

Preamble

The Department of Mechanical Engineering at Institute of Technology, Nirma University, Ahmedabad is actively involved in Research, Development and Industrial consultancy work specially in the fields of Design, Thermal and Production Engineering. We all know Mechanical Engineering field is so vast in which the day to day developments are so rapid which demands for all Mechanical Engineers including faculty members, researchers and industry persons to update their knowledge with this rapid development. Looking to the demand and need of knowledge up gradation, the Department of Mechanical Engineering is organizing Two weeks Short Term Training Program on "Advances in Thermal and Fluid Science"

The Program

The program is designed to address various aspects of ongoing developments in the field of thermal and fluid science. Two weeks training program is designed to address research and development activities and current practices in this area. The course provides unique opportunity to the faculty members, the researchers, practicing engineers and students to be benefitted with various talks and interactive sessions from Experts in the concern field.

Objectives

After successfully completing this course, the participant will be able to:

- get updated with ongoing research activities in the field of thermal and fluid science and will be able to improve effectiveness of the thermal system,
- apply various aspects of thermal and fluid science to solve live industrial problems,
- appreciate the use of various available software in the field of fluid science and new developments/research in thermal engineering.

Course Contents

Sessions on the topics tentatively listed herewith are planned (however, the list is not exhaustive and also the sessions will be conducted based on the availability of the relevant experts): Fundamentals of Heat Transfer, Fluid Mechanics and Thermodynamics, Exergy Analysis, Finite Volume Method, Rarified Flow Dynamics, Discrete Simulation Monte-Carlo Method for Molecular Dynamics, Heat Transfer Enhancement, Lattice-Boltzmann Method, Experimental Multiphase Flow, Modeling of Combustion,

Heat Transfer in Micro Channel, Boiling Heat Transfer, Alternative Fuels, Life Cycle Analysis of IC Engine, Radiation Heat Transfer, Interface Tracking Methods for Analysis of Multiphase Flow, Computational Fluid Dynamics, Grid Generation, The use of CFD Software for analysis of Laminar Flow, Turbulent Flow, Mutihase Flow, Boiling etc. Recent practices in the industries, Demonstration of Experimental Facilities in Thermal and Fluid Science at Nirma University.

Faculty

The Program will be conducted by experienced faculty members from Mechanical Engineering department and eminent professors from various IITs and NITs as well as experts from reputed research organizations such as IPR, ISRO etc.

Registration Charges

₹ 5000 for faculty member from other academic institutions
₹ 8000 for members from industries and R&D organizations
₹ 3000 for full-time research scholars (pursuing Ph.D.)
Registration fee includes tea, and course material. All other expenses are to be bared by the participants. Registration charges are non-refundable.

Important Dates

Last date of receiving application: 09/06/2018
Confirmation of selection by E-mail: 12/06/2018
Commencement of Program 18/06/2018

Eligibility for Admission

Faculty members from various engineering colleges, full-time research scholars (pursuing Ph.D.) working in relevant areas, professional from Industries and R&D organizations.

Travelling Allowance and Boarding Lodging

Participants are requested to make their own arrangements for boarding, and travelling. However, on request, the arrangement for accommodation can be made on chargeable basis.

APPLICATION FORM
ISTE Approved
Short Term Training Program
on
***Advances in Thermal and Fluid
Science***
18 June – 30 June, 2018
Under the Auspices
of
Centre for Quality Assurance and Academic
Development (CQAAD)
Organized by
Mechanical Engineering Department,
Institute of Technology,
Nirma University, Ahmedabad

1. Name:
 2. Designation:
 3. Qualification:
 4. D.O.B.: Sex: Male / Female
 5. Institution/ :
Industry
 6. Mailing Address:
.....
Phone: Fax:
E-mail:
 7. ISTE Membership:
 8. Experience
Teaching : Years Months
Industrial : Years Months
 9. Subjects Taught:
 10. Hostel Accommodation required: Yes / No
 11. Demand Draft Rs. No.
dated..... Bank
- Place:
Date: Signature of the Applicant

Certificate from Sponsoring Authority

This is to clarify that _____ is regular employee of our institution/industry and is hereby sponsored for the two week **ISTE Approved Short Term Training Program on “Advances in Thermal and Fluid Science”** at Institute of Technology, Nirma University from 18th June 2018 to 30th June 2018. He/She will be permitted to attend the course for the entire duration if selected.

Date: _____ Signature with Seal
Place: _____ Head of the Institution

How to Apply

Interested applicants are requested to fill-up the attached application form and return, along with, duly signed certificate of sponsoring authority (in case of faculty members from engineering colleges, professionals from industry and R&D organizations) or bonafide certificate issued by the authority (in case of full-time Ph.D. students) as applicable. The form shall be sent to the following address, so as it reaches on or before 09/06/2018.

Dr. Absar M . Lakdawala
(Coordinator of the Program)

Department of Mechanical Engineering,
Institute of Technology, Nirma University,
Sarkhej-Gandhinagar Highway,
Ahmedabad- 382 481, Gujarat, India.
Phone No.:(O) 079-30642541
e-mail: absar.lakdawala@nirmauni.ac.in

Applicants should send the demand draft of applicable registration fees in favour of “Institute of Technology, Nirma University”, payable at Ahmedabad.

