

PSN ENGINEERING COLLEGE

Melathediyoor, Palayamkottai Taluk, Tirunelveli District, Pin - 627 152.

(Approved by AICTE and Affiliated to Anna University)

An ISO 9001 : 2015 Certified Institution

Website : www.psnec.ac.in Email : principal@psnec.ac.in

☎ 04634-279078, 279079 Fax : 04634-279078



Lr.No: PSNEC/2022-23/MS/FDP/PL-01

Date: 23/01/2023

PERMISSION LETTER

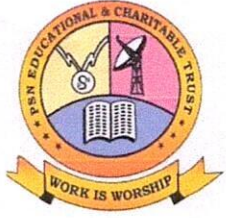
Respected Sir,

Department of Mechanical Sciences, PSNEC, proposed to conduct a “**FIVE DAYS ONLINE FACULTY DEVELOPMENT PROGRAM**” to the faculty of Mechanical sciences in IQAC, PSNEC from 27/03/2023 to 31/03/2023.

We request your valuable permission for conducting the above program on the above said date.


23/01/23
HOD/Mechanical Sciences


PRINCIPAL
Dr. M.S. RAVIKUMAR
Principal
PSN ENGINEERING COLLEGE
Melathediyoor, Palayamkottai
Tirunelveli - 627 152



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Ref: PSNEC/2022-23/MS/FDP/CR-01

Date: 25/01/2023

CIRCULAR

It is informed with great pleasure that the Department of Mechanical Sciences our college proposed to conduct “**FIVE DAYS ONLINE FACULTY DEVELOPMENT PROGRAM**” program in the topic “**Thermodynamics and Heat Transfer**” from **27th March 2023 to 31st March 2023** in PSNEC Campus.

All are request to attend the program.


PRINCIPAL
Dr. M.S. RAVIKUMAR
Principal
PSN ENGINEERING COLLEGE
Melathediyoar, Palayamkottai
Tirunelveli - 627 152

CC To -

- 1) Director
- 2) Director - IQAC
- 3) All Dept HOD's (AUTOMOBILE, CIVIL, CSE, ECE, IT, MECH, MECH & AUTO, MBA, S&H)
- 4) Librarian
- 5) Physical Director
- 6) Hostel Warden

PSN ENGINEERING COLLEGE

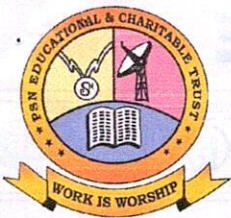
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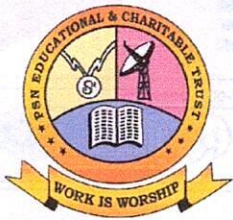
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Department of Mechanical Sciences

Report On Five Days Online Faculty Development Program

Name of the Program	FIVE DAYS ONLINE FDP ON THERMODYNAMICS AND HEAT TRANSFER
Conducted on	27 th March 2023 to 31 st March 2023
Duration	5 Days
Venue	IQAC, PSN Engineering College, Melathediyoor.
Dept./Year/Semester	All the Faculty of Mechanical Sciences.
Number of Participates	30
Resource Person Details	<ol style="list-style-type: none">1. Dr.K.Arunprasath, Prof/Mech, PSN College of Engineering & Technology, Tirunelveli.2. Dr.J. Selwinrajadurai, Prof / Mech, Govt. College of Engineering, Tirunelveli.3. Dr. M.Edwin, Prof/Mech, University College Engineering, Nagercoil.4. Prof.A.Ramesh Udhayakumar, Prof/Mech, MNM Jain Engineering College, Chennai.5. Dr.M.Vijayakumar, Prof/ Mech, PSN College of Engineering & Technology, Tirunelveli.
Objectives of the Programme	<p>To pursue academic excellence during interactive session.</p> <p>To discuss how to teach various topics in heat transfer included in syllabus by giving better idea.</p> <p>To focus on a important points while conducting lecture in the class for effective and interactive session.</p>



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Faculty of Mechanical Sciences conducted Five days online Faculty development program on “**Thermodynamics And Heat Transfer**”. Five eminent experts from various Colleges were invited to share their wisdom and vast experience on the topic.

