



J.K.K. MUNIRAJAH COLLEGE OF TECHNOLOGY
Approved by AICTE, New Delhi And Affiliated to Anna University, Chennai.
Accredited by NAAC with “A” grade
T.N. Palayam (Po), Gobi (Tk), Erode (Dt) – 638 506



ACADEMIC YEAR

2022-2023



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CURRICULUM DESIGN AND DEVELOPMENT

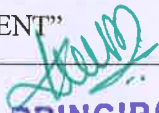


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3. Summary of Design and Development of Curriculum for Add on / Certificate / Diploma Courses

S.No	Year	Department	Faculty Participated	Add on Course Title
1	2022-2023	AUTO	Mr.S.GANESHKUMAR	Design and Development Of Curriculum For "Light Vehicle Mechanical Technology"
2	2022-2023	CIVIL	Mrs. P. REENA	Design and Development Of Curriculum For "BUILDING INFORMATION MODELING"
3	2022-2023	CSE	Dr.N.SATHYABALAJI	Design and Development Of Curriculum For "ADVANCED DEVOPS STRATEGIES AND TECHNIQUES"
5	2022-2023	EEE	Mr.S.M.PRANESH	Design and Development Of Curriculum For "WIRELESS POWER TRANSFER SYSTEM"
6	2022-2023	ECE	Mrs.B.P.BRIGHT THANGA MAHIZH	Design and Development Of Curriculum For "FINFET TECHNOLOGY FOR CIRCUIT DESIGN"
7	2022-2023	MECH	Dr.N.SANKAR	Design and Development Of Curriculum For "CRYOGENIC HYDROGEN TECHNOLOGY"
8	2022-2023	IT	Mrs.P.SANGEETHA	Design and Development Of Curriculum For "ADVANCED DIGITAL MARKETING STRATEGIES FOR ENGINEERING INNOVATIONS:A COMPREHENSIVE APPROACH"
8	2022-2023	MCA	Mrs.P.ARCHANA	Design and Development Of Curriculum For "DEVOPS PRACTICES FOR COMPUTER APPLICATIONS"
9	2022-2023	MBA	Mr.E.R.VADIVEL	Design and Development Of Curriculum For "ENTREPRENEURSHIP DEVELOPMENT"


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REQUISITION LETTER

From,

Head of the Department,
Automobile Engineering,
J.K.K Munirajah College of Technology,
T.N.Palayam.

To,

The Principal,
J.K.K Munirajah college of Technology,
T.N.Palayam.

Respected Sir,

Sub: Seeking permission for conducting a Certificate Program-reg

We have planned to conduct a certificate Program for II, III and IV year B.E Automobile Engineering students on "LIGHT VEHICLE MECHANICAL TECHNOLOGY" from 12.09.2022 TO 17.09.2022 by program coordinator Mr. S.GANESH KUMAR, M.E . So, I request you to kindly provide permission to conduct the certificate Program.

Thanking You,


Place: T.N.Palayam

Date: 05.09.2022

Permitted
S. Ganesh Kumar
5/9/22

Yours Truly,




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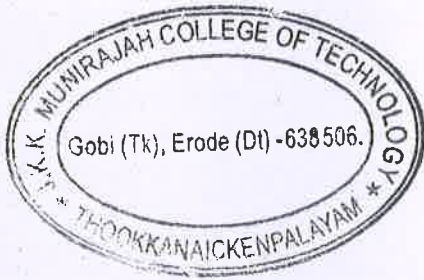


JKKMCT/CIRCULAR/SEP-22

06.09.2022

CIRCULAR

The Department of Automobile Engineering is planning to organize a Certificate Program on **"LIGHT VEHICLE MECHANICAL TECHNOLOGY"** for the benefit of the students from **12.09.2022 (Monday) TO 17.09.2022 (Saturday)**. Students those who are willing to attend the course can enroll their names to their class in-charges respectively on or before 09.09.2022.



[Signature]
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T.N. PALAYAM (Po)-638 506
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Copy To

All the HODs and Staff Members,

All the students,

Notice Boards & File Copy

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DEPARTMENT OF AUTOMOBILE ENGINEERING

Program Name : LIGHT VEHICLE MECHANICAL TECHNOLOGY

Program Code :22AELVMTCP01

Program Coordinator Name: Mr.S.GANESH KUMAR, M.E

Total Hours: 36hrs

CHAPTER I– INTRODUCTION TO MECHANICAL TECHNOLOGY

- Identify automotive mechanical systems and components.
- Use and maintain tools and equipment in an automotive workplace.
- Identify automotive system components.
- Apply knowledge of automotive circuits.

CHAPTER II -TROUBLESHOOTING AND PROBLEM SOLVING

- Resolve routine problems in an automotive workplace.
- Identify basic automotive faults using troubleshooting processes.
- Importance of effective communication with colleagues and customers when undertaking troubleshooting and problem-solving.

CHAPTER III -VEHICLE BODY TECHNIQUES

- Identify automotive electrical systems and components.
- Use and maintain tools and equipment in an automotive workplace.
- Remove and store vehicle body components.
- Apply refinishing primers to vehicle surfaces

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CHAPTER IV-IMPORTANCE OF SUSTAINABILITY

- Fundamental principles of sustainability explanation.
- Understands environmental hazard identification and risk control.
- Evaluates the workplace in relation to environmentally sustainable work practices.
- Proposes improvements for sustainability best practice in an automotive workplace.

CHAPTER V-SAFE WORK PROCEDURES AND PRACTICES

- Standard operating procedures (SOPs).
- Selection, use and maintenance of PPE.
- Manual handling techniques.
- Hazardous substances and dangerous goods.
- Importance of safe work procedures and practices.
- Propose safe work procedures and practices for an automotive workplace and job role.


