



RAMCO INSTITUTE OF TECHNOLOGY

Approved by AICTE, New Delhi & Affiliated to Anna University
Accredited by NAAC & An ISO 9001: 2015 Certified Institution
NBA Accredited UG Programs: CSE, EEE, ECE and MECH

Academic Year 2022-23 (Even Semester)

Details of Programme Organized

Sl.NO	Contents	Details
1.	Title of the programme	The Laws that Governs the Universe According to Peter Atkins
2.	Programme Theme	Innovative Teaching
3.	Programme Type	Webinar
4.	Details of Resource Person	Dr.V. Babu, Professor Department of Mechanical Engineering Indian Institute of Technology, Madras
5.	Mode & Venue / Platform	Google Meet http://meet.google.com/vbn-dizu-zkh
6.	Date & Duration	27.02.2023 (Monday) & 1 hour 20 minutes
7.	No. of Student Participants	49
8.	No. of Faculty Participants	18
9.	No. of External Participants	47
10.	Expenditure Amount (if any)	Nil
11.	Registration Link	https://tinyurl.com/elsnt010

12. Objective of the Programme:

- To enhance the knowledge in thermodynamics basics in Mechanical Engineering.
- To apply thermodynamics zeroth law to solve engineering problem.
- To apply thermodynamics first law to solve engineering problem
- To apply thermodynamics second law to solve engineering problem.

13. Detail Description of the activity:

Extramural lecture series (ELS)- NT010- Online webinar titled **"The Laws that Governs the Universe According to Peter Atkins"** was organized by Department of Mechanical Engineering, Ramco Institute of Technology, Rajapalayam on **27.02.2023 (Monday)**. The main objective of these ELS is to impart knowledge about thermodynamics laws uses in cosmology, computing, biology & theology. Dr.V. Babu, Professor, Department of Mechanical Engineering, Indian Institute of Technology, Madras acted as a resource person for this programme.

Dr.P.Suresh kumar, ASCP/Mech delivered welcome address and Mr.J.Jerold John Britto, AP(SG)/Mech introduced the resource person of this event. He detailed about the schedule of event. The resource person explained the following Concept

- Thermodynamics
- Laws of thermodynamics
- Connection between laws of thermodynamics .
- Define temperature
- Measurement of temperature
- Property of a system
- Mode of energy storage
- Reversible processes
- Scale of temperature
- Principle of increase in entropy

The Resource person explains the basic concept of thermodynamics and how the students get understand by the zeroth law, first law and second law. He concludes his session with through a detailed thermodynamics uses in cosmology, computing, biology & theology. At the end of the session participants clarified their doubts. Mr.L.Karthikeyan, AP/Mech acted as a moderator for the session. Mr.R.Prabhakaran, Mr.R.Venkatesh, Mr.M.Ramar and Mr. S.Kathiravan acted as coordinators.

Totally, there are 156 registrations are received across all major cities of our state and few are from other states also. Out of which 114 participants from various engineering college faculties, Research Scholar and Students actively participated in this programme via Google Meet Platform. All the Participants received their certificate after they completed all procedures

14. Banner / Flyer of the Programme:



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Department of Mechanical Engineering
EXTRAMURAL LECTURE SERIES(ELS) - NT010



THE LAWS THAT GOVERN THE UNIVERSE ACCORDING TO PETER ATKINS

Registration Link
<https://tinyurl.com/elant010>



<http://meet.google.com/vbn-dizu-zkh>



**Date : February 27, 2023
(Monday)
IST: 03.00 P.M to
04.00 P.M**

Dr. V. Babu
Professor
Department of Mechanical Engineering
Indian Institute of Technology, Madras