Day 1:

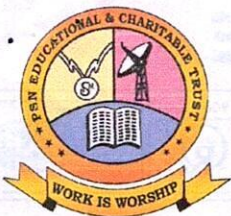
Program began with Tamil Thai Valzthu, followed by Welcome address by **Dr.N.Prabhu** (Director/PSN Engineering College).The introduction to the Chief Guest was given by **Dr.K.Krishnamoorthy**, (HoD/ Automobile Engineering/ PSN Engineering College). The key Note speaker of the opening day Forenoon session was **Dr.K.Arunprasath** , Assistant Professor , Department of Mechanical Engineering of the PSN College of Engineering and Technology, Tirunelveli. He has introduced how the thermodynamics and heat transfer subjects are correlated with each other in a beautiful manner. He has touched most of the points from unit I i.e. Thermodynamics law's, Thermodynamic states, Entropy, Total internal energy, Temperature, Thermodynamic equilibrium. The session ended by the participants enthusiastically asked questions/doubts to the Chief Guest. The first day Afternoon session of the programme started with the basic Thermodynamics Unit-I by **Dr.K.Krishnamoorthy**, (HoD/ Automobile Engineering/ PSN Engineering College). He spoke about Work and energy, Heat engines, Isothermal and adiabatic processes, Entropy, Open systems, Thermodynamic properties and relations. The end of the session the participants to interact with the key note speaker.

Day 2:

Program began with introduction to the Chief Guest by **Prof.T.Livingston** (HoD,Mechanical Engineering/PSN Engineering College).The Chief Guest was **Dr.J. Selwinrajadurai**, (Professor, Dept. of Mechanical Engineering/GCE, Tirunelveli). He took first session on introduction to “**Air Standard Cycles And Compressors**”. He also highlighted about Heat Engine, Types of heat engines, Available work of cycle, Efficiency of a cycle, Air-standard efficiency of a cycle, Reversible cycle, Ideal Heat Engine Cycle, Carnot Cycle, Otto Cycle, Diesel Cycle, Duel Cycle . In the second session he discussed about the introduction to the Compressor, Working Principle, Industrial Uses Of Compressed Air, Applications of Compressors, Classification Of Compressors, Compression Neglecting Clearance Volume, Types of Compression Curves, Air Compressor Terminology, Effect Of Clearance Volume. The session ended by the participants enthusiastically asked questions/doubts to the Chief Guest.

Day 3:

Program began with introduction to the Chief Guest by **Mrs.A.Thangapoo** (HoD,MBA/ PSN Engineering College).The Chief Guest was **Dr. M.Edwin**, (Assistant Professor, Dept. of Mechanical Engineering, University College of Engineering,Nagercoil). He spoke about the “**Steam Properties And Cycle**”. He covered various topics related to the steam like introduction of steam, Steam Properties, Steam boilers, Steam turbines, Steam production, Application of Steam. In the second session the Chief Guest discussed about the introduction to the Steam Cycles, Rankine cycle, The four processes in the Rankine cycle, Real Rankine cycle, Variations of the basic Rankine cycle, Rankine cycle with reheat, Regenerative Rankine cycle, Organic Rankine cycle. The session ended by the participants enthusiastically asked questions/doubts to the Chief Guest.



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Day 4:

On Fourth day **Prof.A.Ramesh Udhayakumar**, Associate Professor, Dept. of Mechanical Engineering from MNM Jain Engineering College, Thoraipakkam, Chennai. He took the morning session on "**Refrigeration and Air-Conditioning**" which includes introduction to Refrigeration, Ice harvesting, Working Principle, Vapor Compression Cycle, BTU, Sub-cooled liquid, Super heated vapor, Refrigeration System Components, Refrigeration Cycles, Gas cycle. In the afternoon session he had elaborated what is Air-Conditioning, operation, Types of air conditioner, Application, Components, Air-Conditioning Cycles.

Day 5:

Dr.M.Vijayakumar, Professor, Department of Mechanical Engineering, PSN College of Engineering and Technology, Tirunelveli, handled the first sessions in "**Introduction To Heat Transfer**", the topic such as modes of heat transfer, temperature boundary conditions, heat flux, thermal conductivity, thermal diffusivity, thermal contact resistance etc. In the second half he had given the idea about one dimensional steady state heat conduction without heat generation in a plane wall, composite wall, cylinder, sphere and critical radius of insulation. In the second session he discussed about the radiation the fundamental concepts, spectral and total emissive power, real and gray surfaces, radiation laws, radiation shape factor, radiation shield and its application. The end of the session the participants interact with Chief Guest to their doubts.

