

**DEPARTMENT OF MECHANICAL ENGINEERING  
VALUE ADDITION PROGRAMS**

<b>WORKSHOPS</b>				
Sl No	Title	Date	Academic year	Total no
1	Workshop on Retrofitting of conventional Two wheeler to Electric	14th March 9023	2022-23	1
2	ENTREPRENEURSHIP AWARENESS CAMP	05/11/2021 - 07/11/2021	2021-22	1
3	ENTREPRENEURSHIP AWARENESS CAMP	05-03-2020 to 07-03-2020	2019-20	5
4	Workshop on "Mendeley Desktop"	9/10/2021		
5	5 days workshop on Creo Modelling Software	26/10/19 -30/10/2019		
6	Introduction to Stress strain Analysis using FEM Software	16/11/2019		
7	One Day Workshop On Supply Chain Operation Simulation	2/11/2019		
Total				7

<b>TRAINING</b>				
Sl No	Title	Date	Academic year	Total no
1	CNC SKILL DEVELOPMENT TRAINING	26-11-2021,3-12-21,4-12-2021,10-12-21,17-12-21.	2021-22	1
2	Online training on Fusion 360	26/09/2020	2020-21	1
3	ONLINE TRAINING "BOSCH SKYPE TRAINING FOR AUTOMOTIVE SEGMENT"	21-05-2020 to 29-05-2020.	2019-20	1
Total				3

<b>WEBINAR</b>				
Sl No	Title	Date	Academic year	Total no
1	Webinar on "Opportunities after engineering through GATE"	6/5/2022	2021-22	5
2	Webinar on "Orientation Program on Product Design & Manufacturing with Autodesk Fusion 360"	25-05-2021		
3	Webinar on "Career options for Mechanical Engineer in HVAC & MEP BIM"	4/5/2021		
4	WEBINAR ON "USER INVOLVED PRODUCT DEVELOPMENT USING ADDITIVE MANUFACTURING"	3/6/2021		
5	Webinar on "Importance of soft skill in personal and professional life. Job opportunities in current market scenario"	19/11/2021		
6	Webinar on "INTRODUCTION TO MECHATRONICS 21-11-20"	21/11/2020	2020-21	11
7	Webinar on Career Opportunities for engineers in Indian Defence Sector	19/09/2020		
8	Webinar on Career Prospects in Today's Dynamic Digital Economy	26/09/2020		
9	Webinar on 'Opportunities for Young Engineers in Oil & Gas Sector'	17/10/2020		
10	National level Webinar on "3D Printing Materials and Software"	7/11/2020		
11	Webinar on "Additive Manufacturing (3D Printing) – Innovative Manufacturing Technique for Engineers"	17/10/2020		
12	Webinar on "Military War Machines and Indian Space Programmes"	17/10/2020		
13	Webinar on "How to Write a Technical Paper".	21/11/2020		
14	Webinar on "Advanced trends in Automobile Design and Drive Train Mechanisms"	22/08/2020		
15	Webinar on 'Opportunities in aerospace industries and what the industry is looking for' on 11th June 2020	11/6/2020		
16	Webinar on 'Industrial relevance of Mechanical Engineering'	3/6/2020		
17	Webinar on "Recent Trends In Automobile Scenarios"	12/5/2020	2019-20	4
18	Career oriented Webinar on 'Design of Building Mechanical Services'	18/05/2020		
19	Webinar on 'Computational Fluid Dynamics'	7/5/2020		
20	Online technical talk on "3D Printing Technology, Its Applications - FDMFFF Parameters Explained"	29/04/2020		
Total				20

<b>SEMINARS/INVITED TALKS</b>				
Sl No	Title	Date	Academic year	Total no
1	Technical talk on "Developments in Design and Automation for Industry 4.0"	22/12/2022	2022-23	1
2	Seminar on "Career opportunities in various sectors in the field of Mechanical Engineering"	4/19/2022	2021-22	1
3	Invited Talk on Steel Industry	11th July 2019	2019-20	5
4	Knowledge Enhancement seminar on MEP	2/11/2019		
5	Seminar on Sustainable development goals	27/09/2019		
6	Invited Talk on Research & Innovation	11th July 2019		
7	Seminar on Research Methodology	14th Nov 2019		
8	Seminar on Opportunities for Higher Studies Abroad.	7/2/2020		
Total				7

ADD-ON COURSE				
Sl No	Title	Date	Academic year	Total no
1	12 hours sessions of an add-on course on employability skill enhancement 14th and 15th October 2022 in association with Progressum Edutech Pvt.Ltd.	14/10/2022- 15/10/2022	2022-23	4
2	Add-on Course on Industrial Robotics and Internet of things (30 Hrs)	13/02/2023 - 17/02/2023		
3	Add-on Course on BIM Tools- Revit MEP & Inventor (30 Hrs)	30/01/2023-03/02/2023		
4	Add-on Course on BIM Tools- Revit MEP & Inventor (30 Hrs)	06/02/23-09/02/23 & 20,21,22 March 2023		
Total				4

CONFERENCES				
Sl No	Title	Date	Academic year	Total no
1	II International Conference on Technological Convergence in Engineering, Energy, and Sustainability (ICTCEES-2020)	18-07-2020 and 19-07-2020.	2020-21	1
2	1st International Conference on Technological Convergence in Engineering, Energy, and Sustainability (ICTCEES-2019)	11/7/2019	2019-20	1
Total				2