Prepared By:


Name : S.GANESH KUMAR, M.E

Designation: AP/AUTO


PROGRAM COORDINATOR


HOD


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DEPARTMENT OF AUTOMOBILE ENGINEERING

Schedule Period : 12.09.2022 TO 17.09.2022

Dates/ Duration	09:30 AM to 11:30 AM (02.00 hr)	BREAK	11.45 AM to 1.15 PM (01.30 hr)	LUNCH	2:00 PM to 4.20 PM (02.30hr)
12.09.2022	Check & perform Measuring & marking by using various Measuring & Marking tools		Plan & perform basic fastening & fitting operation by using correct hand tools, Machine tools & equipment.		Test various electrical/ electronic components using proper measuring instruments and compare the data using standard parameters.
13.09.2022	Check & Interpret Vehicle Specification data & VIN and Select & operate various Service Station Equipments.		Dismantle & assemble of Engine from vehicle (LMV/HMV) along with other accessories.		Overhaul Engine and check functionality.
14.09.2022	Trace, Test & Repair Cooling and Lubrication System of engine.		Trace & Test Intake and Exhaust system of engine.		Service Fuel System and check proper functionality.
15.09.2022	Test Engine Performance and set idling speed.		Monitor emission of vehicle and execute different operation to obtain optimum pollution as per emission norms		Carryout overhauling of Alternator and Starter Motor.
16.09.2022	Diagnose & rectify the defects in LMV/HMV to ensure functionality of vehicle.		. Demonstrate basic mathematical concept and principles to perform practical operations.		Understand and explain basic science in the field of study.
17.09.2022	Read and apply engineering drawing for different application in the field of work.		Plan & perform maintenance, diagnosis and servicing of transmission system.		Troubleshoot vehicle Engine components and ascertain repair.

S. Gan
PROGRAM COORDINATOR

[Signature]
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Requisition Letter

From

Head of the Department,
Civil Engineering,
J.K.K Munirajah College of Technology,
T.N.Palayam.

To

The Principal,
J.K.K Munirajah college of Technology,
T.N.Palayam.

Respected Sir,

Sub: Seeking permission for conducting a Certificate Program-Reg

We have planned to conduct a certificate Program for II-, III- and IV-year CIVIL students on "**BUILDING INFORMATION MODELING**" from **22.09.2022** TO **28.09.2022** by program coordinator Mrs.P. REENA AP/CIVIL . So, I request you to kindly provide permission to conduct the certificate Program.

Thanking You,

Place: T.N.Palayam

Date: 12.09.2022

Yours Truly,

Permitted
[Signature]

[Signature]
PRINCIPAL
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GOBI (TK), ERODE (DI).

[Signature]



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JKKMCT/CIRCULAR/SEP/2022

14.09.2022

CIRCULAR

The Department of Civil Engineering is planning to organize a Certificate Program on **"BUILDING INFORMATION MODELING"** (36 Hours) for the benefit of the students from **"22.09.2022 (THURSDAY) TO 28.09.2022 (WEDNESDAY)"** Students those who are willing to attend the Program can enroll their names to their class in-charges respectively on or before **19.09.2022**.




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Program Name : **BUILDING INFORMATION MODELING**

Program Code : **22CEBIMCP01**

Program Coordinator Name: Mrs.P.REENA M.E

Total Hours : 36 hrs

CHAPTER I

- Introduction to BIM modeling
- The need and scope of with live examples
- Ergonomic data and its application

CHAPTER II

- Applying learnings to a bigger scale hotel/at scheme/hostels
- Incorporation of site factors

CHAPTER III

- Realistic approach road and building bye-laws
- The magic of Importing previous plans & reorient them to achieve larger scale in no time

CHAPTER IV

- Prepare specifications in BIM
- Estimating all the quantities in a very short time.
- Layer wise calculation for pipelines, electrical ducts, AC units, etc

CHAPTER V

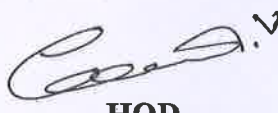
- Introducing structural layers for design
- Cross-check with foundation calculation & column orientation
- Data and record for the 3D design of individual aspects for the next level.


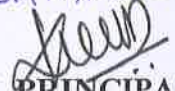
Prepared By :

Name : P REENA

Designation : AP/CIWI


PROGRAM CO-ORDINATOR


HOD


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CERTIFICATE PROGRAM - BUILDING INFORMATION MODELING

Schedule Period :22.09.2022 TO 28.09.2022

Dates/ Duration	09:30 AM to 11:30 AM (02.00 hr)		11.45 AM to 1.15 PM (01.30 hr)		2:00 PM to 4.20 PM (02.30hr)
22.09.2022	A thorough introduction to BIM	BREAK	BIM's extent and various application	LUNCH	Case study and live applications/examples
23.09.2022	PROJECT- Small scale (initial) with interior		Hostel room or a Master bed room.PROJECT- Office Building		PROJECT- Evaluation of the project
24.09.2022	Introduction to bigger scale problems based on previous sample design		Time saving factor using 3D skills.Cross check in 3D-Quick Revit analysis/SAP		Specification generation in BIM.PROJECT- Hospital Hostel
26.09.2022	Estimation of quantities.Basics of foundation calculation & column		PROJECT- Individual home Duplex bungalow		PROJECT- Individual home- Evaluation
27.09.2022	PROJECT- Duplex bungalow- Evaluation		5D estimation and BIM/adding another dimension to BIM		Layer of services: water supply and Sanitation.PROJECT- Multi-story building
28.09.2022	Calculation and Fitting nitty-gritty.Centerline plan and Cross check with grid formation		Electrical Layout and BIM,AC layout ducting (only introduction)		Electrical Layout: drawing and estimation

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REQUISITION LETTER

From,

Head of the Department,
Computer Science and Engineering,
JKK Munirajah College of Technology,
T.N.Palayam.

To,

The Principal,
JKK Munirajah College of Technology,
T.N.Palayam.

Respected Sir,

Sub: Seeking permission for conducting a Certificate Program- Reg

We have planned to conduct a certificate program for II, III and IV year Computer Science students on "ADVANCED DEVOPS STRATEGIES AND TECHNIQUES" from 22.08.2022 to 27.08.2022 by Program Coordinator Dr.N.SATHYABALAJI, So, I request you to kindly provide a permission to conduct the certificate program.