The programme ended with Valedictory by **Dr.G.SatishPandian** (Director-IQAC/PSN Engineering College). Feedback was received from the participants and E- certificates were sent to the participants by g-mail. On the whole the program was well appreciated by the participant.

SUMMARY :

1. Online FDP conducted from **27th March 2023** to **31st March 2023**
2. Totally 30 Faculty were participated in the Online FDP Programme.
3. FDP was held on the topic of "**Thermodynamics And Heat Transfer**".
4. The participants have acquired knowledge of the Thermodynamics And Heat Transfer. This was evident in the quality of questions asked to the speakers and feedback given by the participants.



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PHOTOGRAPHS:

FDP E-Brochure

FIVE DAYS FACULTY DEVELOPMENT PROGRAM
On
Thermodynamics & Heat Transfer
27.3.2023 to 31.3.2023

Registration Form

Name: _____
Designation: _____
College: _____
Branch: _____
Address: _____
Mobile No: _____
Email: _____
Category: Academic / Industry / others

Signature of the Participant _____
Date _____ Place _____

CHIEF PATRON
Dr. P. Sornathi, Chairman

PSN GROUP OF INSTITUTIONS


PATRON
Dr. M.S. Ravikumar, Principal

CO PATRONS
Dr. N. Prabhu, Director (Academic)
Dr. G. Senthil Prasad, Director (BQAC)

CONVENERS
Dr. K. Krishnamoorthy, BOD Auto
Dr. T. Livingston, BOD Mech
Prof. S. Parvathi, BOD Mech & Auto

FDP COORDINATORS
Dr. Jessem, Professor Mech
Dr. Manoj Abraham, Professor Mech
Mr. S. Anilkumar, AP / Mech

PSN ENGINEERING COLLEGE
Melathediyoor, Tirunelveli, Tamilnadu, India.
(Approved by AICTE and Affiliated to Anna University,
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DEPARTMENT OF MECHANICAL SCIENCES
Organizes
FIVE DAYS ONLINE FACULTY DEVELOPMENT PROGRAM
on
Thermodynamics and Heat Transfer
27th March 2023 - 31st March 2023

ABOUT THE COLLEGE
PSN Engineering College is a Premier Engineering College started in the year 2007 by PSN Educational and Charitable Trust. The College is approved by AICTE and Affiliated to Anna University, Chennai. Located at Melathediyoor 21 km away from Tirunelveli Railway Station and 50km from Tutukudi Airport. The College Features a park surrounding an air conditioned Conference hall, Seminar Hall and presentation room. The host at PSN Open the Engineering support laboratory in different disciplines to achieve academic excellence and to become technological experts in the global scenario.

The Institute offers 3 under-graduate and 5 post-graduate Programs covering "Engineering and Technology" and "Management". The College has strong industry interaction with reputed National and International organizations. The College has obtained an ISO 9001:2015 Certification.

DEPARTMENT OF MECHANICAL SCIENCES
DEPARTMENT OF MECHANICAL ENGINEERING

The Department of Mechanical Engineering was established in the year 2008. The Department of Mechanical & Automation Engineering currently offers a variety of opportunities for professional entering the field. This department is facilitated with all qualified faculty members and well equipped laboratories.

DEPARTMENT OF AUTOMOBILE ENGINEERING
The Department of Automobile Engineering was established in the year 2008. Automobile Engineering offers an well experienced faculty members who are specialized in both industrial sector and teaching profession. Automobile engineering aims to attain excellence in academic and research activities.

ABOUT THE FDP
Thermodynamics and heat transfer deals with energy systems including conservation of energy and efficient conversion of energy forms as well as transport of thermal energy by heat transfer and transport of component mass by mass transfer. Heat transfer and thermal sciences have been a traditional strength of the Department of Mechanical Engineering. In recent years, the world's scope of research has expanded to include heat and mass transfer in the production of fresh (recharge) production, mass concentration (solid energy) thermal management (jet engine cooling), phase change and porous media of ceramics, vehicle engine, and turbo-charger (jet engine), heat and mass transfer in heat exchanger and cooling, heat transfer at the nanoscale and nano-voids in new materials, energy storage, transport assessment for nuclear fission, modeling and simulation of film growth during fabrication of solar cells. Other important applications of heat and mass transfer include biomedical applications such as mass preservation and thermal treatment of cancer as well as mass transport in excess of the body, air separation, chemical and fluidity control in medicine.