TECH FEST				
Sl No	Title	Date	Academic year	Total no
1	ME Tech Fest MEXTERIOUS	5/12/2022	2022-23	1
Total				1

Total No of Worksops	7
Total No of Trainings	3
Total No of Webinar	20
Total No of Seminars/invited Talks	7
Total No of Add-on course	4
Total No of Tech fest	1
Total No of Conferences	2

Total No of program

44

  
23/2/2023  
Co-ordinator

**MEJO M FRANCIS**  
Assistant Professor  
Department of  
Mechanical Engineering  
Vimal Jyothi Engg. College  
Chempuri

  
Cdr (retd) RAJU K.K.  
Asst. Professor & HOD  
Department of Mechanical Engineering  
Vimal Jyothi Engineering College  
Chempuri, Kannur, Kerala- 670632

**INDIRECT ATTAINMENT FROM VALUE ADDITION PROGRAMS (ACADEMIC YEAR WISE)**

ATTAINMENT LEVEL 1 :50% to 60% STUDENTS HAS GIVEN THE RATING  
 ATTAINMENT LEVEL 2 :60% to 80% STUDENTS HAS GIVEN THE RATING  
 ATTAINMENT LEVEL 3 : MORE THAN 80% STUDENTS HAS GIVEN THE RATING

**AY 2019-20**

Sl No	Program	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
1	Invited Talk on Research & Innovation		3				3	3					3		
2	International Conference ICTCEES 2019						3	3					3		
3	Seminar on Research Methodology				3	3					3	3			
4	5 days workshop on Creo Modelling Software			3	3	3								3	
5	One Day Workshop On Supply Chain Operation Simulation			3		3							3	3	3
6	Training In Edgcam In Association With Kriatech Services					3								3	
7	ONLINE TRAINING "BOSCH SKYPE TRAINING FOR AUTOMOTIVE	3		3		3		3		3			3	3	
8	Online technical talk on "3D Printing Technology, Its Applications - FDM/FFF Parameters Explained"					3								3	
9	Career oriented Webinar on 'Design of Building Mechanical Services'	3	3	3			3	3		3			3	3	
10	webinar on 'Computational Fluid Dynamics'			3		3	3							3	
11	ENTREPRENEURSHIP AWARENESS CAMP (5th to 7th March 2020)						3		3	3	3	3			3
12	Workshop on CYCLE TEMPO, a software tool to design and analyze thermodynamic systems.						3								3
13	Seminar on Opportunities for Higher Studies Abroad						3						3		
14	Webinar on Recent Trends in Automobile Scenarios			3	3		3								
	<b>Average attainment</b>	3	3	3	3	3	3	3	3	3	3	3	3	3	3

**AY 2020-21**

	Program	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
1	Webinar on "INTRODUCTION TO MECHATRONICS (21-11-20)					3	3							3	3
2	Online training on Fusion 360	3			3	3								3	
3	webinar on Career Opportunities for engineers in Indian Defence Sector							3	3					3	
4	Career Prospects in Today's Dynamic Digital Economy					3	3							3	
5	Webinar on 'Opportunities for Young Engineers in Oil & Gas Sector'	3	3			3				3		3	3	3	3
6	National level webinar on "3D Printing Materials and Software"		3	3			3	3	3			3	3	3	3
7	Webinar on "Additive Manufacturing (3D Printing) - Innovative Manufacturing Technique for Engineers"					3	3							3	
8	Webinar on "Military War Machines and Indian Space Programmes"					3	3	3	3	3	3			3	3
9	Webinar on "How to Write a Technical Paper".					3	3	3	3	3	3			3	3
10	Webinar on "AUTOMOTIVE DESIGN THINKING				3	3	3						3	3	
11	Webinar on "Industrial relevance of Mechanical Engineering"						3	3						3	
12	II International Conference on Technological Convergence in Engineering, Energy, and Sustainability (ICTCEES-2020)	3	3	3	3	3	3	3	3	3	3	3	3		
13	webinar on 'Opportunities in aerospace industries and what the industry is looking for' on 11th June 2020						3	3						3	
	<b>Average attainment</b>	3	3	3	3	3	3	3	3	3	3	3	3	3	3

AY 2021-22														
Program	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
1 "Opportunities after engineering through GATE	3	3							3			3		
2 "Career opportunities in various sectors in the field of Mechanical Engineering"	3	3			3				3		3		3	3
3 Webinar on "Orientation Program on Product Design & Manufacturing with Autodesk Fusion 360					3								3	
4 Webinar on "Career options for Mechanical Engineer in HVAC & MEP BIM"	3	3	3		3								3	
5 Webinar on "Employable Skillsets required in core mechanical industries"	3	3	3		3								3	
6 WEBINAR ON "USER INVOLVED PRODUCT DEVELOPMENT USING ADDITIVE MANUFACTURING				3	3									
7 CNC SKILL DEVELOPMENT TRAINING	3			3	3								3	3
8 Webinar on "Mendeley Desktop"		3			3					3		3	3	3
9 ENTREPRENEURSHIP AWARENESS CAMP						3	3	3	3	3	3			3
10 Webinar on "Importance of soft skill in personal and professional life. Job opportunities in current market scenarios	3	3	3		3								3	
<b>Average attainment</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>

