	• Additional Experiments in Lab • Industrial Certification courses and Value Added courses on Laboratory/ Design skill Conducted.	Minutes of meeting to conduct VAC courses attached
			How do you rate the courses that you have leant in relation to your current Job		
Employer	10	80% or 2.4	How do you rate the applicability of the domains and the tools used for designing the experiments in terms of existing practices in the Industry?	• Industrial Certification courses and Value Added courses on Laboratory/ Design skill Conducted.	

IQAC Coordinator

Principal

PRINCIPAL
JCT College of Engineering & Technology
Pichanur, Coimbatore - 641105

Dr.V.J.ARULKARTHICK, M.E., Ph.D.,
IQAC Co-ordinator
JCT College of Engineering and Technology
Coimbatore - 641 105.

JCT
College of Engineering and Technology

26 – 10 – 2017

Dr. R. Perumal,
Professor and Head,
Department of Petrochemical Engineering

To

Dr. A. Peer Mohammed,
Chairperson,
Faculty of Technology,
Anna University, Chennai – 600 025.

Respected sir,

Sub.: Submission of suggestions for Syllabus Sub-committee Meeting on 07 – 11 – 2017.

On behalf of JCT College of Engineering and Technology, Coimbatore, I wish to submit the following to consider at the meeting.

I. The Technology Group UG courses,
   (1) B. Tech. (Chemical Engineering)
   (2) B. Tech. (Chemical and Electrochemical Engineering)
   (3) B. Tech. (Petrochemical Technology)
   (4) B. E. (Petrochemical Engineering) and
   (5) B. Tech. (Petroleum Engineering)

   have many subjects common and the syllabus can be modified such that one common question paper for University examination can be set for all common subjects of all the above courses.

   Now it is the practice to set different question papers for different courses.

II. Since the academic system is CBCS, it is opt to have the common subjects streamlined into a single identity.

III. As there is no difference except two subjects for the B. E. (Petrochemical Engineering) and B. Tech. (Petrochemical Technology), these two courses can be merged into a single course.

I am submitting these suggestions for efficient running of the courses and also to ease at the University examination procedures as the CBCS system is being introduced.

I am available for further discussions to make an effective syllabus.

Thanking you,

Yours truly,

PRINCIPAL
JCT College of Engineering & Technology
Pichanur, Coimbatore-641105

26/10/17

PRINCIPAL
JCT College of Engineering & Technology
PICHANUR, Coimbatore - 641 105.

Dr. R. Perumal,
Professor and Head,
Department of Petrochemical Engineering,
JCT College of Engineering and Technology,
Pichanur, Coimbatore – 641 105.
Mail ID: perumal.r@jct.ac.in
Mobile: 9361444406

Scanned by CamScanner
Scanned by CamScanner

COURSE DATA SHEET

PROGRAM: MECHANICAL ENGINEERIING	DEGREE: BACHELOR OF ENGINEERING
COURSE: TOTAL QUALITY MANAGEMENT	SEMESTER: VI CREDITS: 3
COURSE CODE: GE6757 REGULATION:2013	COURSE TYPE: CORE
COURSE AREA/DOMAIN: MANAGEMENT	CONTACT HOURS: 3 hours/Week.
CORRESPONDING LAB COURSE CODE (IF ANY): NIL	LAB COURSE NAME (IF ANY): NIL

SYLLABUS:

UNIT	DETAILS	HOURS
I	**INTRODUCTION :** Introduction - Need for quality - Evolution of quality - Definitions of quality - Dimensions of product and service quality - Basic concepts of TQM - TQM Framework - Contributions of Deming, Juran and Crosby - Barriers to TQM - Quality statements - Customer focus - Customer orientation, Customer satisfaction, Customer complaints, Customer retention - Costs of quality.	9
II	**TQM PRINCIPLES :** Leadership - Strategic quality planning, Quality Councils - Employee involvement - Motivation, Empowerment, Team and Teamwork, Quality circles Recognition and Reward, Performance appraisal - Continuous process improvement - PDCA cycle, 5S, Kaizen - Supplier partnership - Partnering, Supplier selection, Supplier Rating.	9
III	**TQM TOOLS AND TECHNIQUES I :** The seven traditional tools of quality - New management tools - Six sigma: Concepts, Methodology, applications to manufacturing, service sector including IT - Bench marking - Reason to bench mark, Bench marking process - FMEA - Stages, Types.	9
IV	**TQM TOOLS AND TECHNIQUES II :** Control Charts - Process Capability - Concepts of Six Sigma - Quality Function Development (QFD) -Taguchi quality loss function - TPM - Concepts, improvement needs - Performance measures.	9
V	**QUALITY SYSTEMS :** Need for ISO 9000 - ISO 9001-2008 Quality System - Elements, Documentation, Quality Auditing - QS 9000 - ISO 14000 - Concepts, Requirements and Benefits - TQM Implementation in manufacturing and service sectors	9
	TOTAL HOURS	45

TEXT/REFERENCE BOOKS:

T/R	BOOK TITLE/AUTHORS/PUBLICATION
T1	Dale H. Besterfiled, et at., "Total quality Management", Third Edition, Pearson Education Asia, Indian Reprint, 2006
R1	James R. Evans and William M. Lindsay, "The Management and Control of Quality", 8th Edition, First Indian Edition, Cengage Learning, 2012.
R2	Suganthi.L and Anand Samuel, "Total Quality Management", Prentice Hall (India) Pvt. Ltd., 2006.
R3	Janakiraman. B and Gopal .R.K., "Total Quality Management - Text and Cases", Prentice Hall (India) Pvt. Ltd., 2006.

COURSE PRE-REQUISITES:

C.CODE	COURSE NAME	DESCRIPTION	SEM
MG6851	PRINCIPLES OF MANAGEMENT	Learning different functions of management	VI

COURSE OBJECTIVES:

1	To understand Quality Management principles
2	To understand Quality Management processes
3	To understand Quality Management traditional Tools
4	To understand Quality Management modern Tools
5	To understand Quality Management Systems

COURSE OUTCOMES:

SNO	DESCRIPTION	PO(1..12) MAPPING	PSO(1,2) MAPPING
	Upon completion of the course, students shall have the ability		
C704.1	Able to understand basic concept of TQM and customer related components and cost of quality	PO3, PO4, PO5, PO8, PO9, PO11, PO12	PSO1
C704.2	Able to apply basic TQM principles in the industrial application and selection of supplier.	PO3, PO4, PO5, PO8, PO9, PO11, PO12	PSO1
C704.3	Able to apply the tools and techniques of quality management to manufacturing and services processes.	PO3, PO4, PO5, PO8, PO9, PO11, PO12	PSO1
C704.4	Able to select the suitable modern TQM tool that can be applied to industry	PO3, PO4, PO5, PO8,PO9, PO11, PO12	PSO1
C704.5	To understand the quality systems followed in the industry	PO6, PO7, PO8, PO12	PSO1
COURSE OVERALL PO/PSO MAPPING:			

PRINCIPAL
JCT College of Engineering & Technology
Pichanur, Coimbatore-641105

Scanned by CamScanner

COURSE OUTCOMES VS POs MAPPING (DETAILED; HIGH:3; MEDIUM:2; LOW:1):

SNO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C704.1			1	2	1			3	3		1	1	1	
C704.2			1	2	1			3	3		1	1	1	
C704.3			1	2	1			3	3		1	1	1	
C704.4			1	2	1			3	3		1	1	1	
C704.5						3	2	3				1	1	
Cxxx*														

** For Entire Course, PO & PSO Mapping*

POs & PSO REFERENCE:

PO1	Engineering Knowledge	PO7	Environment & Sustainability	PSO1	Capable of successfully performing national level competitive examinations for higher studies and employment
PO2	Problem Analysis	PO8	Ethics	PSO2	An ability to apply their knowledge in the domain of engineering mechanics, fluid, thermal engineering and advanced technologies in solving engineering problems for the benefits of society
PO3	Design & Development	PO9	Individual & Team Work		
PO4	Investigations	PO10	Communication Skills		
PO5	Modern Tools	PO11	Project Mgt. & Finance		
PO6	Engineer & Society	PO12	Life Long Learning		

COs VS POs MAPPING JUSTIFICATION:

SNO	PO/PSO MAPPED	LEVEL OF MAPPING	JUSTIFICATION
C704.1	PO3, PO4, PO5, PO8, PO9, PO11, PO12, PSO1.	1,2,1,3,3,1,1,1	Helps the students, as part and whole of team, to understand basics about quality and its management concepts. When the students as a fresh engineer, they must know about importance of quality which is the very basic requirement.
C704.2	PO3, PO4, PO5, PO8, PO9, PO11, PO12, PSO1.	1,2,1,3,3,1,1,1	Helps the students, as part and whole of team, in investigating and developing solutions by understanding principles. After understanding the basics, they can able to learn and use tools and new techniques. This capacity will make them aware of quality concepts.
C704.3	PO3, PO4, PO5, PO8, PO9, PO11, PO12, PSO1.	1,2,1,3,3,1,1,1	Helps the students, as part and whole of team, in investigating and developing solutions using tools and techniques. They must learn these new techniques to be a industry ready engineer to fit on the joining day itself. Helps students to equip themselves to solve day-to-day problems encountered in industry.
C704.4	PO3, PO4, PO5, PO8, PO9, PO11, PO12, PSO1.	1,2,1,3,3,1,1,1	Helps the students, as part and whole of team, in investigating and developing solutions using tools and new concepts. They must learn these new techniques to be a industry ready engineer to fit on the joining day itself
C704.5	PO6, PO7, PO8, PO12, PSO1.	3,2,3,1,1	As things change, continuous learning needed. Helps students to update to face real industry and society requirements
Cxxx*			

GAPS IN THE SYLLABUS - TO MEET INDUSTRY/PROFESSION REQUIREMENTS, POs & PSOs:

SNO	DESCRIPTION	PROPOSED ACTIONS
1	Real time approaches to be explored to achieve Customer Satisfaction: customer and customer perception of quality, feedback, using customer complaints, service quality, translating needs into requirements, customer retention, Case studies	Assignment
2	Practical Approach to get Employee Involvement – Motivation, employee surveys, empowerment, teams, suggestion system, recognition and reward, gain sharing, performance appraisal, unions and employee involvement, case studies	Assignment
3	Practical approach to be learn about Six Sigma concepts	Seminar

