RAAK

COLLEGE OF ENGINEERING AND TECHNOLOGY

(Approved by AICTE, New Delhi & Affiliated to Pondicherry University)

From

02.09.2020

Mr.G.Krishnakumar
Assistant Professor, Mechanical Engineering
RAAK College of Engineering and Technology
Puducherry -110

To

The Principal
RAAK College of Engineering and Technology
Puducherry -110

Respected Sir,

Sub: Requisition for Approval to Conduct Skill Development program / Value added Course on "**20ME01-Hybrid Electric Vehicles" -** reg.

This is to bring to your kind notice that the Skill Development Team is planning to conduct a Program on**"20ME01-Hybrid Electric Vehicles" for** Final Year Mechanical Engineering students from 09-09-2020 to 13-09-2020

The main focus of this program is to provide a better exposure to our students on the **"Hybrid Electric Vehicles"** for practical applications.

The syllabus and course plan structured are not listed in the Pondicherry University Curriculum. and the same have been verified and approved by the Principal/HoD/Professors and Skill development team.

Hence, I kindly request you to approve event planned. The details and the necessary proofs are attached with this letter.

Thanking you,

Yours faithfully

G.Krishnakumar
AP/MECH

RAAK College of Engineering & Technology

Dr. S. SEENUVASAMURTHI, M.E., Ph.D.
PRINCIPAL
RAAK College of Engineering & Technology
No.1, Muthupillai Palayam Road,
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Puducherry - 605 110

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COLLEGE OF ENGINEERING AND TECHNOLOGY

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RAAKCET/PRINCIPAL/CIR/AUG2020 **03/09/2020**

CIRCULAR

This is to inform that the Skill Development Team is planning to conduct a value added course on **"20ME01-Hybrid Electric Vehicles"** for the Final Year students from 09-09-2020 to 13-09-2020. Students are asked to utilize this opportunity and improve their skills.

PRINCIPAL

Dr. S. SEENUVASAMURTHI, M.E., Ph.C.
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2. All Faculty & Staff Members
3. All HoDs

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NO:1, MUTHUPILLAI PALAYAM ROAD, G.N. PALAYAM, VILLIYANUR, PUDUCHERRY - 605 110

DEPARTMENT OF MECHANICAL ENGINEERING

PRESENTS

VALUE ADDED COURSE ON

HYBRID ELECTRIC VEHICLES (ONLINE MODE)

2020-2021

DATE: 09/08/2020 to 13/08/2020

VENUE: RAAKCET

TIME: 09 am to 04 pm

Resource Person:

Mr. D.Dhineshkumar
Assistant Professor.
Krishnaswami College of Engg & Tech

For Registration Contact:

Mr. Kirubakaran. AP/ MECH
9486304735.

HOD

Mr.Krishnakumar.G

PRINCIPAL

Dr. S. Seenuvasamurthi

Dr. S. SEENUVASAMURTHI, M.E., Ph.D.
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COLLEGE OF ENGINEERING AND TECHNOLOGY

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VALUE ADDED COURSES

2020-2021

Department of Mechanical Engineering

20ME01-Hybrid Electric Vehicles

Syllabus

Duration: 30 hours

Course Objective:

- To understand upcoming technology of electric and hybrid electric vehicles
- Analyze different aspects of drive train topologies
- Learn different energy management strategies
- To understand different communication systems used in electric and Hybrid electric vehicles

Course outcomes of Electric and Hybrid Vehicles:

- Impact of conventional vehicles on the society and different types of drive train topologies
- Load modelling based on the road profile and braking concepts
- Different types of motors used in electric and hybrid electric vehicles
- Different types of energy storage systems
- The concept vehicle to grid (V2G) and grid to vehicle (G2V)

Module 1: Introduction To Hybrid Electric Vehicles

Vehicle basics- Constituents of a conventional vehicle-Drive cycles and Drive Terrain, A Brief history of Hybrid Electric vehicles (HEVs), Basics of Electric Vehicles (EV), Basics of Hybrid Electric Vehicles (HEVs), Architecture of HEVs- Series HEVs, Parallel HEVs, Series-Parallel HEVs,

Module 2: Electric Propulsion Systems

DC Motors- Operating principle and control of DC motors, Induction Motor Drives: Operating principle and Control Mechanisms, Brushless Motor Drives

Module 3: Design of Hybrid Electric Vehicle Drives

Design of Series Hybrid Electric Vehicle Drive - Control Strategies, Sizing of Major Components and Case Study for designing for various parameters.