AY 2022-23														
Program	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
1 Webinar on multi robot systems, by Dr.Lucia Pallottino, Associate Professor, University of Di Pisa, Italy						3								
2 Technical Talk on Current trends in Computer & Communication Technologies										3				
3 Hands-on training Robotic workshop on 4th Dec 2022 in collaboration with IEEE RAS														
4 ME Tech Fest "MEXTERIOUS						3	3	3	3	3	3		3	3
5 Technical talk on "Developments in Design and Automation for Industry 4.0			3	3	3	3							3	
6 12 hours sessions of an add-on course on employability skill enhancement 14th and 15th October 2022 in association with Progressum Edutech Pvt.Ltd,						3				3		3		
7 CNC Skill Development Training (5 Days)	3				3									3
8 Add-on Course on Industrial Robotics and Internet of things (30 Hrs)	3	3	3	3	3	3			3		3	3	3	3
9 Add-on Course on BIM Tools- Revit MEP & Inventor (30 Hrs)	3	3	3		3					3			3	3
10 Workshop on BIM Tools- Revit MEP & Inventor (30 Hrs)	3	3	3		3					3			3	3
<b>Average attainment</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>

*[Signature]*  
25/12/2022  
Coordinator

**MEJO M FRANCIS**  
Assistant Professor  
Department of  
Mechanical Engineering  
Vimal Jyothi Engg. College  
Chempuri

*[Signature]*  
**Cdr (Retd) RAJU K.K.**  
Asso. Professor & HOD  
Department of Mechanical Engineering  
Vimal Jyothi Engineering College  
Chempuri, Kannur, Kerala



**DEPARTMENT OF MECHANICAL ENGINEERING**  
**CURRICULAM GAP IDENTIFICATION & ACTIONS PLANNED**

**SUBJECT NAME:** Basics of Mechanical Engg      **CODE:** EST 120      **SEMESTER:** S1/S2

**ABOUT THE SUBJECT:** Basic Mechanical Engg Topics/Introduction to Mechanical core courses

SL-NO.	GAPS IN THE SYLLABUS TO MEET INDUSTRY/PROFESSIONAL REQUIREMENTS;	DESCRIPTION	CONCERNED POs	PROPOSED ACTIONS
1	Advanced industry based modelling & simulation tools	Industrial Visits/Invited Talks	PO5,PO6	Basic Design Engineering workshops/ video lecture

Member 1 *Appu Kucian*

Member 2 *Ajir Augustine*

*[Signature]*  
**Chairman**  
*12/03/2022*

**C. P. RAJU K.K.**  
 Professor & HOD  
 Department of Mechanical Engineering  
 Vimal Jyothi Engineering College  
 Thrissur, Kannur, Kerala- 670032



**DEPARTMENT OF MECHANICAL ENGINEERING**  
**CURRICULAM GAP IDENTIFICATION & ACTIONS PLANNED**

**SUBJECT NAME:** Life Skills      **CODE:** HUN101      **SEMESTER:** SI

**ABOUT THE SUBJECT:** Course deals with communication, leadership and other skills required in a professional life

SL. NO.	GAPS IN THE SYLLABUS TO MEET INDUSTRY/PROFESSIONAL REQUIREMENTS:	DESCRIPTION	CONCERNED POs	PROPOSED ACTIONS
1	Developing ethical principles	Cultivate moral & ethical principles and commitment in professional, social ethics and responsibilities	PO8	Charity pilgrim

Member 1

*[Signature]*  
 SPPL Pentim

Member 2

*[Signature]*  
 Dr. Sathyan

Chairman

*[Signature]*  
 10/18/2022  
 K. K. K.

*[Faint background text]*  
 Director & HOD  
 Mechanical Engineering  
 Vimal Jyothi Engineering College  
 K. K. K. Kannur, Kerala-670332



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**DEPARTMENT OF MECHANICAL ENGINEERING**  
**CURRICULAM GAP IDENTIFICATION & ACTIONS PLANNED**

**SUBJECT NAME: MECHANICS OF FLUID**      **CODE: MET 203**      **SEMESTER : 3**

**ABOUT THE SUBJECT:** Fundamentals of fluid flow analysis is discussed with the help of numerical problems

SL. NO.	GAPS IN THE SYLLABUS TO MEET INDUSTRY/PROFESSION REQUIREMENTS:	DESCRIPTION	CONCERNED POs	PROPOSED ACTIONS
1	Advanced industry based modelling & simulation tools	CFD analysis to calculate lift and drag of simple geometries using potential flow, and boundary layer flow theories etc are not available in syllabus	PO 3, PO 4, PO 5, PO6, PSO1	Workshops/Invited talk/Seminar/Training on Advanced developments in mechanical engineering Introduction to CFD software can be provided to students
3	Design of a pipeline for transmission of water is not mentioned in curriculum	Fundamental knowledge on design of a pipeline for transmission system is not in curriculum	PO 3, PO 4, PO 5, PO6, PSO1	Exercise on Design of a pipeline for transmission of drinking water supply for a domestic township, considering the various losses and power requirement

*M. J. Francis*  
*[Signature]*

Member 1

*Alex George*  
*[Signature]*  
 Member 2

**Chairman**

*19/7/24*

*[Signature]*  
 Cdr. P. RAJU K.K.  
 Head of Department

Vimal Jyothi Engineering College  
 Vengalloor, Thiruvananthapuram - 695027  
 Phone: 0477-253337



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**DEPARTMENT OF MECHANICAL ENGINEERING**

**CURRICULAM GAP IDENTIFICATION & ACTIONS PLANNED**

**SUBJECT NAME: MECHANICS OF SOLIDS      CODE: MET 201      SEMESTER: S3**

**ABOUT THE SUBJECT:** The course is to practice methodologies to analyze stresses and strains in simple structural members, and to apply the results in simple design problems.