PRINCIPAL
JCT College of Engineering & Technology
Pichanur, Coimbatore-641105

Scanned by CamScanner

PROPOSED ACTIONS: TOPICS BEYOND SYLLABUS/ASSIGNMENT/INDUSTRY VISIT/GUEST LECTURER/NPTEL ETC

TOPICS BEYOND SYLLABUS/ADVANCED TOPICS/DESIGN:

1	**List of national and International awards in the area of QUALITY**
2	**Poka- yoke concepts**
3	**Supply chain Management concept introduction**
4	**Seven Habits of High effective people**
5.	**Six sigma case study (Dappa walas of Mumbai)**

WEB SOURCE REFERENCES:

1	http://nptel.ac.in/courses/122106032/Pdf/4_1.pdf
2	www.srmuniv.ac.in/sites/default/files/downloads/TQM_Intro.pdf
3	https://www.wiley.com/college/sc/reid/chap5.pdf
4	164.100.133.129:81/econtent/Uploads/Total_Quality_Management.pdf
5	http://edunotes.in/ge6757-/ total-quality- management

DELIVERY/INSTRUCTIONAL METHODOLOGIES:

☐ CHALK & TALK	☐ STUD. ASSIGNMENT	☐ WEB RESOURCES	☐ NPTEL/OTHERS
☐ LCD/SMART BOARDS	☐ STUD. SEMINARS	☐ ADD-ON COURSES	☐ WEBNIARS

ASSESSMENT METHODOLOGIES-DIRECT

☐ ASSIGNMENTS	☐ STUD. SEMINARS	☐ TESTS/MODEL EXAMS	☐ UNIV. EXAMINATION
☐ STUD. LAB PRACTICES	☐ STUD. VIVA	☐ MINI/MAJOR PROJECTS	☐ CERTIFICATIONS
☐ ADD-ON COURSES	☐ OTHERS		

ASSESSMENT METHODOLOGIES-INDIRECT

☐ ASSESSMENT OF COURSE OUTCOMES (BY FEEDBACK, ONCE)	☐ STUDENT FEEDBACK ON FACULTY (TWICE)
☐ ASSESSMENT OF MINI/MAJOR PROJECTS BY EXT. EXPERTS	☐ OTHERS

INNOVATIONS IN TEACHING/LEARNING/EVALUATION PROCESSES:

1. Expert Lecture
2. Industrial visit
3. "Case study"
4. Mini-projects

PRINCIPAL
JCT College of Engineering & Technology
Pichanur, Coimbatore-641105

Prepared by
(Faculty)

Approved by
(HOD)

Scanned by CamScanner

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

Pichanur, Coimbatore -641105

Department of Mechanical Engineering

Academic Year 2018-2019

Department : Mechanical engineering
Branch and Year: Final Mechanical
Subject : Total Quality Management

Faculty Name :Dr.G.Ramesh
Semester No :VII
Subject code : GE 6757

Lecture No.	Topic	Hours	Reference	Teaching Aids
	UNIT I-INTRODUCTION			
1	Introduction - Need for quality	1	T1	BLACK BOARD
2	Evolution of quality - Definition of quality	1	T1	BLACK BOARD
3	Dimensions of manufacturing and service quality	1	T1	BLACK BOARD
4	Basic concepts of TQM	1	T1	BLACK BOARD
5	TQM Framework, Quality Statements	1	T1	BLACK BOARD
6	Contributions of Deming, Juran and Crosby	1	T1	BLACK BOARD
7	Contributions of Deming, Juran and Crosby	1	T1	BLACK BOARD
8	Customer orientation, Customer satisfaction	1	T1	BLACK BOARD
9	Customer complaints, Customer retention, cost of quality	1	T1	BLACK BOARD
	UNIT II- TQM PRINCIPLES			
1	Leadership	1	T1	BLACK BOARD
2	Quality statements – Quality council	1	T1	BLACK BOARD
3	Strategic quality planning,	1	T1	BLACK BOARD
4	Quality circles	1	T1	BLACK BOARD
5	Employee involvement – Motivation	1	T1	BLACK BOARD
6	Empowerment, Team and Teamwork,	1	T1	BLACK BOARD
7	Recognition and Reward, Performance appraisal	1	T1	BLACK BOARD

PRINCIPAL
JCT College of Engineering & Technology
Pichanur, Coimbatore-641105

Scanned by CamScanner

8	Continuous process improvement – PDSA cycle, 5s,	1	T1	BLACK BOARD
9	Kaizen - Supplier partnership – Partnering, Supplier selection, Supplier Rating.	1	T1	BLACK BOARD
	UNIT III- TQM TOOLS & TECHNIQUES I			
1	The seven traditional tools of quality	1	T1	BLACK BOARD
2	New management tools	1	T1	BLACK BOARD
3	Six-sigma: Concepts, methodology	1	T1	BLACK BOARD
4	applications to manufacturing,	1	T1	BLACK BOARD
5	service sector including IT – Bench marking – Reason to bench mark	1	T1	BLACK BOARD
6	service sector including IT – Bench marking – Reason to bench mark	1	T1	BLACK BOARD
7	Bench marking process	1	T1	BLACK BOARD
8	FMEA – Stages, Types.	1	T1	BLACK BOARD
9	FMEA – Stages, Types.	1	T1	BLACK BOARD
	UNIT IV- TQM TOOLS & TECHNIQUES II			
1	Control charts	1	T1	BLACK BOARD
2	Process cabability	1	T1	BLACK BOARD
3	concept of Six sigma Quality	1	T1	BLACK BOARD
4	QFD	1	T1	BLACK BOARD
5	Quality Function Deployment	1	T1	BLACK BOARD
6	Taguchi quality loss function	1	T1	BLACK BOARD
7	TPM – Concepts, improvement needs	1	T1	BLACK BOARD
8	TPM – Concepts, improvement needs	1	T1	BLACK BOARD
9	Performance measures.	1	T1	BLACK

PRINCIPAL
JCT College of Engineering & Technology
Pichanur, Coimbatore-641105

Scanned by CamScanner

				BOARD
UNIT V- QUALITY SYSTEMS				
1	Need for ISO 9000- ISO 9000-2000 Quality System	1	T1	BLACK BOARD
2	Need for ISO 9000- ISO 9000-2000 Quality System	1	T1	BLACK BOARD
3	Elements, Documentation, Quality auditing	1	T1	BLACK BOARD
4	Elements, Documentation, Quality auditing	1	T1	BLACK BOARD
5	QS 9000 – ISO 14000 – Concepts, Requirements and Benefits	1	T1	BLACK BOARD
6	QS 9000 – ISO 14000 – Concepts, Requirements and Benefits	1	T1	BLACK BOARD
7	QS 9000 – ISO 14000 – Concepts, Requirements and Benefits	1	T1	BLACK BOARD
8	Case studies of TQM implementation in manufacturing and service sectors including IT.	1	T1	BLACK BOARD
9	Case studies of TQM implementation in manufacturing and service sectors including IT.	1	T1	BLACK BOARD
CONTENT BEYOND SYLLABUS				
1	List of national and International awards in the area of quality	1	web source	BLACK BOARD
2	Poka- yoke concepts	1	Web source	BLACK BOARD
3	Supply chain Management concept introduction	1	Web source	BLACK BOARD
4	Seven Habits of High effective people	1	T1	BLACK BOARD
5	Six sigma case study (Dappa walas of Mumbai)	1	Web source	BLACK BOARD

Guest lectures required if any : NO

TOTAL 45 Periods

PRINCIPAL
JCT College of Engineering & Technology
Pichanur, Coimbatore -641105

Scanned by CamScanner

Text Book: H.Besterfiled, et al., "Total Quality Management",

Reference Books:

1. Janakiraman,B and Gopal, R.K, "Total Quality Management
2. Suganthi,L and Anand Samuel, "Total Quality Management",

Date :

Sign. of Faculty : _____

Name : Dr.G.Ramesh

Date :

Sign. of HOD : _____

Name :Dr.P.Pitchandi

PRINCIPAL
JCT College of Engineering & Technology
Pichanur, Coimbatore-641105

Scanned by CamScanner

MA8151 ENGINEERING MATHEMATICS – I **L T P C**
4 0 0 4

OBJECTIVES:

The goal of this course is to achieve conceptual understanding and to retain the best traditions of traditional calculus. The syllabus is designed to provide the basic tools of calculus mainly for the purpose of modelling the engineering problems mathematically and obtaining solutions. This is a foundation course which mainly deals with topics such as single variable and multivariable calculus and plays an important role in the understanding of science, engineering, economics and computer science, among other disciplines.

UNIT I DIFFERENTIAL CALCULUS 12

Representation of functions - Limit of a function - Continuity - Derivatives - Differentiation rules - Maxima and Minima of functions of one variable.

UNIT II FUNCTIONS OF SEVERAL VARIABLES 12 Partial differentiation – Homogeneous functions and Euler's theorem – Total derivative – Change of variables – Jacobians – Partial differentiation of implicit functions – Taylor's series for functions of two variables – Maxima and minima of functions of two variables – Lagrange's method of undetermined multipliers.

UNIT III INTEGRAL CALCULUS12 Definite and Indefinite integrals - Substitution rule - Techniques of Integration - Integration by parts, Trigonometric integrals, Trigonometric substitutions, Integration of rational functions by partial fraction, Integration of irrational functions - Improper integrals.

UNIT IV MULTIPLE INTEGRALS12 Double integrals – Change of order of integration – Double integrals in polar coordinates – Area enclosed by plane curves – Triple integrals – Volume of solids – Change of variables in double and triple integrals.

UNIT V DIFFERENTIAL EQUATIONS12

Higher order linear differential equations with constant coefficients - Method of variation of parameters – Homogenous equation of Euler's and Legendre's type – System of simultaneous linear differential equations with constant coefficients - Method of undetermined coefficients.