Thermodynamics, heat and mass transfer remain important fundamental topics in the development of modern and future engineering systems. Heat and mass transfer remain integral to address challenges in transportation to sustainable energy future that uses solar energy as a primary and efficient use of conventional energy generation.

RESOURCE PERSONS
Dr. R. Anantharam, Prof/Mech, PSN College of Engineering & Technology, Tirunelveli.
Dr. J. Selvarajaperum, Prof/ Mech, Govt. College of Engineering, Tirunelveli.
Dr. M. Edwin, Prof/Mech, University College Engineering, Chennai.
Prof. A. Ramesh Udayasankar, Prof/Mech, MNM Jain Engineering College, Chennai.
Dr. M. Vijayakumar, Prof. Mech, PSN College of Engineering & Technology, Tirunelveli.

CONTACT DETAILS
Last Date for Registration: 23.3.23
Registration Number: RG-700 - For Participants
Google Link For Registration: <https://forms.gle/3E1T8R9P9YVZ9SEH>
For Payment: 944313469 (Phone No)
Contact Email: faculty@psnec.ac.in
College Website: www.psnec.ac.in

Sample E-Certificate

PSN ENGINEERING COLLEGE
Melathediyoor, Tirunelveli, Tamilnadu, India.
(Approved by AICTE and Affiliated to Anna University, Chennai)

Faculty Development Program on Thermodynamics and Heat Transfer

CERTIFICATE FOR APPRECIATION

This is to certify that Prof. A. Rameshudhayakumar, Associate Professor, MNM Jain Engineering College has presented a topic on **Refrigeration & Air-Conditioning** in the **Faculty Development Program on Thermodynamics and Heat Transfer** organized by PSN Engineering College, held from 27.3.2023 to 31.3.2023.

Dr. K. Krishnamoorthy, Convener
Dr. N. Prabhu, Director (Academic)
Dr. M. S. Ravikumar, Principal

Appreciation e-Certificates For Resource Person

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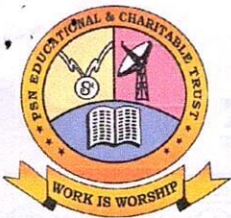
Faculty Development Program on Thermodynamics and Heat Transfer

CERTIFICATE FOR PARTICIPATION

This is to certify that Dr. K. Arumuganainar, Assistant Professor, J.P. College of Engineering has participated in the **Faculty Development Program on Thermodynamics and Heat Transfer** organized by PSN Engineering College, held from 27.3.2023 to 31.3.2023.

Dr. K. Krishnamoorthy, Convener
Dr. N. Prabhu, Director (Academic)
Dr. M. S. Ravikumar, Principal

Sample of e-Certificates For Participants



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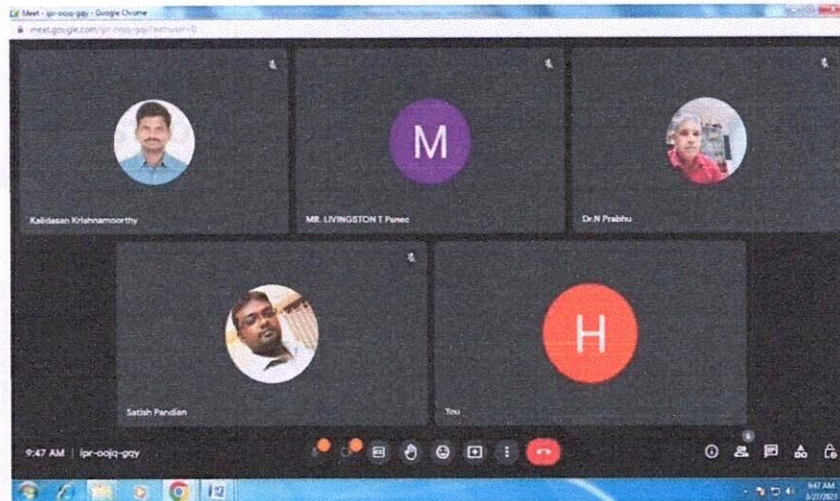
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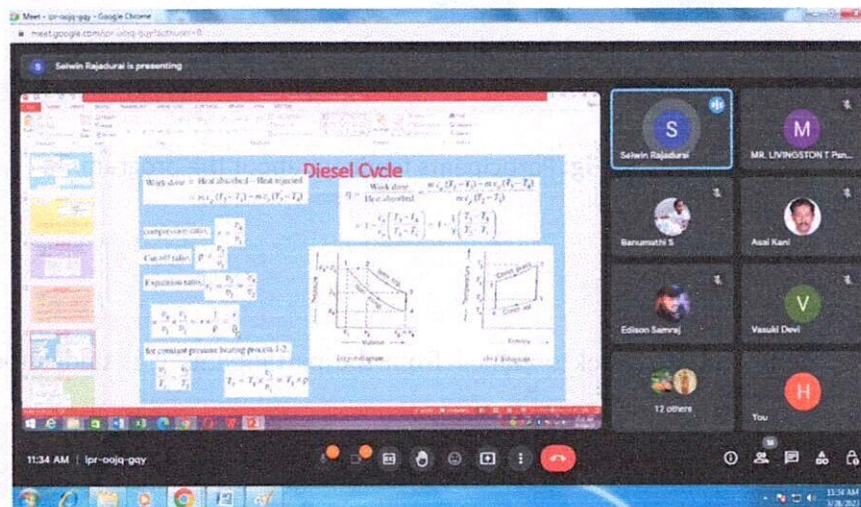
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Screenshots of Online FDP