SL. NO.	GAPS IN THE SYLLABUS TO MEET INDUSTRY/PROFESSIONAL REQUIREMENTS:	DESCRIPTION	CONCERNED POs	PROPOSED ACTIONS
1	Exposure to experimental stress analysis and structural problems	Hands on knowledge in industry based modeling, simulation & project management tools	PO 3, PO 4, PO 5, PSO1	Introduction to stress strain analysis using FEM software

Member 1

*Dr. Jithin A.N*  
13/7/24

Member 2

*Dijo Dinesh*  
13/7/24

*J. V. S. Raju K.K.*  
13/7/24  
Chairman  
Vimal Jyothi Engineering College  
Champanur, Kannur, Kerala - 690032





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**DEPARTMENT OF MECHANICAL ENGINEERING**  
**CURRICULAM GAP IDENTIFICATION & ACTIONS PLANNED**

**SEMESTER:S4**

**CODE:MET202**

**SUBJECT NAME: Thermodynamics**

**ABOUT THE SUBJECT:** Fundamentals of thermodynamics/Thermal Engineering

SL. NO.	GAPS IN THE SYLLABUS TO MEET INDUSTRY/PROFESSIONAL REQUIREMENTS:	DESCRIPTION	CONCERNED POs	PROPOSED ACTIONS
1	Advanced industry based modelling & simulation tools	Introduction software's likes CFD, Cycle Tempo	PO 3, PO 4 , PO 5,PO6,PSO1	Workshops/Invited talk/Seminar/Training on Advanced developments in mechanical engineering

*Appa Kulkarni*  
**Member 1**

*Go Kulkarni R*  
**Member 2**

*[Signature]*  
**Chairman**  
Centre for Quality Improvement  
Vimal Jyothi Engineering College  
Savitribai Phule Pune University  
Kharadi, Pune-411 004



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**DEPARTMENT OF MECHANICAL ENGINEERING**  
**CURRICULAM GAP IDENTIFICATION & ACTIONS PLANNED**

**SEMESTER: S4**

**CODE: EST200**

**SUBJECT NAME:** Design and engineering

**ABOUT THE SUBJECT:** Basic engineering designs

SL. NO.	GAPS IN THE SYLLABUS TO MEET INDUSTRY/PROFESSIONAL REQUIREMENTS:	DESCRIPTION	CONCERNED POS	PROPOSED ACTIONS
1	Advanced design concepts in Robotics and Industrial Automation	Insight to the Design Concepts in Robotics & automation	POS,PO6	Workshop/hands-on training / Add-on Courses

Member 1

*M. The Mathew*

Chairman

*23/7/21*

*A. J. K. K.*

*Chairman & HOD*

*Department of Engineering*

*Government Engineering College*

*Thiruvananthapuram, Kerala - 695 014*

*Shanmuga . K . K*



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**DEPARTMENT OF MECHANICAL ENGINEERING**  
**CURRICULAM GAP IDENTIFICATION & ACTIONS PLANNED**

**SUBJECT NAME:** Manufacturing Process      **CODE:** MET204      **SEMESTER:**S4

**ABOUT THE SUBJECT:** Knowledge in various manufacturing processes and technology related to them

SL. NO.	GAPS IN THE SYLLABUS TO MEET INDUSTRY/PROFESSIONAL REQUIREMENTS:	DESCRIPTION	CONCERNED POS	PROPOSED ACTIONS
1	Advanced manufacturing tools and techniques	Interaction with industries / Knowledge on manufacturing tools and techniques	PO5,PSO1,PSO2	Workshop on 3D Printing technology/CNC/EDGE CAM Training

Member 1

*Shrey George*

Member 2

*John Sanyal*

Chairman

*M. Francis*  
19/11/20

**MEJO M FRANCIS**  
Assistant Professor  
Department of  
Mechanical Engineering  
Vimal Jyothi Eng  
College



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**DEPARTMENT OF MECHANICAL ENGINEERING**  
**CURRICULAM GAP IDENTIFICATION & ACTIONS PLANNED**

**SUBJECT NAME:** Computer Aided Design and Analysis Lab    **CODE:** MEL332    **SEMESTER:**S6

**ABOUT THE SUBJECT:** Introduction to solid modelling and Finite Element Analysis software. Exercises on modeling and assembly.