TOTAL : 60 PERIODS

PRINCIPAL
JCT College of Engineering & Technology
Pichanur, Coimbatore - 641105

Scanned by CamScanner

OUTCOMES:

After completing this course, students should demonstrate competency in the following skills:

- Use both the limit definition and rules of differentiation to differentiate functions.
- Apply differentiation to solve maxima and minima problems.
- Evaluate integrals both by using Riemann sums and by using the Fundamental Theorem of Calculus.
- Apply integration to compute multiple integrals, area, volume, integrals in polar coordinates, in addition to change of order and change of variables.
- Evaluate integrals using techniques of integration, such as substitution, partial fractions and integration by parts.
- Determine convergence/divergence of improper integrals and evaluate convergent improper integrals.
- Apply various techniques in solving differential equations

TEXT BOOKS:

1. Grewal B.S., "Higher Engineering Mathematics", Khanna Publishers, New Delhi, 43rd Edition, 2014.

2. James Stewart, "Calculus: Early Transcendentals", Cengage Learning, 7th Edition, New Delhi, 2015. [For Units I & III - Sections 1.1, 2.2, 2.3, 2.5, 2.7(Tangents problems only), 2.8, 3.1 to 3.6, 3.11, 4.1, 4.3, 5.1(Area problems only), 5.2, 5.3, 5.4 (excluding net change theorem), 5.5, 7.1 - 7.4 and 7.8].

REFERENCES:

1. Anton, H, Bivens, I and Davis, S, "Calculus", Wiley, 10th Edition, 2016.

2. Jain R.K. and Iyengar S.R.K., "Advanced Engineering Mathematics", Narosa Publications, New Delhi, 3rd Edition, 2007.

3. Narayanan, S. and ManicavachagomPillai, T. K., "Calculus" Volume I and II, S. Viswanathan Publishers Pvt. Ltd., Chennai, 2007.

4. Srimantha Pal and Bhunia, S.C, "Engineering Mathematics" Oxford University Press, 2015.

5. Weir, M.D and Joel Hass, "Thomas Calculus", 12th Edition, Pearson India, 2016.

PRINCIPAL
JCT College of Engineering & Technology
Pichanur, Coimbatore - 641105

Scanned by CamScanner

JCT

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

PICHANUR, COIMBATORE – 641 105

TÜV AUSTRIA

LESSON PLAN

Academic Year 2019-20

Department : S&H (Mathematics) Faculty Name : Dr. M. Muralidharan

Branch and Year : BE- & I Year Semester No : I

Subject Title : ENGINEERING MATHEMATICS I Subject Code : MA 8151

Lecture No.	Topic	Reference	Teaching Aids
	UNIT V DIFFERENTIAL EQUATIONS		
1.	Higher order differential equations with constant coefficients ➢ Problems on $(aD^2+bD+c)y = 0$	T1, R3	CHALK&TALK
2.	Particular Integral (P.I) ➢ P.I of the form e^{ax}	T1, R3	CHALK&TALK
3.	P.I of the form sinax or cosax	T1, R3	CHALK&TALK
4.	**Tutorial 1 :** Problems on P.I of the form e^{ax}, sinax or cosax	T1, R3	CHALK&TALK
5.	P.I of the form x^m	T1, R3	CHALK&TALK
6.	P.I of the form xV(x) where V(x) is any function of x	T1, R3	CHALK&TALK
7.	Second & Higher order differential equations with variable coefficients or Homogeneous equation ➢ Problems	T1, R3	CHALK&TALK
8.	**Tutorial 2 :** Problems on P.I of the form x^m, xV(x)	T1, R3	CHALK&TALK
9.	Equations reducible to homogeneous equation. Solving Simultaneous linear differential equations ➢ Problems	T1, R3	CHALK&TALK
10.	Variation of Parameters ➢ Problems	T1, R3	CHALK&TALK
11.	Method of Undetermined coefficients ➢ Problems	T1, R3	CHALK&TALK
12.	**Tutorial 3 :** Problems on variation of parameters, undetermined coefficients	T1, R3	CHALK&TALK
13.	**CBS 5:** Applications of Differential Equations	E5	ICT
	UNIT I DIFFERENTIAL CALCULUS		
14.	Introduction. Representation of functions with some examples.	T1, R3	CHALK&TALK
15.	Limit of a function ➢ Problems	T1, R3	CHALK&TALK
16.	Continuity of a function ➢ Problems	T1, R3	CHALK&TALK
17.	**Tutorial 1:** Problems based on limit and continuity of a function.	T1, R3	CHALK&TALK
18.	Derivatives of Exponential, Logarithmic and trigonometric functions ➢ Problems	T1, R3	CHALK&TALK
19.	Derivative of Product, Quotient and Chain Rules ➢ Problems	T1, R3	CHALK&TALK

PRINCIPAL
JCT College of Engineering & Technology
Pichanur, Coimbatore-641105

Scanned by CamScanner

20.	Derivatives of Implicit functions and hyperbolic functions ➢ Problems	T1, R3	CHALK&TALK
21.	**Tutorial 2:** Problems based on derivatives.	T1, R3	CHALK&TALK
22.	Equation of Tangent and Normal ➢ Problems	T1, R3	CHALK&TALK
23.	Maxima and minima of functions of one variable, Problems on absolute maximum or minimum value.	T1, R3	CHALK&TALK
24.	Local Maxima and minima of functions of one variable using first and second derivative test. ➢ Problems	T1, R3	CHALK&TALK
25.	**Tutorial 3:** Problems based on maxima and minima.	T1, R3	CHALK&TALK
26.	**CBS 1:** Applications of Differential Calculus	E1	ICT
	UNIT II FUNCTIONS OF SEVERAL VARIABLES		
27.	Partial differentiation, Euler's Theorem ➢ Problems	T1, R3	CHALK&TALK
28.	Total Differentiation, Implicit functions ➢ Problems	T1, R3	CHALK&TALK
29.	Problems on total differentiation of a function of two functions	T1, R3	CHALK&TALK
30.	**Tutorial 1:** Problems on Total differentiation	T1, R3	CHALK&TALK
31.	Taylor's series for functions of two variables - Problems	T1, R3	CHALK&TALK
32.	Problems on Taylor's series	T1, R3	CHALK&TALK
33.	Jacobians ➢ Problems	T1, R3	CHALK&TALK
34.	**Tutorial 2:** Problems on Taylor's series and Jacobians	T1, R3	CHALK&TALK
35.	Maxima and minima of functions of two variables - Problems	T1, R3	CHALK&TALK
36.	Lagrange's multiplier ➢ Problems	T1, R3	CHALK&TALK
37.	Problems on Lagrange's multiplier	T1, R3	CHALK&TALK
38.	**Tutorial 3:** Problems on Maxima and minima using Lagrange's multiplier	T1, R3	CHALK&TALK
39.	**CBS 2:** Applications of Functions of several variables	E2	ICT
	UNIT III INTEGRAL CALCULUS		
40.	Introduction, Substitution method ➢ Problems	T1, R3	CHALK&TALK
41.	Rational algebraic function	T1, R3	CHALK&TALK
42.	Method by completing squares Problems on integrals of the form $\int \frac{dx}{ax^2+bx+c}$ and $\int \frac{lx+m}{ax^2+bx+c}dx$	T1, R3	CHALK&TALK
43.	**Tutorial 1:** Problems on method by completing squares.	T1, R3	CHALK&TALK
44.	Resolving into partial fraction ➢ Problems	T1, R3	CHALK&TALK

PRINCIPAL
JCT College of Engineering & Technology
Pichanur, Coimbatore - 641105

Scanned by CamScanner

45.	Problems on integrals of the form $\int \frac{dx}{\sqrt{ax^2+bx+c}}$, $\int \frac{lx+m}{\sqrt{ax^2+bx+c}}dx$, $\int \sqrt{ax^2+bx+c}\,dx$ and $\int (lx+m)\sqrt{ax^2+bx+c}\,dx$	T1, R3	CHALK&TALK
46.	Integration of irrational functions, trigonometric integrals and substitutions ➢ Problems	T1, R3	CHALK&TALK
47.	**Tutorial 2 :** Problems based on rational and irrational functions.	T1, R3	CHALK&TALK
48.	Integration by parts, Properties of definite integrals ➢ Problems	T1, R3	CHALK&TALK
49.	Reduction formula ➢ Problems	T1, R3	CHALK&TALK
50.	Improper integrals ➢ Problems	T1, R3	CHALK&TALK
51.	**Tutorial 3 :** Problems on integration by parts and reduction formula.	T1, R3	CHALK&TALK
52.	**CBS 3:** Applications of Integral Calculus	E3	ICT
	UNIT IV MULTIPLE INTEGRALS		
53.	Double integral in Cartesian coordinates ➢ Problems	T1, R3	CHALK&TALK
54.	Problems on double integral in Cartesian coordinates. Problems on area bounded by plane curves	T1, R3	CHALK&TALK
55.	Double integral in Polar coordinates ➢ Problems	T1, R3	CHALK&TALK
56.	**Tutorial 1 :** Problems in double integral	T1, R3	CHALK&TALK
57.	Problems on double integral in polar coordinates	T1, R3	CHALK&TALK
58.	Changing the order of integration ➢ Problems	T1, R3	CHALK&TALK
59.	Problems on changing the order of integration	T1, R3	CHALK&TALK
60.	**Tutorial 2 :** Problems on changing the order of integration	T1, R3	CHALK&TALK
61.	Triple integral ➢ Problems	T1, R3	CHALK&TALK
62.	Problems on triple integral	T1, R3	CHALK&TALK
63.	Problems on changing the variables in double and triple integral.	T1, R3	CHALK&TALK
64.	**Tutorial 3 :** Problems on triple integral	T1, R3	CHALK&TALK
65.	**CBS 4:** Applications of Multiple integrals	E4	ICT

PRINCIPAL
JCT College of Engineering & Technology
Pichanur, Coimbatore - 641105

Scanned by CamScanner

TEXT BOOKS:

1. Grewal B.S., —Higher Engineering Mathematicsl, Khanna Publishers, New Delhi, 43rd Edition, 2014.
2. James Stewart, "Calculus: Early Transcendentals", Cengage Learning, 7th Edition, New Delhi, 2015. [For Units I & III - Sections 1.1, 2.2, 2.3, 2.5, 2.7(Tangents problems only), 2.8, 3.1 to 3.6, 3.11, 4.1, 4.3, 5.1(Area problems only), 5.2, 5.3, 5.4 (excluding net change theorem), 5.5, 7.1 - 7.4 and 7.8].

REFERENCES:

1. Anton, H, Bivens, I and Davis, S, "Calculus", Wiley, 10th Edition, 2016.
2. Jain R.K. and Iyengar S.R.K., —Advanced Engineering Mathematicsl, Narosa Publications, New Delhi, 3rd Edition, 2007.
3. Narayanan, S. and Manicavachagom Pillai, T. K., —Calculus" Volume I and II, S. Viswanathan Publishers Pvt. Ltd., Chennai, 2007.
4. Srimantha Pal and Bhunia, S.C, "Engineering Mathematics" Oxford University Press, 2015.
5. Weir, M.D and Joel Hass, "Thomas Calculus", 12th Edition, Pearson India, 2016.