Thanking You,

Place: T.N.Palayam

Date:17.08.2022

Permitted
[Signature]
17/8/22

Yours Truly,

[Signature]

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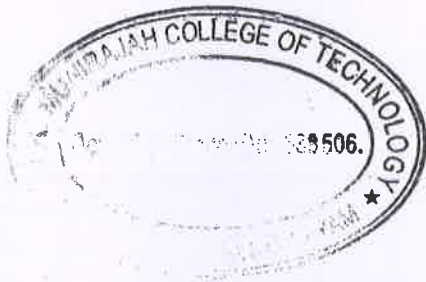


JKKMCT/CIRCULAR/AUG-22

18/08/2022

CIRCULAR

The Department of Computer Science and Engineering is planning to organize a Certificate Program on **"ADVANCED DEVOPS STRATEGIES AND TECHNIQUES"** (36 Hours) for the benefit of the students from **22.08.2022 (Monday) to 27.08.2022 (Saturday)**. Students those who are willing to attend the Program can enroll their names to their class in-charges respectively on or before **20.08.2022**



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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

PROGRAM SYLLABUS

Name of the Certificate Program : **ADVANCED DEVOPS STRATEGIES AND
TECHNIQUES**

Program Code : **22CSEADST02**

Name of the Program Coordinator : **Dr.N.SATHYABALAJI**

Academic Year: **2022-2023**

Program Contents

Total Hours: **36**

Chapter 1: Introduction to Advanced DevOps

- Understanding Advanced DevOps
- Overview of advanced DevOps principles and methodologies
- Importance and impact of advanced strategies in modern software development
- Case Studies and Best Practices
- Analysis of successful DevOps implementations
- Best practices and lessons learned from real-world case studies

Chapter 2: Containerization and Orchestration

- Advanced Docker Techniques
- Advanced container management strategies in Docker
- Optimization and performance enhancements
- Kubernetes at Scale
- Orchestration with Kubernetes for large-scale deployments
- Advanced concepts in Kubernetes networking and scalability

Chapter 3: Continuous Integration/Continuous Deployment (CI/CD) Pipelines

- Building Complex CI/CD Pipelines
- Strategies for creating intricate and efficient CI/CD pipelines
- Incorporating diverse testing methodologies into pipelines
- Automated Testing Strategies

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- Implementing advanced automated testing techniques within CI/CD workflows
- Integration of testing suites for comprehensive code validation

Chapter 4 : Infrastructure as Code (IaC)

- Advanced Terraform Usage
- Advanced usage of Terraform for infrastructure provisioning
- Best practices and optimization techniques
- Infrastructure Management with Ansible
- Advanced Ansible playbook creation for efficient infrastructure management
- Ansible roles and complex automation scenarios

Chapter 5 : Monitoring, Logging, and Observability

- Advanced Monitoring Solutions
- Implementation of advanced monitoring tools and solutions
- Techniques for real-time performance analysis and optimization
- Leveraging Logs for Troubleshooting and Optimization
- Utilizing logs effectively for troubleshooting and performance enhancement
- Log analysis strategies for system optimization

Chapter 6 : Security in DevOps

- Implementing Security Measures
- Integration of security practices within DevOps workflows
- DevSecOps principles and their application in secure development
- Best Practices in DevOps Security
- Examining best practices and strategies for secure DevOps implementation
- Case studies showcasing the importance of security in DevOps environments

Prepared by:

Name: DR. N. SATHYABALAJI

Designation: HOD-CSE

PROGRAM COORDINATOR

HOD

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

PROGRAM SCHEDULE

Name of the Certificate Program : ADVANCED DEVOPS STRATEGIES AND TECHNIQUES

Program Code : 22CSEADST02

Name of the Program Coordinator : Dr.N:SATHYABALAJI

Program Period: 22.08.2022 to 27.08.2022

Date/ Time	9:30AMto 11:30AM (2 Hours)		11.45 AM to 12.45PM (1 Hour)		1:30 PM to 4.30 PM (3 Hours)
22.08.2022	Understanding Advanced DevOps, Overview of advanced DevOps principles and methodologies	BREAK	Importance and impact of advanced strategies in modern software development, Case Studies and Best Practices	LUNCH	Analysis of successful DevOps implementations, Best practices and lessons learned from real-world case studies
23.08.2022	Advanced Docker Techniques, Advanced container management strategies in Docker		Optimization and performance enhancements , Kubernetes at Scale		Orchestration with Kubernetes for large-scale deployments, Advanced concepts in Kubernetes networking and scalability
24.08.2022	Building Complex CI/CD Pipelines, Strategies for creating intricate and efficient CI/CD pipelines		Incorporating diverse testing methodologies into pipelines, Automated Testing Strategies		Implementing advanced automated testing techniques within CI/CD workflows, Integration of testing suites for comprehensive code validation
25.08.2022	Advanced Terraform Usage, Advanced usage of Terraform for infrastructure provisioning		Best practices and optimization techniques, Infrastructure Management with Ansible		Advanced Ansible playbook creation for efficient infrastructure management, Ansible roles and complex automation scenarios
26.08.2022	Advanced Monitoring Solutions' Implementation of advanced monitoring tools and solutions		Techniques for real-time performance analysis and optimization, Leveraging Logs for Troubleshooting and Optimization		Utilizing logs effectively for troubleshooting and performance enhancement, Log analysis strategies for system optimization
27.08.2022	Implementing Security Measures, Integration of security practices within DevOps workflows		DevSecOps principles and their application in secure development, Best Practices in DevOps Security		Examining best practices and strategies for secure DevOps implementation, Case studies showcasing the importance of security in DevOps environments

PROGRAM COORDINATOR

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Gobi (Tk), ERODE

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Requisition Letter

From,
Dr.C.Saravanan,
Head of the Department,
Department of Electrical and Electronics Engineering,
JKK Munirajah college of Technology,
T.N. Palayam.

To,
The Principal,
JKK Munirajah college of Technology,
T.N. Palayam.
Respected Sir,

Sub: Seeking permission for conducting a Certificate Programme-Reg

We have planned to conduct a certificate Programme for II-, III- and IV-year Electrical and Electronics Engineering students on **"Wireless Power Transfer System"** from **12.09.2022** to **17.09.2022** by Programme coordinator Mr. S.M. Pranesh , So, I request you to kindly provide permission to conduct the certificate Programme.