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Module 4: Design of Parallel Hybrid Electric Vehicle Drive

Control Strategies of Drive Train and Design of Drive Train Parameters.

Module 5: Energy Storage Systems:

Electrochemical Batteries, Lead-Acid Batteries, Nickel Based Batteries, Lithium Based Batteries, Ultra Capacitors- Basic Principles and Performance, Ultrahigh-speed flywheels- Basic Principle and Power Capacity, Fly Wheel technologies.

Course Designed by

Approved by

Principal

RAAK College of Engineering & Technology

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CO - ATTAINMENT MAPPING

Sl. No	Register Number	Student Name	CO1	CO2	CO3	CO4
1	17TB3101	AKASH.P	✓	✓	✓	✓
2	17TB3102	DENNIS REGANNATHAN.J	✓	✓	✓	✓
3	17TB3103	GOVINDHAN.D	✓	✓	✓	✓
4	17TB3104	KARTHIKEYAN.M	✓	✓	✓	✓
5	17TB3105	KARUNAMOORTHY.S	✓	✓	✓	✓
6	17TB3106	KUMARAGURU.C	✓	✓	✓	✓
7	17TB3107	KUMARAVEL.K	✓	✓	✓	✓
8	17TB3108	MANIKANDAN.M	✓	✓	✓	✓
9	17TB3109	MICHEAL JASS.R	✓	✓	✓	✓
10	17TB3110	MOHAMAD ALLAUDDIN.A	✓	✓	✓	✓
11	17TB3111	MUTHUKUMARAN.S	✓	✓	✓	✓
12	17TB3112	NIHAL AHAMED.N	✓	✓	✓	✓
13	17TB3114	PATTAPPAN.S	✓	✓	✓	✓
14	17TB3115	PRAVEENKUMAR.N	✓	✓	✓	✓
15	17TB3116	SIVABALAN.P	✓	✓	✓	✓

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VALUE ADDED COURSES

2020-2021

Department of Mechanical Engineering

20ME01-Hybrid Electric Vehicles

COURSE PLAN

S.no	Date	Hours	Time	Topic	Resource person
DAY -1					
1	09.09.20	1.2	9AM -11AM	Vehicle basics- Constituents of a conventional vehicle- Drive cycles and Drive Terrain, A Brief history of Hybrid Electric vehicles (HEVs),	Mr.G.Senthivel & Mr.D.Dhineshkumar
2		3,4	11.15AM – 1.15 PM	Basics of Electric Vehicles (EV), Basics of Hybrid Electric Vehicles (HEVs), Architecture of HEVs	Mr.G.Senthivel
3		5.6	2 PM -4PM	Series HEVs, Parallel HEVs, Series-Parallel HEVs,	Mr.D.Dhineshkumar
DAY 2					
4	10.09.20	7,8	9AM -11AM	DC Motors- Operating principle and control of DC motors	Mr.G.Senthivel
5		9,10,	11.15AM – 1.15 PM	Induction Motor Drives: Operating principle and Control Mechanisms	Mr.D.Dhineshkumar
6		11,12	2 PM -4PM	Brushless Motor Drives	Mr.G.Senthivel
DAY -3					
7	11.09.20	13,14	9AM -11AM	Design of Series Hybrid Electric Vehicle Drive	Mr.D.Dhineshkumar
8		15,16	11.15AM – 1.15 PM	Control Strategies, Sizing of Major Components	Mr.G.Senthivel
9		17,18	2 PM -4PM	Case Study for designing for various parameters	Mr.D.Dhineshkumar
DAY -4					