E-RESOURCES (NPTEL, URLs, e-Books, etc.):

1. https://www.siyavula.com/read/maths/.../differential-calculus/06-differential-calculus-07
2. http://mathispower4u.wordpress.com/
3. https://www.youtube.com/watch?v=EBfxiKQLnJ4
4. https://www.youtube.com/watch?v=FmhMUTmUjhM
5. https://www.analyzemath.com/calculus/Differential_Equations/applications.html

Date: Sign. Of Faculty: _____

Name: Dr. M. Muralidharan

Date: Sign. Of HOD: _____

Name:

PRINCIPAL
JCT College of Engineering & Technology
Pichanur, Coimbatore - 641105

Scanned by CamScanner

JCT College of Engineering and Technology

Minutes of Meeting

Date : 3.6.2014
Time : 3.30 pm
Venue : Principal Chamber
Type : Special meeting to finalize the conduct of Value added courses

Members present

1. Principal 2. HoD – Automobile 3. HoD – PE 4. HoD – EEE 5.HoD – ECE 6. HoD – CSE 7. HoD- PCE
8. HoD- S&H 9. HoD- Mech 10. HoD – Civil

Discussion : 1

Planning to conduct Value added courses for benefit of students of below mentioned branches to enhance knowledge in the relevant field. The HoD's are asked to submit the proposal for conducting value added courses in their respective branches.

Resolution:

Based on the submitted proposals, the management is pleased to approve the following Value Added courses can be conducted for this academic year 2014-15.

Department	Name of the Course
Automobile Engineering	CATIA Modeling
Automobile Engineering	CNC programming
CIVIL ENGINEERING	Basic Site Work & Building Marking
EEE	Course on P-Spice Design
EEE	Low Power Vlsi With Lifting Algorithm
EEE	Course on LABVIEW
Petroleum Engineering	Oil And Gas Offshore Safety Engineering
CSE	Software Testing
S&H	Carrier Development Course

Principal

PRINCIPAL
JCT College of Engineering & Technology
Pichanur, Coimbatore-641105

Scanned by CamScanner

JCT College of Engineering and Technology

Minutes of Meeting

Date : 1.6.2015
Time : 11.30 AM
Venue : Principal Chamber
Type : Special meeting to take decision on the conduct of Value added courses for the academic year 2015-16

Members present

1. Principal 2. HoD- Mech 3. HOD – CSE 4. HOD – Civil 5. HoD – PE 6. HoD – ECE 7 . HoD- S&H. 8. HOD- PCE 9.HoD – EEE 10. HOD – Automobile

Discussion

Planning to conduct Value added courses for benefit of students of below mentioned branches to enhance knowledge in the relevant field. All HoD's are asked to submit the proposal for conducting value added courses in their respective branches.

Resolution:

Based on the submitted proposals, the management is pleased to approve the following Value Added courses can be conducted for this academic year 2015-16.

Department	Name of the Course
Automobile Engineering	HANDS ON TRAINING ON COMMERICAL VEHICLES
Automobile Engineering	HANDS ON TRAINING ON LIGHT VEHICLES
Civil Engg	ELECTRICAL WIRING FOR INDUSTRIAL BUILDING
CSE	NETWORK SECURITY MOBILE APPLICATION DEVELOPMENT
ECE	Hands on Training on NS2 Simulation and JAVA
ECE	NETWORK SECURITY
ECE	T-SPICE
ECE	ATMEL
EEE	MOBILE APPLICATION DEVELOPMENT
EEE	HANDS ON TRAINING ON " MOTOR WINDING DESIGN"
EEE	HANDS ON TRAINING ON EMBEDDED SYSTEMS
Mechanical	CNC PART PROGRAMMING AND MACHINING
PE	OIL EXTRACTION EQUIPMENTS
PE	ADVANCED MUNCIPAL WASTE MANAGEMENT
S & H	SOFT SKILLS TRAINING AND DEVELOPMENT

Principal

PRINCIPAL
JCT College of Engineering & Technology
Pichanur, Coimbatore - 641105

Scanned by CamScanner

JCT College of Engineering and Technology

Minutes of Meeting

Date : 6.6.2016
Time : 10.30 AM
Venue : Principal Chamber
Type : Special meeting to take decision on the conduct of Value added courses for the academic year 2016-17

Members present

1. Principal 2. HOD – Automobile 3. HOD – CSE 4. HOD – Civil 5.HoD – ECE 6. HoD – PE 7. HOD- PCE HoD- S&H 9.HoD – EEE 10. HoD -Mech

Discussion

Planning to conduct Value added courses for benefit of students of below mentioned branches to enhance knowledge in the relevant field. All HoD's are asked to submit the proposal for conducting value added courses in their respective branches.

Resolution:

Based on the submitted proposals, the management is pleased to approve the following Value Added courses can be conducted for this academic year 2016-17.

Department	Name of the Course
AUTO	CATIA MODELING
CIVIL	REVIT ARCHITECTURE
ECE	XILINX
ECE	HANDS ON TRAINING BIOMEDICAL DEVICES & ARDUINO
ECE	SOFTWARE TRAINING
PE	ADVANCED MUNCIPAL WASTE MANAGEMENT
FT	DEVELOPMENT IN EXTRUDED FOODS
FT	GREEN BIO TECHNOLOGY FOR FOOD SECURITY
PCE	ENERGY CONSERVATION MANAGEMENT AND AUDITING
Mechanical	ADVANCED METROLOGY TRAINING
S & H	COMMUNICATION DEVELOPMENT SKILLS

Principal

PRINCIPAL
JCT College of Engineering & Technology
Pichanur, Coimbatore - 641105

Scanned by CamScanner

JCT College of Engineering and Technology

Minutes of Meeting

Date : **5.6.2017**
Time : **2.30 PM**
Venue : **Seminar Hall**
Type : **Special meeting to take decision on the conduct of Value added courses for the academic year 2017-18**

Members present

1. Principal 2. HOD – Automobile 3. HOD – CSE 4. HOD – Civil 5.HoD – ECE 6. HoD – PE 7. HOD- PCE 8. HoD- S&H 9.HoD – EEE 10. HoD -Mech

Discussion

Planning to conduct Value added courses for benefit of students of below mentioned branches to enhance knowledge in the relevant field. All HoD's are asked to submit the proposal for conducting value added courses in their respective branches.

Resolution:

Based on the submitted proposals, the management is pleased to approve the following Value Added courses can be conducted for this academic year 2017-18.

Department	Name of the Course
AUTO	Hands On Training On Commercial Vehicles, PRO/ENGINEER
AUTO	Hands On Training On Light Vehicles, ANSYS
CIVIL	Plumbing For Residential Building
CIVIL	Electrical Wiring For Residential Building
Mechanical	Advanced Technology in Hydraulics
Mechanical	Robotics and Automation
EEE	Course On "MATLAB for Power Electronics", PCB Design
S & H	YOGA
ECE	Image And Signal Processing Using MATLAB
PE	Drill bit design and Perforation Techniques
PE	Oil And Gas Offshore Safety, Oil and Gas Operations, Electrical Resistivity Survey and its applications in Oil and Gas Exploration
PCE	Introduction To Energy Management And Auditing
CSE , ECE	IOT Using RASPBEERY PI
CSE, ECE	ANTROD for Mobile application
FT	High Pressure Processing and Packaging

PRINCIPAL
JCT College of Engineering & Technology
Pichanur, Coimbatore - 641105

Scanned by CamScanner

JCT College of Engineering and Technology

Minutes of Meeting

Date : 4.6.2018
Time : 4.00 PM
Venue : Principal cabin
Type : Special meeting to take decision on the conduct of Value added courses for the academic year 2018-19

Members present

1. Principal 2. HOD – Automobile 3. HOD – CSE 4. HOD – Civil 5.HoD – ECE 6. HoD – PE 7. HOD- PCE 8. HoD- S&H 9.HoD – EEE 10. HoD -Mech

Discussion

Planning to conduct Value added courses for benefit of students of below mentioned branches to enhance knowledge in the relevant field. All HoD's are asked to submit the proposal for conducting value added courses in their respective branches.

Resolution:

Based on the submitted proposals, the management is pleased to approve the following Value Added courses can be conducted for this academic year 2018-19.

Department	Name of the Course
Automobile Engineering	Hands On Training On Commercial Vehicles
Automobile Engineering	Hands On Training On Light Vehicles
CIVIL	3DS Max
CIVIL	Basics Site Work & Building Marking
ECE	Embedded System Design Using ARDUINO Micro Controller
MECHANICAL	Advanced Foundry Technology
MECH	Advanced casting technology
EEE	Course On " MATLAB for Power System"
EEE	Course On Industrial Automation
S & H	Competitive exam Guidance
FT	3D Printing of FOODS
PCE	Introduction To Energy Management And Auditing
PE	Trends And Developments In Petroleum Exploration And Technology
PE	Oil And Gas Offshore Safety

Principal

PRINCIPAL
JCT College of Engineering & Technology
Pichanur, Coimbatore - 641105

Scanned by CamScanner

JCT College of Engineering and Technology,

Pichanur - 641 105

Department of Mechanical Engineering

Subject : GE 6757 Total Quality management

Semester : VII JULY 2019 to Dec 2019

Content Beyond syllabus topics with answer

1. List of national and International awards in the area of quality.
2. Poka- yoke concepts
3. Supply chain Management concept introduction
4. Seven Habits of High effective people
5. Six sigma case study (Dappa walas of Mumbai)

PRINCIPAL
JCT College of Engineering & Technology
Pichanur, Coimbatore-641105

Scanned by CamScanner

JCT College of Engineering and Technology, Pichanur 641 105

Department of Mechanical Engineering

Subject : GE 6757 Total Quality management

Semester : VII JULY 2019 to Dec 2019

CBS 2 : POKA –YOKE concept

Over view

A good *poka yoke* definition is simply 'mistake proofing'. Of note, the term *poka yoke*is of Japanese origin and is one of the handful of the more commonly used **Japanese terms** that have become mainstream in Lean circles.