Thanking You,

Place: T.N.Palayam

Date: 02.09.2022

Permitted
[Signature]
2/9/22

Yours Truly,

[Signature]
02/09/22
(Dr.C.Saravanan)

[Signature]
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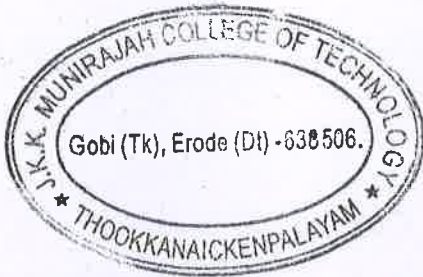


JKKMCT/CIRCULAR/SEP-22

DATE: 07/09/2022

CIRCULAR

The Department of Electrical and Electronics Engineering is planning to organize a Certificate Programme on **"WIRELESS POWER TRANSFER SYSTEM"** (36 Hours) for the benefit of the students from **12/09/2022 (Monday)** to **17/09/2022 (Saturday)**. Students those who are willing to attend the course can enroll their names to their class in-charge respectively on or before **09/09/2022**.



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All the HODs and Staff Members,

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

PROGRAMME SYLLABUS

Programme Name: **WIRELESS POWER TRANSFER SYSTEM**

Programme Code: **22EEEWPTSCP01**

Programme Coordinator Name: Mr. S.M.Pranesh, M.E.,

Total Hours: 36 Hrs

CHAPTER 1:


WPTS technologies

- Capacitive WPTSs
- Inductive WPTSs
- Radiant WPTSs
- Theory of operation
- Advantages & disadvantages of inductive WPTS
- FOMs of inductive WPTS
- Resonant WPTS
- Theory of operation

CHAPTER 2:

Coil Design of Wireless Power Transfer Systems (WPTS)

- Basics of electro magnetics
- Coil parameters
- Coil resistance
- Coil Inductance and magnetic flux density
- Mutual inductance
- Skin effect and proximity effect
- Coil design
- Coil Types
- Coil coupling arrangement analysis


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CHAPTER 3:

Core structures for WPTS

- Introduction
- Ferrite core structure and their need
- Cored coupling
- Comparison
- Electromagnetic field

CHAPTER 4:


Resonant topologies of WPTS

- Compensation and its need
- Behavior of the compensation capacitance
- Analysis of compensation topology structures
- Characteristic evaluation of topologies
- Comparative analysis of different topologies

CHAPTER 5:

Power Supply for WPTS

- Introduction
- Wide band gap switches
- Comparative properties of wide band gap semiconductors
- Converter/Inverter for WPT
- Full-Bridge Inverter
- Losses
- Power factor correction (PFC) Rectifier


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CHAPTER 6:

Implementation of WPTS

- Implementation of coil coupling system
- Power electronics system implementation of WPT
- Assembling the prototype example of the turning tests

CHAPTER 7:

On-Line Electrical Vehicle (OLEV)

- OLEV System
- Winding Types
- Core Structures of OLEV
- Segmentation of power rails

Prepared by:

Name: Mr. S.M.Pranesh

Designation: AP/ EEE

PROGRAMME COORDINATOR

HOD

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

SCHEDULE PROGRAMME: TRAINING ON WIRELESS POWER TRANSFER SYSTEM

SCHEDULE PERIOD: 12.09.2022 TO 17.09.2022

Dates/ Duration	09:30 AM to 11:30 AM (02.00 hr)		11.45 AM to 1.15 PM (01.30 hr)		2:00 PM to 4.20 PM (02.30hr)
12.09.2022	Registration and Inauguration		Introduction about Wireless Power Transfer System		Session 1 WPTS technologies *Capacitive WPTSs *Inductive WPTSs *Radiant WPTSs
13.09.2022	Session 2 *Theory of operation *Advantages & disadvantages of inductive WPTS *FOMs of inductive WPTS *Resonant WPTS	BREAK	Session 3 Coil Design of Wireless Power Transfer Systems (WPTS) * Basics of electro magnetics * Coil parameters *Coil Inductance and magnetic flux density	LUNCH	Session 4 * Mutual inductance * Skin effect and proximity effect *Coil design *Coil Types
14.09.2022	Session 5 Core structures for WPTS * Introduction * Ferrite core structure and their need * Cored coupling		Session 6 *Comparison *Electromagnetic field		Session 7 Resonant topologies of WPTS * Compensation and its need *Behavior of the compensation capacitance

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15.09.2022	Session 8 Analysis of compensation topology structures *Characteristic evaluation of topologies *Comparative analysis of different topologies	Session 9 Power Supply for WPTS *Introduction *Wide band gap switches *Comparative properties of wide band gap semiconductors	Session 10 Converter/Inverter for WPT *Full-Bridge Inverter *Losses *Power factor correction (PFC) Rectifier
16.09.2022	Session 11 Implementation of WPTS *Implementation of coil coupling system *Power electronics system implementation of WPT	Session 12 *Assembling the prototype example of the turning tests * Resonance capacitors *High frequency inverter	Session 13 *Protection scheme of HT side *Diode Rectifier and chopper *Interface of power cards
17.09.2022	Session 14 On-Line Electrical Vehicle (OLEV) * OLEV System *Winding Types	Session 15 *Core Structures of OLEV * Segmentation of power rails	Session 16 * Dual type and mono type power transfer systems * Winding Types Conclusion  PRINCIPAL


PROGRAMME COORDINATOR


HOD


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Requisition Letter

From,

Head of the Department,
Department of Electronics and Communication Engineering,
J.K.K.Munirajah College of Technology,
T.N.Palayam.

To,

The Principal,
J.K.K.Munirajah College of Technology,
T.N.Palayam.

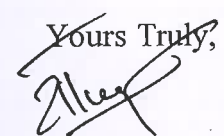
Permitted
12/1/23

Respected Sir,

Sub: Seeking permission for conducting a Certificate Program-Reg


We have planned to conduct a certificate program for II, III and IV-year ECE students on "FinFET Technology for Circuit Design" from 30.01.2023 to 04.02.2023 by program coordinator Mrs.B.P.Bright Thanga Mahizh AP/ECE. So, I request you to kindly provide permission to conduct the certificate program.