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10	12.09.20	19,20	9AM -11AM	Control Strategies of Drive Train	Mr.G.Senthivel
11		21,22	11.15AM – 1.15 PM	Design of Drive Train Parameters.	Mr.D.Dhineshkumar
12		23,24	2 PM -4PM	Electrochemical Batteries, Lead-Acid Batteries	Mr.G.Senthivel
DAY -5					
13	13.09.20	25,26	9AM -11AM	Nickel Based Batteries, Lithium Based Batteries, Ultra Capacitors-	Mr.D.Dhineshkumar
14		27,28	11.15AM – 1.15 PM	Basic Principles and Performance, Ultrahigh-speed flywheels	Mr.G.Senthivel
15		29,30	2 PM -4PM	Basic Principle and Power Capacity, Fly Wheel technologies.	Mr.D.Dhineshkumar
ASESSMENT EXAM WILL BE CONDUCTED AFTER ONE WEEK OF COURSE COMPLETION *					

BREAK TIME: 11.00 TO 11.15 AM **LUNCH BREAK: 1.15 PM TO 2.00 PM**

COURSE DESIGNED BY
Mr. G.KRISHNAKUMAR

APPROVED BY
SKILL DEVELOPMENT TEAM

PRINCIPAL

RAAK College of Engineering & Technology

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VALUE ADDED COURSES

2020-2021

Department of Mechanical Engineering

EVENT REPORT

Name of the Course: 20ME01-Hybrid Electric Vehicles (Online mode)

Name of the Instructors: Mr.G.Senthivel & Mr.D.Dhineshkumar

Year/ Branch: IV/ Mechanical

Duration of Course: 30 Hours (09-09-2020 to 13-09-2020)

Assessment Date: 20.09.2020

Post Event Summary:

The course was inaugurated on 09-09-2020 at 9.30 A.M. by our respectable principal and sessions were continued as per the schedule. Students were enriched their knowledge by attending the course. Finally, the course concluded by vote of thanks.

On 20.09.2020 assessment was conducted and feedbacks were collected from all the participants.

CO - Attainment:

CO1: To understand upcoming technology of electric and hybrid electric vehicles

CO2: Analyze different aspects of drive train topologies

CO3: Learn different energy management strategies

CO4: To understand different communication systems used in electric and Hybrid electric vehicles

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Value Added Course on Hybrid Electric Vehicles 2020-21

Induction Motor Drives: Operating principle and Control Mechanisms on 10.09.20

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COLLEGE OF ENGINEERING AND TECHNOLOGY

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03.08.2020

From

Mr.G.Krishnakumar

Assistant Professor, Mechanical Engineering

RAAK College of Engineering and Technology

Puducherry -110

To

The Principal

RAAK College of Engineering and Technology

Puducherry -110

Respected Sir,

Sub: Requisition for Approval to Conduct Skill Development program / Value added Course on **"20ME02 - Introduction to fracture mechanics"** - reg.

This is to bring to your kind notice that the Skill Development Team is planning to conduct a Program on "**20ME02 - Introduction to fracture mechanics**" for the Third Year Mechanical Engineering students from 09-08-2020 to 13-08-2020

The syllabus and course plan structured are not listed in the Pondicherry University Curriculum and the same have been verified and approved by the Principal/HoD/Professors and Skill development team.

Hence, I kindly request you to approve event planned. The details and the necessary proofs are attached with this letter.

Thanking you,

Yours faithfully,

G.Krishnakumar

AP/MECH

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RAAKCET/PRINCIPAL/CIR/AUG2020 02/08/2020

CIRCULAR

This is to inform that the Skill Development Team is planning to conduct a value added course on "**20ME02 - Introduction to fracture mechanics**" for Third Year Mechanical Engineering students from 09-08-2020 to 13-08-2020. .Students are asked to utilize this opportunity and improve their skills.