SL. NO.	GAPS IN THE SYLLABUS TO MEET INDUSTRY/PROFESSIONAL REQUIREMENTS:	DESCRIPTION	CONCERNED POs	PROPOSED ACTIONS
1	Advanced industry based modelling & simulation tools	Hands on knowledge in industry based modeling, simulation & project management tools	PO5,PO6,PS O1, PO 3, PO 4, PO 5	Short Term Training on Advanced modelling and analysis software tools in collaboration with BIMLab/Conceptia/ Inter CAD systems etc

Member 1

Member 2

Chairman

Raju K.K.  
Chairman



**DEPARTMENT OF MECHANICAL ENGINEERING**

**CURRICULAM GAP IDENTIFICATION & ACTIONS PLANNED**

**SUBJECT NAME:** Machine Tools and Metrology      **CODE:** ME 303      **SEMESTER:** S5

**ABOUT THE SUBJECT:** The course emphasis on various manufacturing processes ,digital manufacturing and metrology

SL NO.	GAPS IN THE SYLLABUS TO MEET INDUSTRY/PROFESSIONAL REQUIREMENTS:	DESCRIPTION	CONCERNED POs	PROPOSED ACTIONS
1	Advanced manufacturing tools and techniques	industry based modelling & simulation tools	PO5,PSO1	STTP for students CNC programming & hands-on Training and workshops/EDGE CAM Training

Member 1 *[Signature]*

Member 2

*[Signature]*  
Maji M Jyothi  
28/12

*[Signature]*  
Chairman  
5th/2022  
Prof. RAJU K.K.  
Professor & HOD  
Mechanical Engineering  
Kannur Engineering College  
Kannur, Kerala-870 022



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**DEPARTMENT OF MECHANICAL ENGINEERING**  
**CURRICULAM GAP IDENTIFICATION & ACTIONS PLANNED**

**SEMESTER: S5**

**SUBJECT NAME: MECHANICS OF MACHINERY CODE: MET 301**

**ABOUT THE SUBJECT:**

The subject deals with the study of relative motion between the various parts of a machine, and forces which act on them.

SL. NO.	GAPS IN THE SYLLABUS TO MEET INDUSTRY/PROFESSIONAL REQUIREMENTS:	DESCRIPTION	CONCERNED POs	PROPOSED ACTIONS
1	Less exposure to synthesis software's and modern kinematic synthesis technique.	There is no exposure to any kinematic synthesis related software's and programming	PO3,PO5, PO7,PO9,PO 10,PSO1,PSO2	Video lecture regarding synthesis software's and their field of application. Workshops/Hands on training programs
2	Mostly focused on graphical analysis and conventional methods.	Graphical analysis techniques are time consuming comparing to software techniques.	PO3,PO5, PO7,PO9,PO 10,PSO1,PSO2	Given an idea about graphical analysis software's and tutorial on graphical analysis techniques.

Member 1 .

*Niyas KM*

**Chairman**

*21/11/2022*

**Cdr (Retd) RAJU K.K.**  
Asst. Professor & HOD  
Department of Mechanical Engineering  
Vimal Jyothi Engineering College  
Chattampi, Kannur, Kerala

Member 2

*[Signature]*  
**Dils Dresh.**



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**DEPARTMENT OF MECHANICAL ENGINEERING**  
**CURRICULAM GAP IDENTIFICATION & ACTIONS PLANNED**

**SUBJECT NAME:** Automobile engineering      **CODE:** MET 352      **SEMESTER:** S6

**ABOUT THE SUBJECT:** The subject is theory oriented which focuses study of automobile components & working

SL NO.	GAPS IN THE SYLLABUS TO MEET INDUSTRY/PROFESSIONAL REQUIREMENTS:	DESCRIPTION	CONCERNED POs	PROPOSED ACTIONS
1	Advanced trends in automobile design and drive train mechanisms	Insights to design concepts & drive train mechanism are not in detail. Practical /hands on session may assists students in SAE Projects	PO3,PO4,PO5,P O6,PO7,PSO 1,PSO2	Workshops/Hands on training programs
2	Modern automobile drive mechanisms	Practical Knowledge on Modern automobile drive mechanisms	PO3,PO4,PO5,P O6,PO7,PSO 1,PSO2	Add-on course/Workshops

**Name & Signature of Course Coordinator**

*Ann B S*  
26/9/22

*Dr. Jithin E V*

**Signature of Head of the Department**

*Dr. Jithin E V*  
Coordinator & HOD  
Mechanical Engineering  
Department, Kannur, KERALA



**DEPARTMENT OF MECHANICAL ENGINEERING**  
**CURRICULAM GAP IDENTIFICATION & ACTIONS PLANNED**

**SUBJECT NAME: DYNAMICS OF MACHINERY & MACHINE DESIGN      CODE: MET 304      SEMESTER: 06**

**ABOUT THE SUBJECT:**

The purpose of the course is to understand the concept on force analysis of machinery, balancing of rotating and reciprocating masses, Gyroscopes, Energy fluctuation in Machines and forces which act on them. The knowledge of this subject is very essential for an engineer in designing the various parts of a machine.