Thanking You,

Yours Truly,


Place: T.N.Palayam

Date: 12.01.2023


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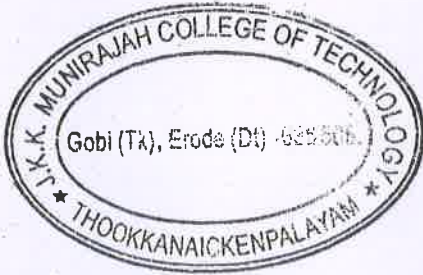


JKKMCT/CIRCULAR/21/JAN-2023

DATE: 13/01/2023

CIRCULAR

The Department of Electronics and Communication Engineering is planning to organize a Certificate Program on **"FinFET Technology for Circuit Design" (36 Hours)** for the benefit of the students from **30.01.2023 (Monday) to 04.02.2023 (Saturday)**. Students those who are willing to attend the program can enroll their names to their class in-charges respectively on or before 20.01.2023.




13/1/23
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Department of Electronics and Communication Engineering

PROGRAM SYLLABUS

Name of the Certificate Program : **FinFET Technology for Circuit Design**

Program Code : **22ECEFTCDP01**

Name of the Program Coordinator : Mrs.B.P.Bright Thanga Mahizh

Academic Year: 2022-2023

Program Contents

Total Hours: 36

Chapter 1 : Introduction to FinFET Technology

- Recap of semiconductor fundamentals
- Review of PN junctions, JFETs, and MOSFETs
- Evolution of MOSFETs to FinFETs
- Advantages and challenges of FinFET technology

Chapter 2 : FinFET Operation, Characteristics and Modeling

- FinFET background
- Evolution of MOSFETs to FinFETs
- Types of FinFET
- FinFET structure and fabrication
- Operational principles of FinFETs
- FinFET Advantages
- Applications of FinFET Technology
- Analyzing FinFET characteristics.
- Modeling FinFET behavior for circuit simulation

Chapter 3 : FinFET Circuit Design

- Design considerations for FinFET-based circuits
- Applications of FinFETs in analog and digital circuits
- Scaling trends in FinFET technology
- Exploring the future developments in advanced semiconductor devices
- FinFETs in integrated circuits and system-on-chip (SoC) designs

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Chapter 4 : Low Power Circuit Design with FinFETs

- Importance of low-power circuit design in CMOS and FinFET technologies.
- Evolution of low-power design in advanced semiconductor devices.
- Power consumption, efficiency, and trade-offs specific to FinFET technologies.
- Principles of advanced low-power design strategies in FinFET technologies
- Techniques for minimizing power consumption in digital and analog circuits with advanced semiconductor technologies

Chapter 5 : Energy-Efficient Components and Architectures in FinFETs

- Identification of energy-efficient components and circuit architectures specific to CMOS and FinFET technologies.
- Analyzing the impact of component selection on power efficiency in advanced semiconductor designs
- Hands-on exercises with energy-efficient components in FinFETs.
- Overview of simulation tools specific to advanced semiconductor technologies for analyzing and validating power performance.
- Hands on project

Prepared by:

Name: Mrs. B.P.Bright Thanga Mahizh
Designation: AP/ ECE

PROGRAM COORDINATOR

HOD

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Department of Electronics and Communication Engineering


Academic Year 2022-2023


Certificate Program on "FinFET Technology for Circuit Design"

Schedule Plan

Dates	09:30 AM to 11:30AM (2 Hrs)		11.45 AM to 1.15 PM (1.30 Hrs)		2:00 PM to 4.30 PM (2.30 Hrs)
30.01.2023	Review of Semiconductor Physics and Traditional Electronic Devices	BREAK	Introduction to FinFET Technology	LUNCH	FinFET Device Structure and Operation
31.01.2023	FinFET Characteristics and Modeling		FinFET Circuit Design		Applications of FinFETs in analog and digital circuits
01.02.2023	FinFET Scaling and Future Trends		FinFETs in integrated circuits and system-on-chip (SoC) designs		Importance of low-power circuit design in FinFET technologies
02.02.2023	Power consumption, efficiency, and trade-offs specific to FinFET technologies		Principles of advanced low-power design strategies in FinFET technologies		Techniques for minimizing power consumption in digital and analog circuits with advanced semiconductor technologies
03.02.2023	Simulation exercises focusing on low-power techniques with FinFETs		Identification of energy-efficient components and circuit architectures specific FinFET technologies		Analyzing the impact of component selection on power efficiency in advanced semiconductor designs
04.02.2023	Overview of simulation tools specific to advanced semiconductor technologies for analyzing and validating power performance		Hands-on training with simulation software tailored FinFET designs		Hands on training Questions and feedback


PROGRAM COORDINATOR


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GOBI (Tk), ERODE (Dt).

REQUISITION LETTER

From,

Head of the Department,
Mechanical Engineering,
J.K.K Munirajah College of Technology,
T.N.Palayam.

To,

The Principal,
J.K.K Munirajah college of Technology,
T.N.Palayam.

Respected Sir,

Sub: Seeking permission for conducting a Certificate Program-reg

We have planned to conduct a certificate Program for I and II year ME-Manufacturing and II, III and IV year BE-Mechanical students on “**CRYOGENIC HYDROGEN TECHNOLOGY**” from **19.09.2022 to 24.09.2022** by program coordinator Dr.N.SANKAR, ME, Ph.D, AP/MECH. So, I request you to kindly provide permission to conduct the certificate Program.

Thanking You,

Place: T.N.Palayam

Date: 08.09.2022

Yours Truly,

K.S.

Permitted
Sankar
08/09/22

Sankar

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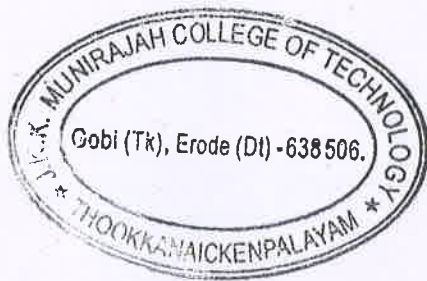


JKKMCT/CIRCULAR/185/SEP-22

12.09.2022

CIRCULAR

The Department of Mechanical Engineering is planning to organize a Value Added Course on **“CRYOGENIC HYDROGEN TECHNOLOGY”** for the benefit of the students from **19.09.2022 (Monday) to 24.09.2022 (Saturday)** Students those who are willing to attend the course can enroll their names to their class in-charges respectively on or before 16.09.2022.