Poka yokes keep **processes** from producing **errors**. Preventing errors obviously improves **quality**, but it also plays a major role in improving **productivity**. With no **rework**, and easier production, **cycle times** and **lead times** both become much shorter. And, of course, faster production with fewer **defects** means lower **costs**.

While the term *poka yoke* originated on the shop floor, it is equally relevant in office, healthcare, and service settings.

Another similar term, *baka yoke*, meaning 'fool proofing', has fallen into minimal use, likely for reasons of political correctness. As an aside, the term *poka yoke* is also frequently used as a verb, as in 'John, can you please *poka yoke* that **fixture**?'

Of note, the last 'e' in the term is often pronounced as a long 'a'.

Mistake-proofing *poka yoke* devices surround people, preventing costly **problems** in their everyday lives.

PRINCIPAL
JCT College of Engineering & Technology
Pichanur, Coimbatore - 641105

Scanned by CamScanner

Examples of Real-World Poka Yokes

- Car keys are one of the most widely used *poka yoke* devices. They can be inserted with either side up.
- Overflow drains on a sink (the holes high up on the side) are examples of *poka yoke* devices that prevent making a mess when filling the basin up with water.
- Most computer manufacturers *poka yoke* their cables so the plugs only fit in one way. This prevents damage to the system.
- Printers stop printing when the paper is out. This keeps them from spreading ink all over the internal mechanisms of the machine.
- A sensor in a gas nozzle knows when your tank is full. This is a *poka yoke* that prevents dangerous messes by shutting off the pump.
- Your ice maker in your freezer shuts off when the bucket is full.
- Your washing machine ends the spin cycle when it is out of balance.

A *poka yoke* device must make it physically impossible to make a mistake. While a*poka yoke* is often a physical device, such as a fixture that only accepts parts one way, processes and parts can also be designed to have a built-in *poka yoke*.

Some poka yoke examples:

- ***Poka Yoke* in Parts Design** (primarily in manufacturing)
    - Hydraulic hoses and wiring harnesses can have different size connectors. Hoses and wires can also be cut to lengths that make it impossible to install incorrectly.
    - Parts can be either reversible (no incorrect orientation) or keyed to make sure they will always be installed properly.
- ***Poka Yoke* Fixture (Physical Device) Designs**
    - Machines can have stops to prevent the wrong raw materials or components from being installed (fixture design).
    - Racks can have only enough spaces to carry the proper number of parts.
    - A scale can be added to a packing station. If the weight was outside of the proper range, software would prevent a label from printing.

PRINCIPAL
JCT College of Engineering & Technology
Pichanur, Coimbatore 641105

Scanned by CamScanner

- Electric-eye **sensors** can be installed in front of parts bins. The operator must trip them in the proper sequence and quantity prior to a **line shifting**.
- A computer program can prevent entering an order if the zip code does not match the city.

- ***Poka Yoke* Process Design**
  - Two parts that are commonly mixed up can be moved to separate **workstations** to prevent errors.
  - The sequence of installation can be changed to prevent one part from damaging another. This commonly happens when large heavy parts are installed over fragile parts, or when tools must be used in tight spaces.

Safety switches are similar to *poka yokes*. The little switch that keeps the microwave from running when the door is opened is a safety device that keeps you from zapping yourself if you try to get your food before the 'ding'. The same is true of dual hand switches on heavy machines that must be pressed for the machine to run. They are great—they keep your hands attached to your body. Just keep in mind that as important as these safety devices are, they don't protect the **output** of the process.*Poka yokes* will protect you *and* deliver uncompromising quality.

Poka yokes can take some precision to **fabricate**. Identify a person that can become an expert on building mistake-proofing devices. Many manufacturing companies have a **tooling** group that is a source of great candidates. Just be careful that they don't over-engineer **solutions**. **Simple** is better.

Most of these examples come from the **shop floor** where *poka yoke* has its roots. Because office processes tend to be more focused on people and software than on parts and machines, there tend to be fewer opportunities for mistake-proofing by frontline employees. Despite this, it is still very important in the office.

Computers and software are full of *poka yokes*. Field filters might ensure that the proper number of digits are entered for a phone number. A *poka yoke* in a **call centermay** sign a person out of if his phone rings more than 4 times without an answer. This keeps the **customer** from waiting. Restricting functionality based on user type (administrator vs. user) is another example.

PRINCIPAL
JCT College of Engineering & Technology
Pichanur, Coimbatore-641105

Scanned by CamScanner

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY
PICHANUR, COIMBATORE-105

DEPARTMENT OF SCIENCE AND HUMANITIES

PRINCIPAL
JCT College of Engineering & Technology
Pichanur, Coimbatore-641105

BS8161 -CHEMISTRY LABORATORY MANUAL

Name : .....

Register No : .....

Year/Semester : .....

Scanned by CamScanner

BONAFIDE CERTIFICATE

DEPARTMENT OF SCIENCE AND HUMANITIES

Certified that this is a Bonafide record of Mr.....

ofMechanical Engineering branch during the Academic year 2019-2020 in the Chemistry Laboratory.

REGISTER No: | | | | | | | | | | | | |

Staff in-charge H.O.D.

This record is submitted for I Semester B.E. Practical Examination of Anna University conducted on .....

PRINCIPAL
JCT College of Engineering & Technology
Pichanur, Coimbatore-641105

Internal Examiner External Examiner

Scanned by CamScanner

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY
PICHANUR, COIMBATORE – 641 105

DEPARTMENT OF SCIENCE AND HUMANITIES

The Vision and Mission of the Institute

INSTITUTE

VISION

"To emerge as a premier institute for developing industry ready engineers with competency, initiative and character to meet the challenges in global environment."

MISSION

1. To impart state-of-the–art engineering and professional education through strong theoretical basics and hands on training to students in their choice of field.
2. To serve our students by teaching them leadership entrepreneurship, team work, values, quality, ethics, and respect for others.
3. To provide opportunities for long term interaction with academia and industry.
4. To create new knowledge through innovation and research.

PRINCIPAL
JCT College of Engineering & Technology
Pichanur, Coimbatore-641105

Scanned by CamScanner

Program Outcomes (POs)

PO1	**Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
PO2	**Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
PO3	**Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
PO4	**Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
PO5	**Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
PO6	**The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering +practice.
PO7	**Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
PO8	**Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
PO9	**Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
PO 10	**Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
PO 11	**Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
PO12	**Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Program Specific Outcomes (PSOs)

PSO1	Capable of successfully performing national level competitive examinations for higher studies and employment
PSO2	An ability to apply their knowledge in the domain of engineering mechanics, fluid, thermal engineering and advanced technologies in solving engineering problems for the benefits of society.

Scanned by CamScanner

JCT College of Engineering and Technology

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

PICHANUR, COIMBATORE – 641 105

DEPARTMENT OF SCIENCE AND HUMANITIES

TÜV AUSTRIA CERTIFIED

COURSE DATA SHEET

PROGRAM:	DEGREE: B.E/B.TECH
COURSE: PHYSICS AND CHEMISTRY LAB	SEMESTER: I CREDITS: 3
COURSE CODE: BS8161 REGULATION: 2017	COURSE TYPE: LAB
COURSE AREA/DOMAIN: SCIENCE	CONTACT HOURS: 3 hours/Week.

SYLLABUS:

Sl.	LIST OF EXPERIMENTS FOR PHYSICS
1.	Determination of rigidity modulus – Torsion pendulum
2.	Determination of Young's modulus by non-uniform bending method
3.	(a) Determination of wavelength, and particle size using Laser (b) Determination of acceptance angle in an optical fiber.
4.	Determination of thermal conductivity of a bad conductor – Lee's Disc method.
5.	Determination of velocity of sound and compressibility of liquid – Ultrasonic
6.	Determination of wavelength of mercury spectrum – spectrometer grating
7.	Determination of band gap of a semiconductor
8.	Determination of thickness of a thin wire – Air wedge method
	LIST OF EXPERIMENTS FOR CHEMISTRY
1.	Estimation of HCl using Na2CO3 as primary standard and Determination of alkalinity in water sample
2.	Determination of total, temporary & permanent hardness of water by EDTA method
3.	Determination of DO content of water sample by Winkler's method.
4.	Determination of chloride content of water sample by argentometric method.
5.	Estimation of copper content of the given solution by Iodometry.
6.	Determination of strength of given hydrochloric acid using pH meter.
7.	Determination of strength of acids in a mixture of acids using conductivity meter.
8.	Estimation of iron content of the given solution using potentiometer.
9.	Estimation of iron content of the water sample using spectrophotometer (1, 10-Phenanthroline / thiocyanate method).
10.	Estimation of sodium and potassium present in water using flame photometer
11.	Determination of molecular weight of polyvinyl alcohol using Ostwald viscometer.
12.	Pseudo first order kinetics-ester hydrolysis.
13.	Corrosion experiment-weight loss method.
14.	Determination of CMC.
15.	Phase change in a solid.
16.	Conductometric titration of strong acid vs strong base.
	TOTAL HOURS 60

Scanned by CamScanner

TEXT/REFERENCE BOOKS:

T/R	BOOK TITLE/AUTHORS/PUBLICATION
T	Vogel's Textbook of Quantitative Chemical Analysis (8TH edition, 2014)

COURSE PRE-REQUISITES:

C.CODE	COURSE NAME	DESCRIPTION	SEM
		NIL	

COURSE OBJECTIVES:

1	To introduce different experiments to test basic understanding of physics concepts applied inoptics, thermal physics, properties of matter and liquids.
2	To make the student to acquire practical skills in the determination of water quality parametersthrough volumetric and instrumental analysis.
3	To acquaint the students with the determination of molecular weight of a polymer by viscometery.