PRINCIPAL

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DEPARTMENT OF MECHANICAL ENGINEERING
PRESENTS
VALUE ADDED COURSE ON
INTRODUNCTION TO FRACTURE MECHANICS (ONLINE MODE)

2020-2021

DATE: 09/08/2020 to 13/08/2020

VENUE: RAAKCET

TIME: 09 am to 04 pm

Resource Person:

Mr. G. Senthilvel
Assistant professor,
Krishnaswami College of Engg & Tech.

For Registration Contact:

Mr. Kirubakaran. AP/ MECH,
9486304735.

HOD
Mr.Krishnakumar.G

PRINCIPAL
Dr. S. Seenuvasamurthi

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VALUE ADDED COURSES

2020-2021

Department of Mechanical Engineering

20ME02 - Introduction to fracture mechanics

Syllabus

Duration: 30 hours

Course Objective:

- To introduce the basic concepts of fracture mechanics
- To import knowledge on linear elastic fracture mechanics
- To study the behaviour of the elastic plastic fracture mechanics
- To understand the experimental testing of plain strain fracture toughness and crack repair methodologies.

Course Outcome:

Upon successful completion of the course students able to

- Understand the fundamental concepts of fracture mechanics.
- Derive the governing equations for the linear elastic fracture mechanics
- Formulate the relationship between J-integral and CTOD.
- Learn to know how to experimentally testing the plain strain fracture toughness and crack repair Methodologies.

Module 1: **(6 Hours)**

Basic concepts of Fracture Mechanics, History of fracture mechanics, Modes of loading, Classification of fracture mechanics – LEFM - EPFM,

Module 2: **(6 Hours)**

Fracture mechanics approach to design – Energy criterion –Stress intensity approach– Time dependent crack growth and damage tolerance.

Module 3: **(6 Hours)**

Linear Elastic Fracture Mechanics (LEFM)-Griffith theory, Energy release rate, Instability and R-curve, Stress analysis of cracks-Stress intensity factor, Relationship between K and global behaviour, Crack tip stress analysis.

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Puducherry - 605 110

Module 4: **(6 Hours)**

Elastic Plastic Fracture Mechanics (EPFM) - Crack tip opening displacement (CTOD), J-integral, relationship between J and CTOD.

Module 5 **(6 Hours)**

Experimental determination of plane strain fracture toughness, K- R curve testing, J measurement, CTOD testing, Failure assessment diagram, Crack arrest and repair methodologies.

Course Designed by **Approved by** **Principal**

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Puducherry - 605 110

CO - ATTAINMENT MAPPING

Sl. No	Register Number	Student Name	CO1	CO2	CO3	CO4
1	18TB1201	AJAY.D	✓	✓	✓	✓
2	18TB1202	AMEENUL ISLAM.N	✓	✓	✓	✓
3	18TB1204	DHAYANITHI.A	✓	✓	✓	✓
4	18TB1206	EZHILARASAN.S	✓	✓	✓	✓
5	18TB1207	GANESH.M	✓	✓	✓	✓
6	18TB1208	GNANASEKAR.S	✓	✓	✓	✓
7	18TB1209	KARTHIKEYAN.S	✓	✓	✓	✓
8	18TB1210	KIRAN.K	✓	✓	✓	✓
9	18TB1211	KOWS.R	✓	✓	✓	✓
10	18TB1212	MOHAMED IRSHATH.R	✓	✓	✓	✓
11	18TB1213	SARANVEL.M	✓	✓	✓	✓
12	18TB1214	SELVAGANAPATHY.T	✓	✓	✓	✓
13	18TB1215	SIVA.A	✓	✓	✓	✓
14	18TB1216	SIVARAJ.K	✓	✓	✓	✓
15	18TB1217	SIVASANKARAN.K	✓	✓	✓	✓
16	18TB1218	VUBALANKA SAI VENKATA SRIRAM	✓	✓	✓	✓