[Signature]
12/9/22
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Copy To

All the HODs and Staff Members,

All the students,

[Signature]
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DEPARTMENT OF MECHANICAL ENGINEERING

ACADEMIC YEAR: 2022-2023

Program Name : “CRYOGENIC HYDROGEN TECHNOLOGY”

Program Code : 22MECHTP01

Program Coordinator Name: Dr.N.SANKAR, ME, PhD, **Total Hours:** 36 hrs

PROGRAM SYLLABUS

CHAPTER 1: AN OVERVIEW OF HYDROGEN TECHNOLOGY


- ❖ Energy Vector;
- ❖ Hydrogen Technology: Applications, Advantages and Challenges
- ❖ Properties gaseous, liquid and slush hydrogen,
- ❖ Isotopes of hydrogen and their uses;
- ❖ Ortho-hydrogen and para-hydrogen

CHAPTER 2: THERMODYNAMICS OF ELECTROLYTIC HYDROGEN PRODUCTION

- ❖ Electrolysis
- ❖ Tank & filter Press type electrolyser
- ❖ PEM electrolysers
- ❖ H₂ Production
- ❖ Thermo-chemical process

CHAPTER 3: OVERVIEW OF CRYOGENIC LIQUEFACTION CYCLES

- ❖ Cryo-compressed gaseous hydrogen storage
- ❖ Metal hydride storage of hydrogen
- ❖ Cryosorption storage of hydrogen in carbonaceous materials
- ❖ Processing of Synthesis gas
- ❖ Auto-thermal Reactor


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CHAPTER 4: LIQUEFACTION OF HYDROGEN, PROBLEMS

- ❖ Maximum inversion temperature
- ❖ Overview of cryogenic liquefaction cycles
- ❖ Problems
- ❖ Ortho-para conversion of hydrogen;
- ❖ Large scale hydrogen production process.
- ❖ Problems

CHAPTER 5: STORAGE AND TRANSFER OF LIQUID HYDROGEN

- ❖ Storage and transfer of liquid hydrogen,
- ❖ Temperature, level and flow rate measurements
- ❖ Super-insulated vessels

CHAPTER 6: GASIFICATION OF HYDROGEN, HYDROGEN AS FUEL

- ❖ Gasification of hydrogen,
- ❖ Hydrogen as fuel
- ❖ Safety issues on hydrogen

Prepared by:


Name : Dr.N.SANKAR, ME, PhD,

Designation : AP/MECH


PROGRAM COORDINATOR


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DEPARTMENT OF MECHANICAL ENGINEERING

ACADEMIC YEAR: 2022-2023

PROGRAM SCHEDULE

Title of the Course : **CRYOGENIC HYDROGEN TECHNOLOGY**

Period : 19.09.2022 to 24.09.2022

Date	09:30 AM to 11:30 AM (2 Hrs)		11.45 AM to 1.45 PM (2 Hrs)		2:30 PM to 4.30 PM (2 Hrs)
19.09.2022	Energy Vector; Hydrogen Technology Applications, Advantages and Challenges	BREAK	Properties gaseous, liquid and slush hydrogen	LUNCH	Isotopes of hydrogen and their uses, Ortho- hydrogen and para- hydrogen
20.09.2022	Electrolysis Tank & filter Press type		Electrolyser PEM electrolysers H ₂ Production		Thermo-chemical process
21.09.2022	Cryo-compressed gaseous hydrogen storage		Metal hydride storage of hydrogen, Cryosorption storage of hydrogen		Processing of Synthesis gas, Auto-thermal Reactor
22.09.2022	Maximum inversion temperature Overview of cryogenic liquefaction cycles		Problems, Ortho-para conversion of hydrogen		Large scale hydrogen production process, Problems
23.09.2022	Storage and transfer of liquid hydrogen		Temperature, level and flow rate measurements		Super-insulated vessels
24.09.2022	Gasification of hydrogen		Hydrogen as fuel		Safety issues on hydrogen

N. Saneel
PROGRAM COORDINATOR

K. J.
HOD

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REQUISITION LETTER

From,
Head of the Department,
Information Technology,
JKK Munirajah College of Technology,
T.N.Palayam.

To,
The Principal,
JKK Munirajah College of Technology,
T.N.Palayam.

Respected Sir,

Sub: Seeking permission for conducting a Certificate Program- Reg

We have planned to conduct a certificate program for II, III and IV year Information Technology students on **"ADVANCED DIGITAL MARKETING STRATEGIES FOR ENGINEERING INNOVATIONS: A COMPREHENSIVE APPROACH"** from **12.09.2022 to 17.09.2022** by Program Coordinator Mrs.SANGEETHA.P/ASSISSTANT PROFESSOR. So, I request you to kindly provide permission to conduct the certificate program.

Thanking You,

Permitted
JKK
3/9/22

Place: T.N.Palayam

Date: 05.09.2022

Yours Truly,

JKK
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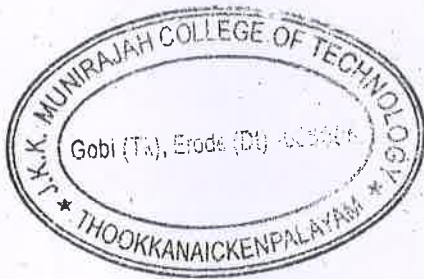


JKKMCT/CIRCULAR/SEP-22

07/09/2022

CIRCULAR

The Department of Information Technology is planning to organize a Certificate Program on **"ADVANCED DIGITAL MARKETING STRATEGIES FOR ENGINEERING INNOVATIONS: A COMPREHENSIVE APPROACH"** (36 Hours) for the benefit of the students from **12.09.2022** (Monday) to **17.09.2022** (Saturday). Students those who are willing to attend the Program can enroll their names to their class in-charges respectively on or before **10.09.2022**.