SL. NO.	GAPS IN THE SYLLABUS TO MEET INDUSTRY/PROFESSIONAL REQUIREMENTS:	DESCRIPTION	CONCERNE D POs	PROPOSED ACTIONS
1	Design and manufacturing modules	Students will not get an understanding of the exact working of various machines	PO3,PO5, PO7,PO9,PO 10,PSO1,PSO2	To demonstrate the working of Gyroscope, whirling of shaft etc to students from the INDUSTRY/LABS
2	Advanced trends in automobile design and drive train mechanisms	Design and manufacturing modules on latest automobile scenarios like solar, hybrid, all-terrain vehicles, formula cars	PO3,PO5, PO7,PO9,PO 10,PSO1,PSO2	Seminars/ workshops on automobile scenarios under SAE

Name & Signature of Course Coordinator

*(Signature)*  
 Dr. V. D. Singh

Signature of Head of the Department

*(Signature)*  
 2/9/22

Dr. V. D. Singh  
 Head of Department  
 Department of Mechanical Engineering  
 Vimal Jyothi Engineering College  
 Jodhpur, Rajasthan





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**DEPARTMENT OF MECHANICAL ENGINEERING**

**CURRICULAM GAP IDENTIFICATION & ACTIONS PLANNED**

**SUBJECT NAME:** Advanced Manufacturing Technology      **CODE:** MET 306      **SEMESTER:** S6

**ABOUT THE SUBJECT:** machining principles and processes in the manufacturing of precision components and products that use conventional and nonconventional technologies

SL. NO.	GAPS IN THE SYLLABUS TO MEET INDUSTRY/PROFESSION REQUIREMENTS:	DESCRIPTION	CONCERNED POs	PROPOSED ACTIONS
1	Advanced manufacturing tools and techniques	Hands on Training in modern manufacturing technologies	PO5,PSO1	STTP for students CNC programming & hands-on Training and workshops/EDGE CAM Training

Member

*Dr. J. An. P. N.*

*Chairman*  
  
 Cdr (Retd) A. J. K. K.  
 Director, Quality Improvement  
 Department of Mechanical Engineering  
 Vimal Jyothi Engineering College  
 P. O. - Kullasat, Kullasat - 676332



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**DEPARTMENT OF MECHANICAL ENGINEERING**  
**CURRICULAM GAP IDENTIFICATION & ACTIONS PLANNED**

**SUBJECT NAME: REFRIGERATION & AIRCONDITIONING CODE: MET 473 SEMESTER: 7**

**ABOUT THE SUBJECT:** Detailed study on refrigeration cycles, types of refrigeration systems and air-condition application

SIL. NO.	GAPS IN THE SYLLABUS TO MEET INDUSTRY/PROFESSION REQUIREMENTS:	DESCRIPTION	CONCERNED POs	PROPOSED ACTIONS
1	Lack of Exposure to modern design & simulation software's used in HVAC Field	The modern HVAC software knowledge is limited in curriculum	PO3, PO4, PO5	An invited talk on REVIT software used in HVAC field is planned in this semester
2	Advanced industry based modelling & simulation tools	Due to time constrains the practical exposure to hvac system is limited	PO 4 ,PO 6	Experiment to find out COP of system with refrigeration test rig can be conducted in thermal engineering Lab
3	Lack of detailed knowledge on Multi pressure systems	Detailed study on industrial refrigeration system is not available	PO12	Students can be motivated to join NPTEL on line course on RAC.

Member 1

P. V. Dinesh

Member 2

Arunal M.P

Chairperson

(Prof. V. S. Raju K. K.)  
Asst. Professor

Department of Mechanical Engineering  
Vimal Jyothi Engineering College  
Chempur, Kannur, Kerala-670002

**DEPARTMENT OF MECHANICAL ENGINEERING**  
**CURRICULUM GAP IDENTIFICATION & ACTIONS PLANNED**

**SUBJECT NAME:** Seminar/ **CODE:** MEQ 413 **SEMESTER:** S7  
**ABOUT THE SUBJECT:** Seminar & Project Presentations

SL. NO.	GAPS IN THE SYLLABUS TO MEET INDUSTRY/PROFESSIONAL REQUIREMENTS:	DESCRIPTION	CONCERNED FOs	PROPOSED ACTIONS
1	Research based knowledge & familiarization of research tools	Experiences to Research based knowledge & familiarization of recent tools & techniques used by researchers	PO2, PO3, PO6, PO7, PO8, PO10, PO 12, PSO 1, PSO 2	International/ national conferences/ Seminars/ workshops on IPR /Research Tool workshops/FDP/ Paper writing /Mat lab workshop

**Name & Signature of faculty**  
Mr. Aji Augustine



**Name & Signature of Course Coordinator**  
Mr. Shaminmuth K K



**Signature of Head of the Department**  
24/9/22


Dr. ...  
Head of Department  
Mechanical Engineering  
Vimal Jyothi Engineering College  
Gannur University, Kollam  
Contact: 0471-2446332, 0471-2446333



**DEPARTMENT OF MECHANICAL ENGINEERING**  
**CURRICULAM GAP IDENTIFICATION & ACTIONS PLANNED**

**SUBJECT NAME:** Heat & Mass Transfer      **CODE:** MET 473      **SEMESTER:** S7  
**ABOUT THE SUBJECT:** Heat & Mass transfer, Boiling & Condensation

SL. NO.	GAPS IN THE SYLLABUS TO MEET INDUSTRY/PROFESSIONAL REQUIREMENTS:	DESCRIPTION	CONCERNED POs	PROPOSED ACTIONS
<b>1</b>	Advanced industry based modelling & simulation tools latest automobile scenarios	Advanced industry based modelling & simulation tools latest automobile scenarios	PO5,PO6,PS O1, PO 3, PO 4, PO 5	Workshops/Invited talk/Seminar/Training on Advanced developments in mechanical engineering