COURSE OUTCOMES:

SNO	Blooms' Taxonomy Level	DESCRIPTION	PO(1..12) MAPPING	PSO(1,2) MAPPING
On completion of this course the students will be able to				
C108.1	V. Evaluating	The students will be outfitted with hands on knowledge	PO1,PO2,PO8	PSO1,PSO2
C108.2	VI. Creating	To analysis chemicals quantitatively.	PO1,PO3,PO8,PO9	PSO1,PSO2
C108.3	III. Applying	To analysis water quality parameter	PO1,PO2,PO8	PSO1,PSO2
C108.4	II. Understanding	To apply the basics physics principles of light and sound to evaluate its properties.	PO1,PO3,PO8	PSO1,PSO2
C108.5	I. Remembering	To apply the basics physics principles of thermal physics to evaluate engineering properties of materials.	PO1,PO2,PO8	PSO1,PSO2
COURSE OVERALL PO/PSO MAPPING: PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12/ PSO1, PSO2				

COURSE OUTCOMES VS POs MAPPING (DETAILED; HIGH:3; MEDIUM:2; LOW:1**):**

SNO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C108.1	2	2						2					2	2
C108.	2		2					2	1				2	2

Scanned by CamScanner

2														
C108.3	2	2						2					2	2
C108.4	2		2					2					2	2
C108.5	2	2						2					2	2
C108*	2.00	2.00						2	1				2	2

** For Entire Course, PO & PSO Mapping*

POs & PSO REFERENCE:

PO1	Engineering Knowledge	PO7	Environment & Sustainability	PSO1	Capable of successfully performing national level competitive examinations for higher studies and employment
PO2	Problem Analysis	PO8	Ethics	PSO2	An ability to apply their knowledge in the domain of engineering mechanics, fluid, thermal engineering and advanced technologies in solving engineering problems for the benefits of society.
PO3	Design & Development	PO9	Individual & Team Work		
PO4	Investigations	PO10	Communication Skills		
PO5	Modern Tools	PO11	Project Mgt. & Finance		
PO6	Engineer & Society	PO12	Life Long Learning		

COs VS POs MAPPING JUSTIFICATION:

S.NO	PO/PSO MAPPED	LEVEL OF MAPPING	JUSTIFICATION
C108.1	PO1	2	Water treatment process is a lifelong process for domestic purposes.
	PO2	2	Knowledge in Ion exchange process used for water softening
	PO8	2	Practical knowledge will support the continuous improvement in their field
	PS01	2	Can able to understand the water treatment methods
	PS02	2	To evaluate problems in various water quality methods and the student should have science and engineering knowledge to analyses problems which may be get through their continuous learning.
C108.2	PO1	2	Water treatment process is a lifelong process for domestic purposes.
	PO3	2	New design and development of the tools helps the field improvement

Scanned by CamScanner

	PO8	2	Practical knowledge will support the continuous improvement in their field
	PO9	1	To analyze the Comparitive study of different effience of in different types of fuels.
	PS01	2	Can able to understand the water treatment methods
	PS02	2	To evaluate problems in various water quality methods and the student should have science and engineering knowledge to analyses problems which may be get through their continuous learning.
C108.3	PO1	2	Steady state analysis of single, two and multi machine system may be applied for the consideration for the public health and safety.
	PO2	2	Practical knowledge will support the continuous improvement in their field
	PO8	2	Practical knowledge will support the continuous improvement in their field
	PSO1	2	To analysis the emf value using potentiometer
	PSO2	2	This unit content has a skilled to qualifying in national level competitive examinations for higher studies and employment.
C108.4	PO1	2	To identify the stress-strain for machinery tools and elasticity nature of materials and to find the conductance of the unknown solution.
C108.5	PO2	2	Used to identify the unknown resistance of any material
	PO8	2	Practical knowledge will support the continuous improvement in their field
	PSO1	2	To analysis the strength of acids using pH meter
	PSO2	2	To create a new concept with specific resistance of a given coil of wire – Carey Foster's Bridge.

GAPS IN THE SYLLABUS - TO MEET INDUSTRY/PROFESSION REQUIREMENTS, POs & PSOs:

SNO	DESCRIPTION	PROPOSED ACTIONS
1	List of different types of modulus exercises.	Seminar
2	Designing a new application of laser in the industrial field	Assignment

PROPOSED ACTIONS: TOPICS BEYOND SYLLABUS/ASSIGNMENT/INDUSTRY VISIT/GUEST LECTURER/NPTEL ETC

Scanned by CamScanner

TOPICS BEYOND SYLLABUS/ADVANCED TOPICS/DESIGN:

1	Conductometric precipitation titration using $BaCl_2$-Na_2SO_4
2	Estimation of copper content of the given solution by EDTA method
3	Designing a model Solar panel and its uses
4	Demo with X-ray diffraction pattern to find the hkl value of the material

WEB SOURCE REFERENCES:

1	https://www.lccc.edu/academics/science-and-engineering/science-in-motion/labs-equipment/chemistry-lab-experiments
2	http://www.rsc.org/learn-chemistry/collections/experimentation/practical-chemistry
3	https://www.youtube.com/playlist?list=PL72F60474CBF8852D
4	https://www.youtube.com/watch?v=4feACUeCFPw
5	https://www.youtube.com/watch?v=l6nkikI7RVw

DELIVERY/INSTRUCTIONAL METHODOLOGIES:

☐ CHALK & TALK	☐ STUD. ASSIGNMENT	☐ WEB RESOURCES	☐ NPTEL/OTHERS
☐ LCD/SMART BOARDS	☐ STUD. SEMINARS	☐ ADD-ON COURSES	☐ WEBNIARS

ASSESSMENT METHODOLOGIES-DIRECT

☐ ASSIGNMENTS	☐ STUD. SEMINARS	☐ TESTS/MODEL EXAMS	☐ UNIV. EXAMINATION
☐ STUD. LAB PRACTICES	☐ STUD. VIVA	☐ MINI/MAJOR PROJECTS	☐ CERTIFICATIONS
☐ ADD-ON COURSES	☐ OTHERS		

ASSESSMENT METHODOLOGIES-INDIRECT

☐ ASSESSMENT OF COURSE OUTCOMES (BY FEEDBACK, ONCE)	☐ STUDENT FEEDBACK ON FACULTY (TWICE)
☐ ASSESSMENT OF MINI/MAJOR PROJECTS BY EXT. EXPERTS	☐ OTHERS

INNOVATIONS IN TEACHING/LEARNING/EVALUATION PROCESSES:

1. To find young's modulus for unknown rigid body
2. To analysis different water parameters .

Scanned by CamScanner

Prepared by **Approvedby**

SYLLABUS

BS8161 PHYSICS AND CHEMISTRY LABORATORY

CHEMISTRY LABORATORY: (Any seven experiments to be conducted)

LIST OF EXPERIMENTS

1. Estimation of HCl using Na2CO3 as primary standard and Determination of alkalinity in water
sample.
2. Determination of total, temporary & permanent hardness of water by EDTA method.
3. Determination of DO content of water sample by Winkler's method.
4. Determination of chloride content of water sample by argentometric method.
5. Estimation of copper content of the given solution by Iodometry.
6. Determination of strength of given hydrochloric acid using pH meter.
7. Determination of strength of acids in a mixture of acids using conductivity meter.
8. Estimation of iron content of the given solution using potentiometer.
9. Estimation of iron content of the water sample using spectrophotometer (1, 10-Phenanthroline / thiocyanate method).
10. Estimation of sodium and potassium present in water using flame photometer.
11. Determination of molecular weight of polyvinyl alcohol using Ostwald viscometer.
12. Pseudo first order kinetics-ester hydrolysis.
13. Corrosion experiment-weight loss method.
14. Determination of CMC.
15. Phase change in a solid.
16. Conductometric titration of strong acid vs strong base.

TOTAL: 30 PERIODS

OUTCOMES

The students will be outfitted with hands-on knowledge in the quantitative chemical analysis of water quality related parameters.

Scanned by CamScanner

CONTENTS

Ex. No	Date	Course Outcomes	Name of the Experiment	Page No.	Staff Signature
WATER ANALYSIS					
1		C108.1	Determination of total, temporary & permanent hardness of water by EDTA method		
2		C108.1	Estimation of HCl using Na_2CO_3 as primary standard and Determination of alkalinity		
3		C108.1	Determination of Dissolved Oxygen of Water sample by Winkler's Method		
4		C108.2	Determination of Chloride Content of Water sample by Argentometric Method		
5		C108.3	Estimation of iron content of the given solution using potentiometer		
6		C108.4	Conductometric Titration of Strong Acid Vs Strong Base		
7		C108.5	Determination of Strength of given Hydrochloric acid using pH meter		
ADDITIONAL EXPERIMENTS (CONTENT BEYOND SYLLABUS)					
1		C108.4	Conductometric precipitation titration using $BaCl_2$-Na_2SO_4		
2		C108.2	Estimation of copper content of the given solution by EDTA method		

Scanned by CamScanner

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY
COIMBATORE – 641105

19/11/2018

From

Head of the Department,
Department of Civil Engineering,
JCT College of Engineering and Technology,
Coimbatore – 641105.

To

The Principal
JCT College of Engineering and Technology,
Coimbatore – 641105.

Respected Sir,

Sub : Requesting permission for conducting course on "3DS MAX" - Reg.

In our Civil Engineering department, we are planned to conduct the course on "3DS MAX" software for our third year fifth semester civil engineering students during the semester holidays between 10/12/2018 to 17/12/2018. Hence I request you to kindly provide the permission for conducting the above course successfully.

Thanking you,

Yours truly,

(Kumar.A)

Scanned by CamScanner

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

PICHANUR, COIMBATORE-641105

3Ds MAX

COURSE SYLLABUS

DAY -1 Introduction, Importance of 3Ds Max for Civil/Architecture Students, Creating Standard, Extended, Primitive objects- Creating Doors, Windows and Stairs, Circle, Line and Ellipse etc.- Convert all solid objects into Editable mesh - Convert all shapes in Editable Spline.

DAY -2 Importing AutoCAD File in 3Ds Max, Applying Camera, Lights and Materials in 3D Model view, Rendering Model View using Default Scan line Renderer, Rendering Building View using Mental Ray Renderer.

DAY -3 Lens and Effects in Lights, Creating Road Night views using Spot light and Lens effects, With path and without path Animation of an object in Particular frames, Road Animation creating with Dummy and Camera.

DAY -4 Creating Fire Effects, Inner wall, Inner door with Frames in AutoCAD to Exterior Building Model, Importing Exterior and Interior building model in 3Ds Max, Setting the furniture in rooms according to its requirement.

DAY -5 Walk Through of Building in Exterior and Interior, Creating AVI Movie.

DAY-6 Project work.