Dr. S. SEENUVASAMURTHI, M.E., Ph.D.
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17	18TBL087	GOKULAKRISHNAN.S	✓	✓	✓	✓

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VALUE ADDED COURSES

2020-2021

Department of Mechanical Engineering

20ME02 - Introduction to fracture mechanics

COURSE PLAN

S.no	Date	Hours	Time	Topic	Resource person
DAY -1					
1	09.08.20	1.2	9AM -11AM	Basic concepts of Fracture Mechanics, History of fracture mechanics,	Mr.D.Dhineshkumar & Mr.G.Senthivel
2		3,4	11.15AM – 1.15 PM	, Modes of loading, Classification of fracture mechanics	Mr.D.Dhineshkumar
3		5.6	2 PM -4PM	LEFM - EPFM,	
DAY 2					
4	10.08.20	7,8	9AM -11AM	Fracture mechanics approach to design – Energy criterion	Mr.D.Dhineshkumar
5		9,10,	11.15AM – 1.15 PM	–Stress intensity approach	Mr.G.Senthivel
6		11,12	2 PM -4PM	Time dependent crack growth and damage tolerance.	Mr.D.Dhineshkumar
DAY -3					
7	11.08. 20	13,14	9AM -11AM	Linear Elastic Fracture Mechanics (LEFM)- Griffith theory, Energy release rate	Mr.G.Senthivel
8		15,16	11.15AM – 1.15 PM	Instability and R-curve, Stress analysis of cracks-Stress intensity factor,	Mr.D.Dhineshkumar
9		17,18	2 PM -4PM	, Relationship between K and global behaviour, Crack tip stress analysis.	Mr.G.Senthivel
DAY -4					
10	12.08. 20	19,20	9AM -11AM	Elastic Plastic Fracture Mechanics (EPFM)	Mr.D.Dhineshkumar
11		21,22	11.15AM – 1.15 PM	Crack tip opening displacement (CTOD)	Mr.G.Senthivel
12		23,24	2 PM -4PM	J-integral, relationship between J and	Mr.D.Dhineshkumar

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				CTOD.	
DAY -5					
13	13.08. 20	25,26	9AM -11AM	Experimental determination of plane strain fracture toughness,	Mr.G.Senthivel
14		27,28	11.15AM – 1.15 PM	K- R curve testing, J measurement, CTOD testing,	Mr.D.Dhineshkumar
15		29,30	2 PM -4PM	Failure assessment diagram, Crack arrest and repair methodologies.	Mr.G.Senthivel
ASESSMENT EXAM WILL BE CONDUCTED AFTER ONE WEEK OF COURSE COMPLETION *					

BREAK TIME: 11.00 TO 11.15 AM **LUNCH BREAK: 1.15 PM TO 2.00 PM**

COURSE DESIGNED BY
Mr.G.KRISHNAKUMAR

APPROVED BY
SKILL DEVELOPMENT TEAM

PRINCIPAL

RAAK College of Engineering & Technology

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VALUE ADDED COURSES
2020-2021
Department of Mechanical Engineering
EVENT REPORT

Name of the Course: 20ME02 - Introduction to fracture mechanics (Online mode)

Name of the Instructors: Mr.D.Dhineshkumar & Mr.G.Senthivel

Year/ Branch: III/ Mechanical

Duration of Course: 30 Hours (09-08-2020 to 13-08-2020)

Assessment Date: 20.08.2020

Post Event Summary:

The course was inaugurated on 09-08-2020 at 9.30 A.M. by our respectable principal and sessions were continued as per the schedule. Students were enriched their knowledge by attending the course. Finally, the course concluded by vote of thanks.

On 20.08.2020 assessment was conducted and feedbacks were collected from all the participants.