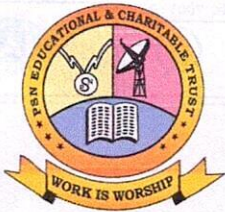


Inaugural Session of the FDP with **Prof. Dr. N.Prabhu**, (Director/PSN Engineering College)



Dr.J. Selwinrajadurai, (Professor, Dept. of Mechanical Engineering/GCE, Tirunelveli), delivering his session on “Air Standard Cycles And Compressors”

Dr. J. Selwinrajadurai
Professor of Mechanical Engineering
Director
PSN Engineering College
Tirunelveli



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Feedback Analysis:

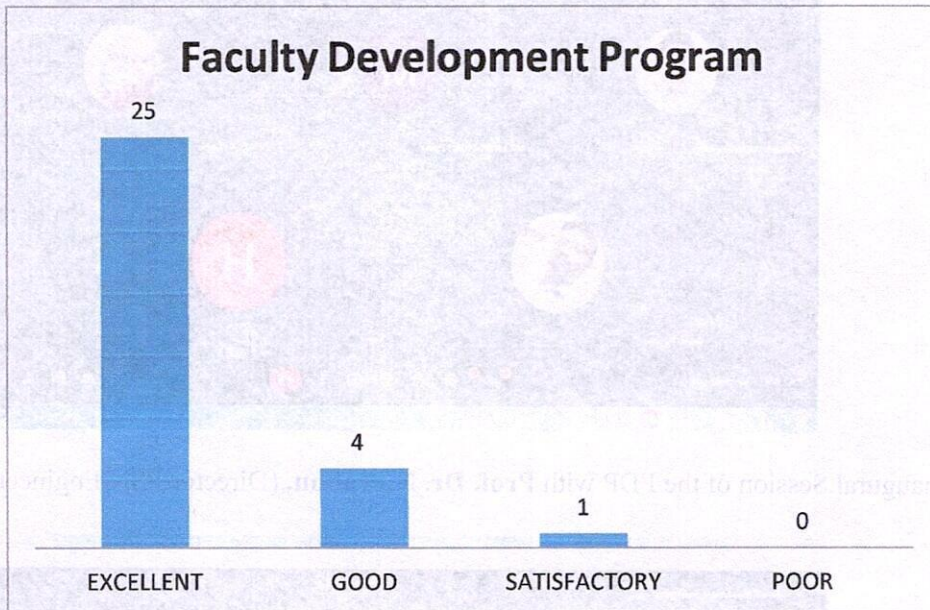


Fig: Participants feedback about the program.

Conclusion:

From the feedback obtained from the participants it is understood that the participants felt the above program is informative.

[Signature]
10/4/23
In-charge

[Signature]
10/4/23
Coordinator

[Signature]
10/4/23
Director
(IQAC)

[Signature]
Principal
Dr. M.S. RAVIKUMAR
Principal

Dr G Satish Pandian
Professor of Mech & Auto
Director - IQAC
PSN Engineering College,
Tirunelveli 627152

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