**Member 1**  
  
**Pilto Nivedha**

  
**Chairman**  
 Cdr (i) P. S. J. K. K.  
 Dept. of Mechanical Engineering  
 Vimal Jyothi Engg. College  
 Chempiperi

**Member 2**   
**MEJO M FRANCIS**  
 Assistant Professor  
 Department of  
 Mechanical Engineering  
 Vimal Jyothi Engg. College  
 Chempiperi



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Under the Architecture of History

**DEPARTMENT OF MECHANICAL ENGINEERING**  
**CURRICULAM GAP IDENTIFICATION & ACTIONS PLANNED**

**SUBJECT NAME:**           Mechatronics           **SEMESTER: S7**

**CODE:**           MET 402

**ABOUT THE SUBJECT:** The subject is theory oriented which focuses mechatronics & Control systems

SL NO.	GAPS IN THE SYLLABUS TO MEET INDUSTRY/PROFESSIONAL REQUIREMENTS:	DESCRIPTION	CONCERNED POs	PROPOSED ACTIONS
1	Advanced design concepts in Robotics and Industrial Automation	Insights to design concepts in robotics is missing in curriculum. Also syllabus does not emphasis more on automation.	PO4, PO5, PO6,PSO1	Technical Talks by / Workshop/hands-on training
2	Practical Knowledge on Mechatronics systems	Practical Knowledge on Mechatronics systems is limited in syllabus	PO4, PO5, PO6,PSO1	Add-on course/Workshops
3				

**Name & Signature of Faculty:**  
Dr. Sridharan P

**Name & Signature of Course Coordinator**  
Dr. Sridharan P

**Signature of Head of the Department**  
27/10/20  
G. S. RAJU K.K.  
Asst. Professor & HOD  
Department of Mechanical Engineering  
Vimal Jyothi Engineering College  
Kannur, Kerala, India



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**DEPARTMENT OF MECHANICAL ENGINEERING**  
**CURRICULAM GAP IDENTIFICATION & ACTIONS PLANNED**

**SEMESTER: S7**

**SUBJECT NAME: Industrial Safety Engineering**

**CODE: MCN 401**

**ABOUT THE SUBJECT:**

SL. NO.	GAPS IN THE SYLLABUS TO MEET INDUSTRY/PROFESSIONAL REQUIREMENTS:	DESCRIPTION	CONCERNED POs	PROPOSED ACTIONS
1	Practical knowledge about various tools and techniques in Industrial Engineering.	Hands on knowledge in industry based modeling, simulation & project management tools	PO3, PO5, PO12, PSO1, PSO2	Workshop On Industrial Simulation/Safety Measures
2	Practical knowledge on Quality control practices and testing methods.	Internship with industries for the students will help to acquire the practical knowledge in the area of quality control and testing instruments.	PO5, PO6, PO8, PO9	Students should come forward to attend the Internship program with industries in Quality control department.

Member 1

Niyas KM 

Member 2

  
28/2/22  
Chairman  
Vimal Jyothi Engineering College  
Kannur University, Kerala-670032

**Chairman**



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Under the Architecture of Haryana

**DEPARTMENT OF MECHANICAL ENGINEERING**  
**CURRICULAM GAP IDENTIFICATION & ACTIONS PLANNED**

**SUBJECT NAME:** Design of Machine Elements      **CODE:** MET 401      **SEMESTER:** S7

**ABOUT THE SUBJECT:** The subject is theory oriented which focuses design of machine elements

SL. NO.	GAPS IN THE SYLLABUS TO MEET INDUSTRY/PROFESSIONAL REQUIREMENTS:	DESCRIPTION	CONCERNED POs	PROPOSED ACTIONS
1	Advanced trends in automobile design and drive train mechanisms	Insights to design concepts in practical machines are not in syllabus. Practical /hands on session may assists students in SAE Projects	PO3,PO4,PO5,P O6,PO7,PSO 1,PSO2	Workshops/Hands on training programs

**Name & Signature of Course Coordinator**  
Mr. Aji Augustine

**Signature of Head of the Department**

Dr. (retd) RAJU K.K.  
Head of the Department  
Mechanical Engineering  
Vimal Jyothi Engineering College  
Kannur, Kerala 670552



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**DEPARTMENT OF MECHANICAL ENGINEERING**

**CURRICULAM GAP IDENTIFICATION & ACTIONS PLANNED**

**SUBJECT NAME:** Project Phase I & II

**CODE:** MED 415 & 416

**SEMESTER:** S7/S8

**ABOUT THE SUBJECT:** Project Phase I & II Covers literature survey, Problem definition, Fixing Objective, suitable methodology, Design & Analysis, Cost

**Analysis, Fabrication and Testing**

SL NO.	GAPS IN THE SYLLABUS TO MEET INDUSTRY/PROFESSIONAL REQUIREMENTS:	DESCRIPTION	CONCERNED POs	PROPOSED ACTIONS
1	Research based knowledge & familiarization of research tools	Experiences to Research based knowledge & familiarization of recent tools & techniques used by researchers	PO2, PO3, PO6, PO7, PO8, PO10, PO12, PSO 1, PSO 2	Technical Talks by / Workshop/hands-on training

*Mejo M Francis*

**Name & Signature of faculty**  
Mr. Mejo M Francis

*Dr. Jithin E V*  
**Name & Signature of Course Coordinator**  
Dr. Jithin E V

00/2/23

**Signature of Head of the Department**

00/2/23

C.K.  
HOD  
Mechanical Engineering  
Vimal Jyothi Engineering College  
City: K. Kannur, Kerala- 570012