CO - Attainment:

CO1: To introduce the basic concepts of fracture mechanics

CO2: To import knowledge on linear elastic fracture mechanics

CO3: To study the behavior of the elastic plastic fracture mechanic

CO4: To understand the experimental testing of plain strain fracture toughness and crack repair methodologies

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COLLEGE OF ENGINEERING AND TECHNOLOGY

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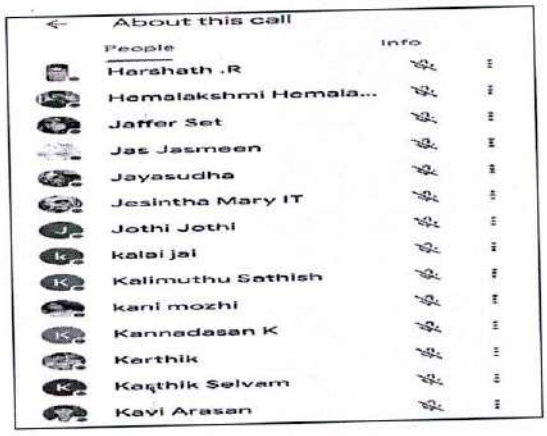
Value Added Course On Introduction to fracture mechanics 2020-21



Time dependent crack growth and damage tolerance on 10.08.20

RAAK College of Engineering & Technology

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03/08/2020

From

Mr.G.Krishnakumar

Assistant Professor, Mechanical Engineering

RAAK College of Engineering and Technology

Puducherry -110

To

The Principal

RAAK College of Engineering and Technology

Puducherry -110

Respected Sir,

Sub: Requisition for Approval to Conduct Skill Development program / Value added Course on **"20ME03- Oil Hydraulics and Pneumatics"** - reg.

This is to bring to your kind notice that the Skill Development Team is planning to conduct a Program on "**20ME03- Oil Hydraulics and Pneumatics**" for second Year Mechanical Engineering students from 09-08-2020 to 13-08-2020.

The syllabus and course plan structured are not listed in the Pondicherry University Curriculum and the same have been verified and approved by the Principal/HoD/Professors and Skill development team.

Hence, I kindly request you to approve event planned. The details and the necessary proofs are attached with this letter.

Thanking you,

Yours faithfully

G.Krishnakumar

AP/MECH

RAAK College of Engineering & Technology

Dr. S. SEENUVASAMURTHI, M.E., Ph.D.
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RAAKCET/PRINCIPAL/CIR/AUG2020 **04/08/2020**

CIRCULAR

This is to inform that the Skill Development Team is planning to conduct a value added course on **"20ME03 - Oil Hydraulics and Pneumatics"** for the Second Year Mechanical Engineering students from 09-08-2020 to 13-08-2020. Students are asked to utilize this opportunity and improve their skills.

PRINCIPAL

Circulation to:

1. All Students
2. All Faculty & Staff Members
3. All HoDs

Copy to:

1. All HoDs
2. Office

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NO:1, MUTHUPILLAI PALAYAM ROAD, G.N. PALAYAM, VILLIYANUR, PUDUCHERRY - 605 110

DEPARTMENT OF MECHANICAL ENGINEERING

PRESENTS

VALUE ADDED COURSE ON

OIL HYDRAULICS AND PNEUMATICS(ONLINE MODE)

2020-2021

DATE: 09/08/2020 to 13/08/2020

VENUE: RAAKCET

TIME: 09 am to 04 pm

Resource Person:

Mr. K. Ainnar
Assistant Professor.
Dr. Pauls College of Engg & Tech.

For Registration Contact:

Mr. Kirubakaran. AP/ MECH,
9486304735.

HOD

Mr.Krishnakumar.G

PRINCIPAL

Dr. S. Seenuvasamurthi

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VALUE ADDED COURSES

2020-2021

Department of Mechanical Engineering

20ME03- Oil Hydraulics and Pneumatics

Syllabus

Duration: 30 hours

Course Objective:

- Course gives idea about the basic system working on fluid power and compressed air.
- Also different valves related to hydraulic and pneumatic systems are discussed in syllabus.
- Subject is also useful for designing the various hydraulic and pneumatic circuits for various engineering applications.