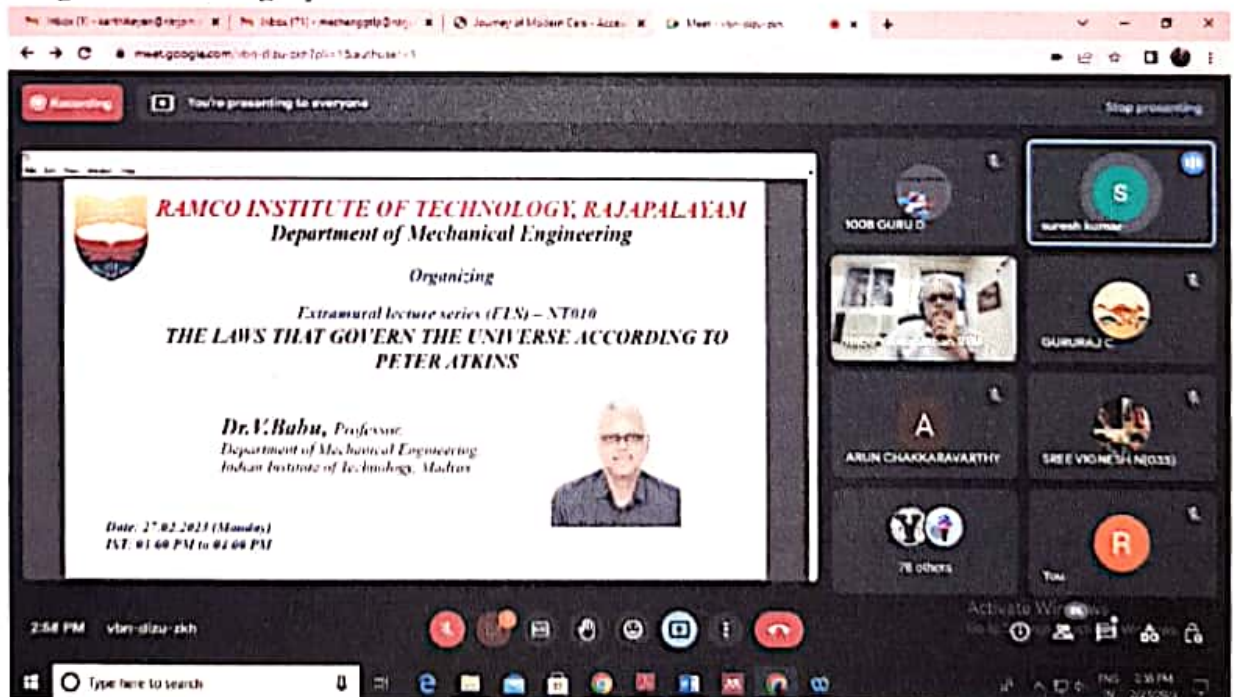
COORDINATOR
MR.R.VENKATESH
ASST. PROF./MECH

CONVENER
Dr.P.SURESHKUMAR
ASSOC. PROF./MECH

PATRON
Dr.S.RAJAKARUNAKARAN
VICE PRINCIPAL & HEAD /MECH

CHIEF PATRON
Dr.L.CAMESAN
PRINCIPAL

15. Programme Photographs:



Recording Babu Viswanathan IITM is presenting

The Laws that Govern the Universe according to Peter Atkins

V Babu
Professor
Department of Mechanical Engineering
Indian Institute of Technology Madras

3:02 PM vbn-dzu-zkh

1007 GOWTHAM K
SURESH KUMAR
GURURAJ C
SREE VIGNESH NEOSSE
ARUN CHAKKARAVARTHY
94 others
You

Activate Windows
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Recording Babu Viswanathan IITM is presenting

Abstract

Thermodynamics started as a branch of mechanical engineering with the onset of the industrial revolution, when steam engines powered by coal were used to mechanize tasks that were until then being carried out using manual labor. Mechanical engineers, since then, started asking the questions - *can all of the calorific value of the fuel be converted into mechanical work output at least under ideal circumstances and if not, why not and what is the maximum possible?* The outcome of such enquiries has been the laws of thermodynamics, which are now considered universal. Hence the claim made in the title.

V Babu Professor

3:05 PM vbn-dzu-zkh

ARUN CHAKKARAVARTHY
SURESH KUMAR
GURURAJ C
SREE VIGNESH NEOSSE
Jerald John Britto J
94 others
You

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Recording Babu Viswanathan (TM) is presenting

3:08 PM vbn-dizu-zkh

Type here to search

Prakash Raj V, Javed John Brito J, Suresh Kumar, GURURAJ C, SRIE VIGNESH N(035), ARUN CHAKRAVARTHY, 97 others, You

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Recording Babu Viswanathan (TM) is presenting

3:42 PM vbn-dizu-zkh

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Prakash Raj V, Javed John Brito J, Suresh Kumar, GURURAJ C, SRIE VIGNESH N(035), ARUN CHAKRAVARTHY, 101 others, You