Coordinator

HOD/CIVIL

Scanned by CamScanner

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY
COIMBATORE – 641105

TIME TABLE

COURSE : 3DSMAX
BATCH : 2016
DURATION : 10/12/2018 TO 17/12/2018

CLASS : Third Year / Vth Semester
Total Hours : 42 Hrs

Sl.No.	DATE	FORENOON				AFTERNOON		
1	10/12/2018	9.00am-10.45am	10.45am – 11.00am	11.00am – 12.45.pm	12.45pm – 1.30pm	1.30pm – 3.15pm	3.15pm – 3.30pm	3.30pm – 5.15pm
2	11/12/2018	Theory sesson - 1	Break	Practical sesson-1	Lunch Break	Theory sesson - 2	Break	Practical sesson-2
3	12/12/2018	Theory sesson - 3		Practical sesson-3		Theory sesson - 4		Practical sesson-4
4	13/12/2018	Theory sesson - 5		Practical sesson-5		Theory sesson - 6		Practical sesson-6
5	14/12/2018	Theory sesson - 7		Practical sesson-7		Theory sesson - 8		Practical sesson-8
6	17/12/2018	Practical Project work		Practical Project work		Course Test		Course Test

Co-ordinator

HOD/Civil

Principal

Scanned by CamScanner

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY
COIMBATORE – 641105

REGISTERED STUDENTS
NAME LIST

COURSE : 3DSMAX
CLASS : Third Year / Vth Semester
BATCH : 2016
DURATION OF THE COURSE : 10/12/2018 – 17/12/2018

S.NO	REG.NO	STUDENTS NAME
1	720916103002	ANZAL.A
2	720916103003	ARAVIND.P.V
3	720916103004	ARAVIND.S.KUMAR
4	720916103006	ASWATHI.R
5	720916103008	ATHIRA .B
6	720916103009	BHARATH.P
7	720916103011	DEVIKA.M
8	720916103012	JINU.J
9	720916103013	KARTHICK.B
10	720916103014	MOHAMMED ADIL BIN BASHEER
11	720916103015	MOHAMMED RISHAL.K.P
12	720916103016	MOHAMMED RISHAN.M.T
13	720916103017	MUHAMMAD SAFAD T
14	720916103018	MUHAMMED NISHAL.M.K
15	720916103019	MUHAMMED SAINUL
16	720916103021	NAMITA BOBAN
17	720916103022	NEETHU.K.K
18	720916103023	NIROSHA.S
19	720916103024	SADIK.I
20	720916103025	SAJITH.K
21	720916103026	SHABIN NAZAR.N
22	720916103029	VARSHINI.S
23	720916103030	ASHMY P I
24	720916103031	NEGHA
25	720916103301	ARUN.T.R

Scanned by CamScanner

26	720916103302	BALAGURUSAMY
27	720916103303	INSHAD
28	720916103304	JAYA KUMAR
29	720916103305	KRISHNA LAL
30	720916103306	NEETHU.S
31	720916103307	SUBAREESH
32	720916103308	TAMIL SELVAN
33	720916103309	UDHAYAKUMAR

COORDINATOR

HOD/CIVIL

Scanned by CamScanner

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

Pichanur, Coimbatore-641105

STUDENTS ATTENDANCE

Course : 3DSMAX

Class : THIRD YEAR / Vth SEMESTER

S.NO	REG.NO	STUDENTS NAME	DATE											
			12-10-2018		12-11-2018		12-12-2018		13/12/2018		14/12/2018		17/12/2018	
			FN	AN	FN	AN	FN	AN	FN	AN	FN	AN	FN	AN
1	720916103002	ANZAL.A												
2	720916103003	ARAVIND.P.V												
3	720916103004	ARAVIND.S.KUMAR												
4	720916103006	ASWATHI.R												
5	720916103008	ATHIRA .B												
6	720916103009	BHARATH.P												
7	720916103011	DEVIKA.M												
8	720916103012	JINU.J												
9	720916103013	KARTHICK.B												
10	720916103014	MOHAMMED ADIL BIN BASHEER												
11	720916103015	MOHAMMED RISHAL.K.P												
12	720916103016	MOHAMMED RISHAN.M.T												
13	720916103017	MUHAMMAD SAFAD T												
14	720916103018	MUHAMMED NISHAL.M.K												
15	720916103019	MUHAMMED SAINUL												
16	720916103021	NAMITA BOBAN												
17	720916103022	NEETHU.K.K												
18	720916103023	NIROSHA.S												
19	720916103024	SADIK.I												
20	720916103025	SAJITH.K												
21	720916103026	SHABIN NAZAR.N												
22	720916103029	VARSHINI.S												
23	720916103030	ASHMY P I												
24	720916103031	NEGHA												
25	720916103301	ARUN.T.R												
26	720916103302	BALAGURUSAMY												
27	720916103303	INSHAD												
28	720916103304	JAYA KUMAR												
29	720916103305	KRISHNA LAL												
30	720916103306	NEETHU.S												
31	720916103307	SUBAREESH												
32	720916103308	TAMIL SELVAN												
33	720916103309	UDHAYAKUMAR												

For

Scanned by CamScanner

CERTIFICATE OF COMPLETION

DEPARTMENT OF CIVIL ENGINEERING

This is to certify that Mr./Ms ARAVIND.P.V has successfully completed the training course on 3DSMAX during 10/12/2018 to 17/12/2018 conducted by the department of Civil Engineering in the academic year 2018-19.

COORDINATOR

HEAD OF THE DEPARTMENT

PRINCIPAL
JCT College of Engineering & Technology
PICHANUR, Coimbatore - 641 105.

PRINCIPAL

JCTCCOLLEGE OF ENGINEERING AND TECHNOLOGY
PICHANUR COIMBATORE- 641105

Scanned by CamScanner

CERTIFICATE OF COMPLETION

DEPARTMENT OF CIVIL ENGINEERING

This is to certify that Mr./Ms KARTHICK.B has successfully completed the training course on 3DSMAX during 10/12/2018 to 17/12/2018 conducted by the department of Civil Engineering in the academic year 2018-19.

COORDINATOR

HEAD OF THE DEPARTMENT

PRINCIPAL

JCT College of Engineering & Technology
PICHANUR, Coimbatore - 641 105.

JCTCCOLLEGE OF ENGINEERING AND TECHNOLOGY
PICHANUR COIMBATORE- 641105

Scanned by CamScanner

CERTIFICATE OF COMPLETION

DEPARTMENT OF CIVIL ENGINEERING

This is to certify that Mr./Ms MOHAMMED RISHAN.M.T has successfully completed the training course on 3DSMAX during 10/12/2018 to 17/12/2018 conducted by the department of Civil Engineering in the academic year 2018-19.

COORDINATOR

HEAD OF THE DEPARTMENT

PRINCIPAL

JCT College of Eng & Technology
PICHANUR, Co - 641 105.

PRINCIPAL

JCTCOLLEGE OF ENGINEERING AND TECHNOLOGY
PICHANUR COIMBATORE- 641105

Scanned by CamScanner

CERTIFICATE OF COMPLETION

DEPARTMENT OF CIVIL ENGINEERING

This is to certify that Mr./Ms NEETHU.K.K has successfully completed the training course on 3DSMAX during 10/12/2018 to 17/12/2018 conducted by the department of Civil Engineering in the academic year 2018-19.

COORDINATOR

HEAD OF THE DEPARTMENT

PRINCIPAL

JCT College of Engineering & Technology
PICHANUR, Coimbatore - 641 105.

JCTCCOLLEGE OF ENGINEERING AND TECHNOLOGY
PICHANUR COIMBATORE- 641105

Scanned by CamScanner

CERTIFICATE OF COMPLETION

DEPARTMENT OF CIVIL ENGINEERING

This is to certify that Mr./Ms NEETHU.S has successfully completed the training course on 3DSMAX during 10/12/2018 to 17/12/2018 conducted by the department of Civil Engineering in the academic year 2018-19.

COORDINATOR

HEAD OF THE DEPARTMENT

PRINCIPAL
JCT College of Engineering & Technology
PICHANUR. Coimbatore - 641 105.

PRINCIPAL

JCTCCOLLEGE OF ENGINEERING AND TECHNOLOGY
PICHANUR COIMBATORE- 641105

Scanned by CamScanner

FEEDBACK FORM

This *Training Evaluation Feedback Form* is available in a PDF version for printing and filling out by hand; or as a Word document that can be filled out on the computer:

1. **How did you attend this training?** *(check all that apply)*
   - [x] As an instructor/facilitator
   - [ ] As a trainee in a group setting
   - [ ] As a Web-based training in a group setting
   - [ ] As a self-paced Web-based training
   - [ ] Other *(describe)*:

2. **Was this training?**
   - [ ] Required
   - [x] Optional

3. **Based on the training course description, how did your learning experience compare to what you expected when you began the training.** *(check only one)*
   - [ ] Learned much more than I expected.
   - [x] Learned somewhat more than I expected.
   - [ ] Learned as much as I expected.
   - [ ] Learned somewhat less than I expected.
   - [ ] Learned much less than I expected.
   - [ ] Learned nothing new.

4. **Please rate how well this training program met your expectations in the following areas:**

	One of the Worst	Below Average	Average	Above Average	One of The Best
Course content			✓		
Course materials			✓		
Presentation style			✓		
Joint exercise content			✓		
Open discussions			✓		
Availability of support materials			✓		
Other: *(describe)*:			✓		

5. **Would you recommend this training to your colleagues?** *(check only one)*
   - [ ] Definitely
   - [x] Probably
   - [ ] Not certain
   - [ ] Probably not
   - [ ] Definitely not

6. **Comments:**

(Name & Signature)

Scanned by CamScanner

JCT

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY
PICHANUR, COIMBATORE – 641 105

22/04/2019

From

Head of the Department,
Department of Civil Engineering,
JCT College of Engineering and Technology,
Coimbatore – 641105.

To

The Principal
JCT College of Engineering and Technology,
Coimbatore – 641105.

Respected Sir,

Sub : Requesting permission for conducting course on 'BASIC SITE WORK AND BUILDING MARKING" - Reg.

The Department of Civil Engineering is planned to conduct the training course on "BASIC SITE WORK AND BUILDING MARKING" for our final year civil engineering students. The course period is 10/06/2019 to 17/06/2019. Hence I request you to kindly provide the permission for conducting the above course successfully.

Thanking you,

Yours truly,

Scanned by CamScanner

BASIC SITE WORK AND BUILDING MARKING

COURSE SYLLABUS

DURATION :30 HOURS (6 DAYS)

INTRODUCTION

Introduction about building construction, importance and necessity of site management and marking, Technical terms of various components of buildings, types of buildings, types of structures, units and measurements, construction tools & equipments and site preparation.