[Handwritten Signature]
27/9/22

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All the HODs and Staff Members,
All the Students,
Notice Board, File

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DEPARTMENT OF INFORMATION TECHNOLOGY

PROGRAM SYLLABUS

Name of the Certificate Program: **ADVANCED DIGITAL MARKETING STRATEGIES FOR ENGINEERING INNOVATIONS: A COMPREHENSIVE APPROACH**

Program Code : **22ITADMSFEI01**

Name of the Program Coordinator: Mrs.P.SANGEETHA

Academic Year: 2022-2023

Program Contents

Total Hours: 36

Chapter 1: Introduction to Digital Marketing for Engineers

- Overview of digital marketing principles
- Importance of digital marketing for engineering innovations
- Understanding the engineering audience and their needs
- Case studies of successful engineering-related digital marketing campaigns

Chapter 2: Crafting a Marketing Strategy for Engineering Innovations


- Market research methodologies for engineering products/services
- Defining target audience personas in engineering sectors
- Setting marketing objectives for engineering innovations
- Identifying key performance indicators (KPIs) for engineering campaigns

Chapter 3: Content Creation and Optimization for Technical Audiences

- Creating compelling content for engineering innovations
- SEO strategies for technical content and engineering websites
- Content optimization for engineering-related keywords and search intent
- Leveraging visual and technical content for marketing purposes

Chapter 4: Social Media and Community Engagement for Engineers

- Overview of social media platforms for engineering industries
- Building and engaging engineering communities on social media
- Strategies for leveraging LinkedIn, Twitter, and other platforms for engineering innovations


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- Live demonstrations and case studies of successful engineering social media campaigns

Chapter 5: Data Analytics and Performance Measurement in Engineering Marketing

- Understanding analytics tools and metrics specific to engineering campaigns
- Analyzing and interpreting data for engineering marketing success
- A/B testing and optimization techniques for engineering innovations
- Reporting and presenting digital marketing campaign results to stakeholders

Chapter 6: Developing and Presenting a Digital Marketing Campaign for an Engineering Innovation

- Group project: Designing a digital marketing campaign for an engineering product/service
- Creating campaign materials: ads, landing pages, social media content, etc.
- Presenting the campaign strategy, implementation plan, and expected outcomes
- Feedback session and discussions on refining campaign strategies

Prepared by:

Name: Mrs.P.SANGEETHA

Designation: ASSISTANT PROFESSOR

PROGRAM COORDINATOR

HOD

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DEPARTMENT OF INFORMATION TECHNOLOGY

PROGRAM SCHEDULE

Name of the Certificate Program: ADVANCED DIGITAL MARKETING STRATEGIES FOR ENGINEERING INNOVATIONS: A COMPREHENSIVE APPROACH

Program Code : 22ITADMSFEI01

Name of the Program Coordinator: Mrs.P.SANGEETHA

Program Period : 12.09.2022 to 17.09.2022

Date/ Time	9:30AM to 11:30AM (2 Hours)		11.45 AM to 12.45PM (1 Hour)		1:30 PM to 4.30 PM (3 Hours)	
12-09-2022	Overview of digital marketing principles	BREAK	Importance of digital marketing for engineering innovations	LUNCH	Understanding the engineering audience and their needs Case studies of successful engineering-related digital marketing campaigns	
13-09-2022	Market research methodologies for engineering products/services		Defining target audience personas in engineering sectors		Setting marketing objectives for engineering innovations, Identifying key performance indicators (KPIs) for engineering campaigns	
14-09-2022	Creating compelling content for engineering innovations		SEO strategies for technical content and engineering websites		Content optimization for engineering-related keywords and search intent Leveraging visual and technical content for marketing purposes	
15-09-2022	Overview of social media platforms for engineering industries		Building and engaging engineering communities on social media		Strategies for leveraging LinkedIn, Twitter, and other platforms for engineering innovations, Live demonstrations and case studies of successful engineering social media campaigns	
16-09-2022	Understanding analytics tools and metrics specific to engineering campaigns		Analyzing and interpreting data for engineering marketing success		A/B testing and optimization techniques for engineering innovations, Reporting and presenting digital marketing campaign results to stakeholders	
17-09-2022	Group project: Designing a digital marketing campaign for an engineering product/service.		Creating campaign materials: ads, landing pages, social media content, etc.			Presenting the campaign strategy, implementation plan, and expected outcomes Feedback session and discussions on refining campaign strategies

Sangeetha
PROGRAM COORDINATOR

Shankar
HOD

Shankar
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OF TECHNOLOGY
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ERODE (DT), 638 506



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REQUISITION LETTER

From,

Head of the Department,

Master of Computer Applications,

JKK Munirajah College of Technology,

T.N.Palayam.

To,

The Principal,

JKK Munirajah College of Technology,

T.N.Palayam.

Respected Sir,

Sub: Seeking permission for conducting a Certificate Program- Reg

We have planned to conduct a certificate program for I, II year Master of Computer Applications students on "DevOps Practices for Computer Applications" from 03.01.2023 to 07.01.2023 by Program Coordinator Mrs.P.ARCHANA AP/MCA. So, I request you to kindly provide permission to conduct the certificate program.

Thanking You,

Yours Truly,

Place: T.N.Palayam

Date:21.12.2022

Permitted
21/12/22

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[Handwritten Signature]



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JKKMCT/CIRCULAR/DEC-2023

27/12/2023

CIRCULAR

The Department of Computer Applications is planning to organize a Certificate Program on "Devops Practices for Computer Applications" (30 Hours) for the benefit of the students from 03.01.2023 (Tuesday) to 07.01.2023 (Saturday). Students those who are willing to attend the Program can enroll their names to their class in-charges respectively on or before 30.12.2022.