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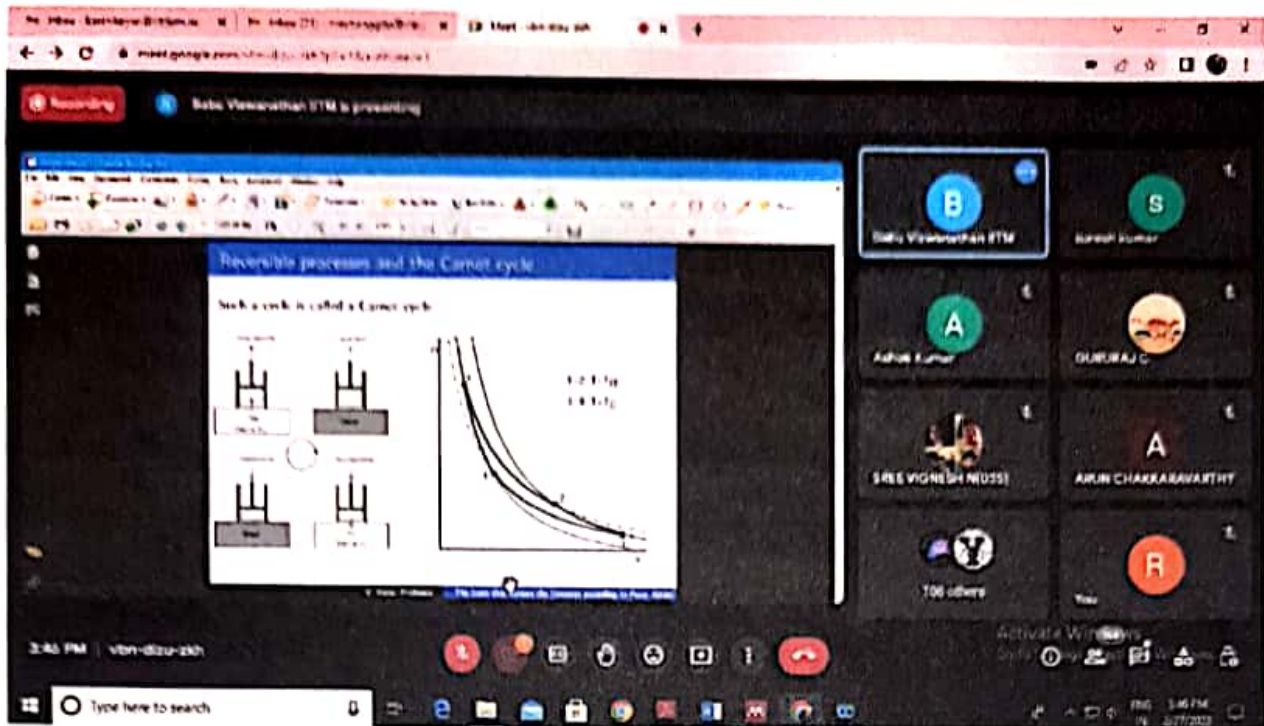
Second law of thermodynamics – Clausius statement

It is impossible to construct a device that operates in a cycle and produces no effect other than the transfer of heat from a cold to a hot body

$$COP_{\text{refrigerator}} = \frac{\text{Effect sought}}{\text{Effort input}} = \frac{Q_2}{W} = \frac{Q_2}{Q_1 - Q_2}$$

COP cannot be ∞ , i.e., $W = 0$. In other words, a refrigerator will not work unless it is turned on

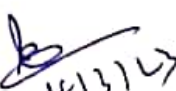
PRFMSUKUMAR M has left the meeting



16. Sample Certificate:

	RAMCO INSTITUTE OF TECHNOLOGY Approved by AICTE, New Delhi & Affiliated to Anna University Accredited by NAAC & An ISO 9001:2015 Certified Institution NBA Accredited UG Programs: CSE, EEE, ECE and MECH	
A2UEyG-CL000001 Certificate of Participation		
This is to certify that PRABHAKARAN R, ASSISTANT PROFESSOR of RAMCO INSTITUTE OF TECHNOLOGY, RAJAPALAYAM has actively participated in the Extramural Lecture Series - NT010 "The Laws that Governs the Universe According to Peter Atkins" conducted on 27.02.2023 by Department of Mechanical Engineering, Ramco Institute of Technology, Rajapalayam-626117.		
"We wish you success in all your future endeavours"		
This is an electronically generated certificate hence does not require signature		Made for free with Certify'em


 Prepared by
 (M.Ramar, AP/Mech)


 Approved by
 (HOD/Mech)