MATERIALS

Construction materials- sand and its types, natural stones, artificial stones, cement and its types, concrete and its types, special types of materials, quality control.

BUILDING MARKING

Units and its conversion, components of various types of buildings, building alignment techniques and its importance, study and execution of building drawings.

LOAD BEARING STRUCTURE

Basic principle, center line marking of load bearing structure- demonstration at site, marking of residential and commercial buildings.

FRAMED STRUCTURE

Basic principle, center line marking of framed structures(column marking)- demonstration at site, marking of multistory buildings and industrial buildings.

PRACTICAL SESSION

Site visit, on marking and alignment of buildings.

COURSE CO-ORDINATOR

HOD/CIVIL

Scanned by CamScanner

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY
COIMBATORE – 641105

TIME TABLE

BASIC SITE WORK AND BUILDING MARKING (36 Hours)

Sl.No.	DATE	FORENOON				AFTERNOON		
1	10/06/2019	9.30am-10.45am	10.45am – 11.00am	11.00am – 12.30.pm	12.30pm – 1.30pm	1.30pm – 3.15pm	3.15pm – 3.30pm	3.30pm – 5.00pm
2	11/06/2019	Theory sesson	Break	Theory sesson	Lunch Break	Practical sesson	Break	Practical sesson
3	12/06/2019	Theory sesson		Theory sesson		Practical sesson		Practical sesson
4	13/06/2019	Theory sesson		Theory sesson		Practical sesson		Practical sesson
5	14/06/2019	Theory sesson		Theory sesson		Practical sesson		Practical sesson
6	17/06/2019	Theory sesson		Practical sesson		Practical TEST		Practical TEST

Principal Co-ordinator HOD/Civil

Scanned by CamScanner

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY
COIMBATORE – 641105

REGISTERED STUDENTS NAME LIST

COURSE : BASIC SITE WORK AND BUILDING MARKING
CLASS : Final Year / VIIth Semester
BATCH : 2015
DURATION OF THE COURSE : 10/06/2019 – 17/06/2019

1	720915103001	ABDUL RAHIMAN. P.H
2	720915103002	ADHUL PRAKASH
3	720915103005	AKSHAY. P.S
4	720915103006	AKSHAY DEV. A
5	720915103007	ALI MISHAB. E.C
6	720915103009	ANIL KUMAR. A
7	720915103010	ANIRUDH. A
8	720915103011	ANJANA PRATHEEP
9	720915103012	BASIL BIJU
10	720915103013	BINCY. U.I
11	720915103014	BINOJ VARGHESE
12	720915103015	DANISH. PK
13	720915103016	ELAYAVENDAN. V
14	720915103017	FATHIMATH NESRIN
15	720915103018	GOKUL. K
16	720915103019	HARI G.S
17	720915103020	HARASH. S
18	720915103021	HIBA BASHEER
19	720915103022	INBARASAN. M
20	720915103023	INFANT RICHARD. J
21	720915103024	JOSE ANISH. A
22	720915103025	MASHHOR MOHAMED. C.C
23	720915103027	MUHAMMED SHAMEER. I
24	720915103028	MUHAMMED.P.P
25	720915103029	MUHAMMED SAHIL. P.C
26	720915103030	MUTHURAJA. V
27	720915103031	PAULSON FERNANDEZ.M
28	720915103032	PUGAZHENTHI. R
29	720915103033	RAM KUMAR. A
30	720915103034	RASHID. S

Scanned by CamScanner

31	720915103035	RENJITH. H
32	720915103036	SAFEEK. A
33	720915103037	SARANG
34	720915103039	TIJO. P.TOM MATHEW
35	720915103305	MIBIN SABARINATH
36	720915103306	POOVARASAN.M
37	720915103307	SHRUTHI
38	720915103308	SURYA.R
39	720915103309	VIVEK.P.V

Coordinator

HOD/Civil

Scanned by CamScanner

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

Pichanur, Coimbatore-641105

STUDENTS ATTENDANCE SHEET

Course : Basic Site Work And Building Marking

Class : Final Year / VII th Semester

S.NO	REG.NO	STUDENTS NAME	DATE											
			06-10-2019		06-11-2019		06-12-2019		13/06/2019		14/06/2019		17/06/2019	
			FN	AN	FN	AN	FN	AN	FN	AN	FN	AN	FN	AN
1	720915103001	ABDUL RAHIMAN. P.H												
2	720915103002	ADHUL PRAKASH												
3	720915103005	AKSHAY. P.S												
4	720915103006	AKSHAY DEV. A												
5	720915103007	ALI MISHAB. E.C												
6	720915103009	ANIL KUMAR. A												
7	720915103010	ANIRUDH. A												
8	720915103011	ANJANA PRATHEEP												
9	720915103012	BASIL BIJU												
10	720915103013	BINCY. U.I												
11	720915103014	BINOJ VARGHESE												
12	720915103015	DANISH. PK												
13	720915103016	ELAYAVENDAN. V												
14	720915103017	FATHIMATH NESRIN												
15	720915103018	GOKUL. K												
16	720915103019	HARI G.S												
17	720915103020	HARASH. S												
18	720915103021	HIBA BASHEER												
19	720915103022	INBARASAN. M												
20	720915103023	INFANT RICHARD. J												
21	720915103024	JOSE ANISH. A												
22	720915103025	MASHHOR MOHAMED. C.C												
23	720915103027	MUHAMMED SHAMEER. I												
24	720915103028	MUHAMMED.P.P												
25	720915103029	MUHAMMED SAHIL. P.C												
26	720915103030	MUTHURAJA. V												
27	720915103031	PAULSON FERNANDEZ.M												
28	720915103032	PUGAZHENTHI. R												
29	720915103033	RAM KUMAR. A												
30	720915103034	RASHID. S												
31	720915103035	RENJITH. H												
32	720915103036	SAFEEK. A												
33	720915103037	SARANG												
34	720915103039	TIJO. P.TOM MATHEW												
35	720915103305	MIBIN SABARINATH												
36	720915103306	POOVARASAN.M												
37	720915103307	SHRUTHI												
38	720915103308	SURYA R												
39	720915103309	VIVEK.P.V												

Scanned by CamScanner

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

PICHANUR COIMBATORE- 641105

CERTIFICATE OF COMPLETION

DEPARTMENT OF CIVIL ENGINEERING

This is to certify that Mr./Ms SHRUTHI has successfully completed the training course on BASIC SITE WORK AND BUILDING MARKING during 10/06/2019 – 17/06/2019 conducted by the department of Civil Engineering in the academic year 2018-19.

PRINCIPAL
JCT College of Engineering & Technology
PICHANUR, Coimbatore - 641 105.

COORDINATOR

HEAD OF THE DEPARTMENT

PRINCIPAL

Scanned by CamScanner

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

PICHANUR COIMBATORE- 641105

CERTIFICATE OF COMPLETION

DEPARTMENT OF CIVIL ENGINEERING

This is to certify that Mr./Ms SURYA.R has successfully completed the training course on BASIC SITE WORK AND BUILDING MARKING during 10/06/2019 - 17/06/2019 conducted by the department of Civil Engineering in the academic year 2018-19.

PRINCIPAL
JCT College of Engineering & Technology
PICHANUR, Coimbatore - 641 105.

COORDINATOR

HEAD OF THE DEPARTMENT

PRINCIPAL

Scanned by CamScanner

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

PICHANUR COIMBATORE- 641105

CERTIFICATE OF COMPLETION

DEPARTMENT OF CIVIL ENGINEERING

This is to certify that Mr./Ms VIVEK.P.V has successfully completed the training course on BASIC SITE WORK AND BUILDING MARKING during 10/06/2019 – 17/06/2019 conducted by the department of Civil Engineering in the academic year 2018-19.

PRINCIPAL
JCT College of Engineering & Technology
PICHANUR, Coimbatore - 641 105.

COORDINATOR

HEAD OF THE DEPARTMENT

PRINCIPAL

Scanned by CamScanner

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

PICHANUR COIMBATORE- 641105

CERTIFICATE OF COMPLETION

DEPARTMENT OF CIVIL ENGINEERING

This is to certify that Mr./Ms ABDUL RAHIMAN. P.H has successfully completed the training course on BASIC SITE WORK AND BUILDING MARKING during 10/06/2019 – 17/06/2019 conducted by the department of Civil Engineering in the academic year 2018-19.

PRINCIPAL
JCT College of Engineering & Technology
PICHANUR, Coimbatore - 641 105.

COORDINATOR

HEAD OF THE DEPARTMENT

PRINCIPAL

Scanned by CamScanner

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

PICHANUR COIMBATORE- 641105

CERTIFICATE OF COMPLETION

DEPARTMENT OF CIVIL ENGINEERING

This is to certify that Mr./Ms ADHUL PRAKASH has successfully completed the training course on BASIC SITE WORK AND BUILDING MARKING during 10/06/2019 – 17/06/2019 conducted by the department of Civil Engineering in the academic year 2018-19.

PRINCIPAL
JCT College of Engineering & Technology
PICHANUR, Coimbatore - 641 105.

COORDINATOR

HEAD OF THE DEPARTMENT

PRINCIPAL

Scanned by CamScanner

Training Evaluation Form

Title of event:

Date of event:

Location of event:

Instructions: Please tick your level of agreement with the statements listed below	Strongly Agree	Agree	Disagree	Strongly Disagree	Not relevant to this event
1.The objectives of the training were met	✓				
2.The presenters were engaging		✓			
3.The presentation materials were relevant		✓			
4.The content of the course was organised and easy to follow	✓				
5.The trainers were well prepared and able to answer any questions		✓			
6.The course length was appropriate	✓				
7. The pace of the course was appropriate to the content and attendees		✓			
8.The exercises/role play were helpful and relevant	✓				
9.The venue was appropriate for the event	✓				

Scanned by CamScanner

10. What was most useful?

11. What was least useful?

12. What else would you like to see included in this event?Are there any other topics that you wouldlike to be offered training courses in?

13. Would you recommend this course to colleagues? Yes/No Why?

Yes. its useful

14. Any other comments?

No

THANK YOU FOR COMPLETING THIS EVALUATION FORM. FEEDBACK RECEIVED WILL BE USED TO PROVIDE IMPROVEMENTS TO FUTURE EVENTS.

Scanned by CamScanner