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Copy To,

All the HODs and Staff Members,

All the Students,

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DEPARTMENT OF MASTER OF COMPUTER APPLICATIONS

PROGRAM SYLLABUS

Name of the Certificate Program : DevOps Practices for Computer Applications
Program Code : 21MCADPCAT01
Name of the Program Coordinator : Mrs.P.ARCHANA APMCA

Academic Year: 2022-2023

Program Contents

Total Hours: 30

Chapter 1: DevOps Fundamentals

- Overview
- Why DevOps
- Sustainable DevOps
- Compliance and security in DevOps
- Change Agents and the DevOps Journey
- Supplemental learning
- Review Questions

Chapter 2: Deploy and Configure Standardized Environments

- Overview
- Environments in IaaS/PaaS and with Containers
- ARM Templates and Desired State Configuration
- Supplemental learning
- Review Questions

Chapter 3: Build and Deploy Automatically to Production Often and Consistently

- Overview
- Automated Builds
- Automated Deployments
- Package Management and Containers
- Lab: Continuous Integration and Continuous Deployment
- Supplemental learning

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- Review Questions

Chapter 4: Test Automatically Before and In Production

- Overview
- DevOps Testing Concepts
- Continuous Testing
- Lab: Testing in Production
- Supplemental learning
- Review Questions

Chapter 5: Continuous Learning from Production to Improve and Scale Business results

- Overview
- Application Performance Monitoring
- Exposure Strategies
- Hypothesis-Driven Development
- Lab: Application Performance Monitoring
- Supplemental learning
- Review Questions

Prepared by:

Name: Mrs.P.Archana

Designation: AP/MCA

PROGRAM COORDINATOR

HOD

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DEPARTMENT OF MASTER OF COMPUTER APPLICATIONS

PROGRAM SCHEDULE

Name of the Certificate Program : DevOps Practices for Computer Applications

Program Code : 21MCADPCAT01

Name of the Program Co-ordinator : Mrs.P.Archana AP/MCA

Program Period : 03.01.2023 to 07.01.2023

Date/ Time	9:30AM to 11:30AM (2 Hours)		11.45 AM to 12.45PM (1 Hour)		1:30 PM to 4.30 PM (3 Hours)
03-01-2023	Registration and Inauguration	BREAK	DevOps Fundamentals	LUNCH	Compliance and security in DevOps
04-01-2023	Deploy and Configure Standardized Environments		Environments in IaaS/PaaS and with Containers		ARM Templates and Desired State Configuration
05-01-2023	Build and Deploy Automatically to Production Often and Consistently		Package anagement and Containers		Lab: Continuous Integration and Continuous Deployment
06-01-2023	Test Automatically Before and In Production		DevOps Testing Concepts		Lab: Testing in Production
07-01-2023	Continuous Learning from Production to Improve and Scale Business results		Application Performance Monitoring		Hypothesis-Driven Development

PROGRAM COORDINATOR

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REQUISITION LETTER

From,
Head of the Department,
Department of management studies
JKK Munirajah College of Technology,
T.N.Palayam.

To,
The Principal,
JKK Munirajah College of Technology
T.N.Palayam.

Respected Sir,

Sub: Seeking permission for conducting a Certificate Program- Reg


We have planned to conduct a certificate program for I, II year MBA students on **ENTREPRENEURSHIP DEVELOPMENT** from 17:10:2022 to 22:10:2022 by the program coordinator Mr.E.R.VADIVEL, MBA So, I request you to kindly provide permission to conduct the certificate program.

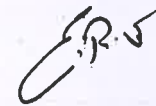
Thanking you


Yours obediently

Place: T.N.Palayam

Date: 30:09:2022


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JKKMCT/CIRCULAR/OCT -2022

03/10/2022

CIRCULAR

The department of management studies is planning to conduct a certificate program on **ENTREPRENEURSHIP DEVELOPMENT** (36 hours) for the welfare of students from 17:10:2022 Monday to 22:10:2022 Saturday students those who are willing to join the program can enroll their names to respective class in-charges on or before 06:10:2022


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DEPARTMENT OF MANAGEMENT STUDIES

PROGRAM SYLLABUS

Name of the Certificate Program: **ENTREPRENEURSHIP DEVELOPMENT**
Program Code: **22MBAESDCP001**

Name of the Program Coordinator: Mr.E.R.VADIVEL, MBA
Academic Year: **2022-2023**

Program Contents Total Hours: **36**

Chapter 1: About Entrepreneurship Development

1. Providing formal and informal education on entrepreneurship.
2. Facilitating access to capital for startup and growth.
3. Connecting experienced entrepreneurs with beginners.

Chapter 2: Entrepreneurship concept

1. Willingness to take calculated risks for potential rewards.
2. Introducing new products, services, or business models.
3. Identifying opportunities and generating innovative ideas.

Chapter 3: Knowledge and Skills of an Entrepreneur.

1. Awareness of market trends, customer needs, and competitive landscape. Influences on Consumer Behavior
2. Developing long-term vision and strategic plans for business growth.
3. Making sound and timely decisions, especially in high-pressure situations.

Chapter 4: Characteristics of Successful Entrepreneurs

1. Able to see and plan for the long-term goals of the business.
2. Flexibility to adjust strategies in response to market changes
3. Understanding and meeting customer needs and expectations


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Chapter 5: Entrepreneurship as a Career & Entrepreneurial Personality

1. Ability to be your own boss and make independent decisions.
2. Pursuing a career aligned with personal passions and values.
3. Constantly addressing challenges and solving problems.


Prepared by:


Name Mr. E.R. VADIVEL, MBA

Designation: AP/MBA


PROGRAM CO-ORDINATOR


HOD


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DEPARTMENT OF MANAGEMENT STUDIES

PROGRAM SCHEDULE

Name of the Certificate Program: **ENTREPRENEURSHIP DEVELOPMENT**

Program Code : **22MBAESDCP001**

Name of the Program Coordinator: Mr.E.R.VADIVEL, MBA

Program period: 17:10:2022 TO 22:10:2022

Academic Year: 2022-2023

Date/ Time	9:30AM to 11:30AM (2 Hours)		11.45 AM to 12.45PM (1 Hour)		1:30 PM to 4.30 PM (3 Hours)
17:10:2022	Introduction to Entrepreneurship	BREAK	Entrepreneurial Process	LUNCH	Business Planning
18:10:2022	Legal and Regulatory Environment		Market Analysis and Customer Identification		Financial Management
19:10:2022	Risk Management		Marketing and Sales		Innovation and Technology
20:10:2022	Leadership and Team Building		Networking and Relationship Building		Social and Environmental Entrepreneurship
21:10:2022	Government Initiatives and Support		Scaling and Growth		E-commerce and Online Platforms
22:10:2022	Subscription-Based Business Models		Case Studies and Guest Speakers		Exit Strategies

PROGRAM CO-ORDINATOR

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