Course Outcome:

Upon successful completion of the course students able to

- Identify and analyze the functional requirements of a power transmission system for a given application. (Application involving fluid power transmission)
- Design an appropriate hydraulic or pneumatic circuit or combination circuit like electro-hydraulics, electro-pneumatics for a given application. Develop a circuit diagram.
- Visualize how the hydraulic/pneumatic circuit will work to accomplish the function

Module 1: **(6 Hours)**

Global fluid power Scenario, Basic system of Hydraulics-Major advantages and disadvantages, Principles of Hydraulic Fluid power, Hydraulic Symbols, Electrical Elements used in hydraulic circuits

Module 2: **(6 Hours)**

Hydraulic & Pneumatic Symbols as per ISO/ANSI, Types, Properties, physical characteristics & functions of hydraulic Oils, Classification- Mineral based, Fire resistant& Biodegradable Oils, Filters, Contaminations, location of filter.

Module 3: **(6 Hours)**

Design of hydraulic circuits: Basic hydraulic circuits, Industrial hydraulic circuits, Power losses in flow control circuits.

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Module 4: **(6 Hours)**

Pneumatic circuits: Basic pneumatic circuits, Development of single Actuator Circuits, Development of multiple Actuator Circuits, Cascade method for sequencing.

Module 5: **(6 Hours)**

Introduction to Automation in hydraulic and Pneumatic Systems.

Course Designed by **Approved by** **Principal**

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CO - ATTAINMENT MAPPING

Sl. No	Register Number	Student Name	CO1	CO2	CO3
1	19TB1201	ABDUL AJEES.M	✓	✓	✓
2	19TB1202	ARUNESHWAR. J	✓	✓	✓
3	19TB1203	DEVA. R	✓	✓	✓
4	19TB1205	MOHANDOSS. A	✓	✓	✓
5	19TB1206	NANTHAKUMAR. S	✓	✓	✓
6	19TB1207	NARAYANA MOORTHI.S	✓	✓	✓
7	19TB1208	PONNAMBALAM. E	✓	✓	✓
8	19TB1209	PRADEEPRAJ.R	✓	✓	✓
9	19TB1211	SILAMBU KALIDASAN. M	✓	✓	✓
10	19TB1212	VASANTHARAJ. R	✓	✓	✓
11	19TBL055	GOUTHAM.N	✓	✓	✓

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VALUE ADDED COURSES

2020-2021

Department of Mechanical Engineering

20ME03- Oil Hydraulics and Pneumatics

COURSE PLAN

S.no	Date	Hours	Time	Topic	Resource Person
DAY -1					
1	09.08.20	1.2	9AM -11AM	Global fluid power Scenario, Basic system of Hydraulics-	Mr.K.Ainnar & Mr.S.Ravienderan
2		3,4	11.15AM – 1.15 PM	Major advantages and disadvantages, Principles of Hydraulic Fluid power,,	Mr.S.Ravienderan
3		5.6	2 PM -4PM	Hydraulic Symbols, Electrical Elements used in hydraulic circuits	Mr.K.Ainnar
DAY 2					
4	10.08.20	7,8	9AM -11AM	Hydraulic & Pneumatic Symbols as per ISO/ANSI, Types, Properties, physical characteristics & functions of hydraulic Oils,	Mr.S.Ravienderan
5		9,10,	11.15AM – 1.15 PM	, Classification- Mineral based, Fire resistant& Biodegradable Oils	Mr.K.Ainnar
6		11,12	2 PM -4PM	Filters, Contaminations, location of filter.	Mr.S.Ravienderan
DAY -3					
7	11.08.20	13,14	9AM -11AM	Design of hydraulic circuits: Basic hydraulic circuits,	Mr.K.Ainnar
8		15,16	11.15AM – 1.15 PM	Industrial hydraulic circuits	Mr.S.Ravienderan
9		17,18	2 PM -4PM	Power losses in flow control circuits.	Mr.K.Ainnar
DAY -4					
10	12.08.20	19,20	9AM -11AM	Pneumatic circuits:	