**DELIVERY DETAILS OF THE CONTENT BEYOND THE SYLLABUS TO REDUCE THE CURRICULAR & INDUSTRIAL GAP AND FOR THE ATTAINMENT OF POS AND PSOS**

CAY (2019-2020) 0005

**CONT  
DELIV**

Sl No	Gap	Subject	Action taken	Date	Resource person with designation/Organization/Place	Class	Relevance to PO and PSOs & justification
1	Experience to research based knowledge & familiarization of recent techniques and software used by researchers	Seminar and Project Preliminary	Invited Talk on Research & Innovation	11/07/19	Dr. Muhammed Al Saidi, Asst. Professor of Applied Sciences Sohar Ministry of Higher Education Oman	S7 ME (2016-20)	PO2, PO6, PO 7, PO 12
2	Experience to research based knowledge & familiarization of recent techniques and software used by researchers	Seminar and Project Preliminary	International Conference ICTCEES 2019	11/07/19	Dr. Christopher Ezhil Singh (Professor, ME)	S7 ME (2016-20)	PO6, PO 7, PO 12
3	Experience to research based knowledge & familiarization of recent techniques and software used by researchers	Seminar and Project Preliminary	Seminar on Research Methodology	14/11/19	Dr. T D John (Professor, ME and Research Dean of VJEC) and Dr. S Christopher Ezhil Singh (Professor, ME)	S7 ME(2017-20)	PO 4, PO 5, PO 10, PSO 1
4	Interaction with industries	Machine Tools and Digital Manufacturing/Metallurgy & Material Science	Invited Talk on Steel Industry	11/07/19	Mr. Raha General Manger Peekay Steels	S3 (2018-22) & S5 ME B (2017-21)	PO 6, PO7 PO 12

  
 Controller of Examinations  
 Sultan Qaboos University  
 Muscat, Sultanate of Oman

5	Hands on knowledge in industry based modeling, simulation & project management tools	Design of Machine elements	Introduction to stress strain analysis using FEM software	16/11/19	Mr. Johny P Joseph (Assistant Professor, ME VJEC).	S3 ME(2 018-22)	PO 3, PO 4, PO 5, PSO1
6	Hands on knowledge in industry based modeling, simulation & project management tools	Project	5 days workshop on Creo Modelling Software	26/10/19	Mr. Vishnu M.V (Sr. Design Engineer), Mr. Midhun J Prakash (Jr. Design Engineer) & Mr. Abhijith J.S (Jr. Design Engineer), Acuwin Innovations Pvt. Ltd	S7 ME(2 016-20)	PO 3, PO 4, PO 5, PSO1
7	Hands on knowledge in industry based modeling, simulation & project management tools	Inventory and Supply Chain Management	One Day Workshop On Supply Chain Operation Simulation	02/11/19	Dr. V. Madhusudanan Pillai, Professor, Department of Mechanical Engineering, NIT Calicut	S7 ME(2 016-20)	PO3, PO5, PO12, PSO1, PS O2
8	Development of Entrepreneurship skills	Principles of Management	An Invited Talk On Entrepreneurship Journey	04/10/19	Mr. M T P Mohammed Kunhi, Managing Director, Sulfex Mattress Company	S5 ME B (2017-21)	PO6, PO9
9	Insight to the Design Concepts in Robotics & automation	Planned for even semester 2019-20					
10	Exposures to the career opportunities available in national & international level	Seminar & Project	Student Alumni Interaction 2K18	1/08/19	Mr. Sarin Jose, Ship Engineer & Mr. Aja y T George (MS scholar)	S7 ME(2 016-20)	PO6, PO7, PO12

CHANDRAN R. J. K. K.  
 Head, Department of ME  
 Vimal Jyothi Engineering College,  
 Chempur, Kariakulam, Kerala - 686512

					CANADA)	20)	
11	Hands on Training in modern manufacturing technologies	ME 303 Machine Tools and Digital Manufacturing	Training In Edgecam In Association With Kriatech Services	19/11/19	Mr. Vijikumar, (Application Manager Kriatech Services Pvt. Ltd) , Mr. Biju K J (CNC Trainer, ME Dept.) and Mr. Shaji George (Assistant Professor, ME Dept.)	S5 ME(2017-21)	PO5,PSO1
12	Awareness about real world technological solutions by applying modern tools and appropriate technologies	Design of Machine elements	Knowledge enhancement seminar on MEP	02/11/19	Mr. VinodBalakrishna Freelancer-MEP Head (ACTMEP)	S7 ME (2016-20)	PO3, PO5, PO6 and PO9
13	Design and manufacturing modules on latest automobile scenarios like solar, hybrid, all-terrain vehicles, formula cars	Planned for even semester 2019-20					
14	Cultivate moral & ethical principles and commitment in professional, social ethics and responsibilities	Planned for even semester 2019-20					
15	Familiarization of methodologies to utilize green energy sources	Advanced energy engineering/ Sustainable energy process	Seminar On Sustainable Development Goals	27/09/19	Dr. Benny Joseph, Principal, VJEC	S7 ME (2016-20)	PO6,PO7

  
 RAJU K.K.  
 Professor & HOD  
 Department of Mechanical Engineering  
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 Changanassery, Kottayam, Kerala - 686012