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10	12.08.20	19,20	9AM -11AM	Pneumatic circuits: Basic pneumatic circuits,	
11		21,22	11.15AM – 1.15 PM	Development of single Actuator Circuits, Development of multiple Actuator Circuits	Mr.K.Ainnar
12		23,24	2 PM -4PM	Cascade method for sequencing	Mr.S.Ravienderan
DAY -5					
13	13.08.20	25,26	9AM -11AM	Introduction to Automation	Mr.K.Ainnar
14		27,28	11.15AM – 1.15 PM	Automation in hydraulic	Mr.S.Ravienderan
15		29,30	2 PM -4PM	Automation in Pneumatic Systems	Mr.K.Ainnar
ASESSMENT EXAM WILL BE CONDUCTED AFTER ONE WEEK OF COURSE COMPLETION *					

BREAK TIME: 11.00 TO 11.15 AM **LUNCH BREAK: 1.15 PM TO 2.00 PM**

COURSE DESIGNED BY
Mr.G.KRISHNAKUMAR

APPROVED BY
SKILL DEVELOPMENT TEAM

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VALUE ADDED COURSES

2020-2021

Department of Mechanical Engineering

EVENT REPORT

Name of the Course: **20ME03- Oil Hydraulics and Pneumatics (Online mode)**

Name of the Instructors: Mr.K.Ainnar & Mr.S.Ravienderan

Year/ Branch: II/ Mechanical

Duration of Course: 30 Hours (09-08-2020 to 13-08-2020)

Assessment Date: 20.08.2020

Post Event Summary:

The course was inaugurated on 09-08-2020 at 9.30 A.M. by our respectable principal and sessions were continued as per the schedule. Students were enriched their knowledge by attending the course. Finally, the course concluded by vote of thanks.

On 20.08.2020 assessment was conducted and feedbacks were collected from all the participants.

CO - Attainment:

CO1: Course gives idea about the basic system working on fluid power and compressed air.

CO2: Also different valves related to hydraulic and pneumatic systems are discussed in syllabus.

CO3: Subject is also useful for designing the various hydraulic and pneumatic circuits for various engineering applications.

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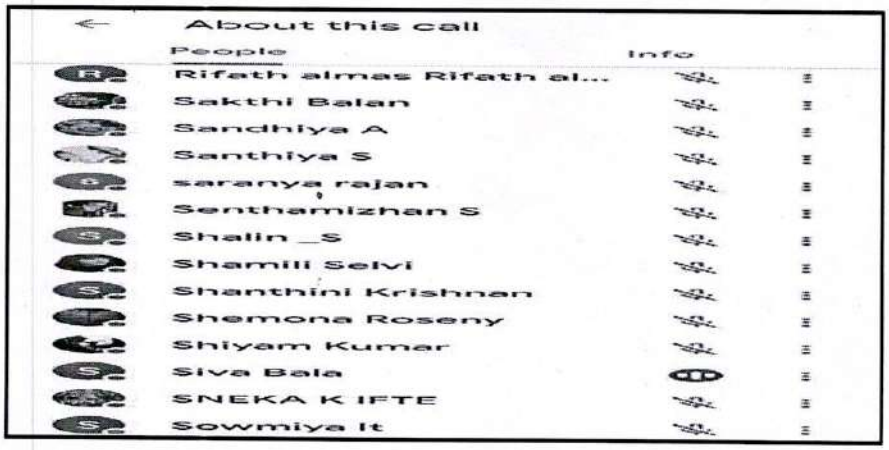
Value Added Course On Oil Hydraulics and Pneumatics 2020-21



Classification- Mineral based, Fire resistant& Biodegradable Oils on 10.08.20

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