THE DEPARTMENT

The department has highly qualified faculty members, state of art laboratories and infrastructures. Continuing Education programs and customized training/ workshops are being organized for industry personnel on regular basis. Various Funded Research Projects and Consultancy projects are also taken up. Establishment of National Thermal Insulation Testing Laboratory is another major important milestone achieved by the department. Students of the department are actively involved in various extracurricular activities and extension activities.

ABOUT NIRMA UNIVERISTY

Nirma University is one of India's leading universities based in Ahmedabad (Gujarat). The University was established in

the year 2003 as a Statutory University under a special act passed by the Gujarat State Legislative Assembly. It is recognized by the University Grants Commission (UGC) under Section 2 (f) of the UGC Act. The University is duly accredited by National Assessment and Accreditation Council (NAAC). The six constituent institutes, spread across the sprawling lush green 125 acre campus of the University, are Institute of Technology, Institute of Management, Institute of Pharmacy, Institute of Law, Institute of Science and Institute of Architecture. The graduate, postgraduate and doctoral level programs offered by these institutes are rated highly by accreditation agencies, industry, business magazines and students.

Centre for Quality Assurance and Academic Development (CQAAD)

Nirma University has constituted a Centre for Quality Assurance and Academic Development (CQAAD) (formerly known as Academic Development and Research Cell) in the year 2008. The prime task of the CQAAD is to facilitate and participate in the development of a system for conscious and consistent improvement in the academic and administrative performance of the University. The centre facilitates the constituent institutes to ensure the sustenance of best academic practices; suggests innovative practices; takes new initiatives to remove deficiencies and enhance academic and administrative quality; promotes finest learning-teaching ambience and prepares for accreditation. The CQAAD is vibrant and regularly organizes various faculty development programmes in diversified areas which include induction programme, orientation programme, refresher programmes, short term training programmes, etc. and also the training programs for non-teaching staff of the University. The CQAAD also undertakes department, institute and university level academic audit to facilitate the efforts of the constituent institutes of the University in leveraging the academic and research standards, conformity to strategic planning and overseeing extension activities for social benefits, etc.

ABOUT INSTITUTE OF TECHNOLOGY

Institute of Technology, Nirma University, started in 1995, was the first self-financed engineering college in Gujarat. Within 20 years of inception, Institute of Technology is a leading hub of education, offering multidisciplinary undergraduate, postgraduate and Ph.D. programs in engineering.

The Institute is ranked within top 25 self-financed engineering colleges of India in the survey conducted by various rating agencies. The faculty members and students of the Institute have won many prestigious awards and bring laurels to the institute.



ISTE Approved Short Term Training Program

on

Advances in Thermal and Fluid Science

18th June – 30th June 2018

Coordinator
Dr. A M Lakdawala

Under the Auspices
of

Centre for Quality Assurance and Academic
Development (CQAAD), Nirma University

Organized by



Mechanical Engineering Department,
Institute of Technology,
Nirma University
Sarkhej-Gandhinagar Highway,
Ahmedabad- 382 481, Gujarat, India
Ph: +91-2717-241911/12/13/14/15
Fax: +91-2717-241917
Website: www.nirmauni.ac.in

1. Details of programme committee and dates on which the meeting/s of the said committee were held.

Nirma University
Institute of Technology
Mechanical Engineering Department

STTP on "Advances in Thermal and Fluid Science"


Minutes of Programme committee meeting for STTP on "Advances in Thermal and Fluid Science" held in A Conference on 09th January 2018.

Following members were present


1. Dr. V.J. Lakhera, Professor and Head, Mechanical Engineering Department and Chairman
2. Dr. R N Patel, (internal member) Professor, Mechanical Engineering Department
3. Dr. A.M. Lakdawala, Associate Professor and STTP Coordinator
4. Dr. N.M. Bhatt (external member), Director, Gandhinagar Institute of Technology, Kalol, Gandhinagar
5. Dr. Surendra Singh Kachhwaha (external member), Professor, SOT, PDP, Gandhinagar.

Following points were discussed

1. Looking at the topic of training programme the list of experts along with their area of interest (as per Annexure-II attached herewith) were short listed as probable speakers for the STTP.
2. As per the topic the probable budget was prepared attached as an Annexure-I
3. Dr V.J. Lakhera has suggested to include industrial visit(s) relevant to STTP in the detailed programme.
4. Dr. N.M. Bhatt suggested that session on "Exergy Analysis of Thermal System" should be included in the detailed programme.
5. Dr. Surendra Singh Kachhwaha suggested to include the session on "Advances in Refrigeration and Air Conditioning Engineering. He also suggested to include the name of Dr. Rajat Mittal, Prof. Ravi Kumar and Dr. Akhilesh Gupta as probable speaker for the STTP.


Dr. V.J. Lakhera
HOD (Mech.)


Dr. N.M. Bhatt



Dr. Surendra Singh
Kachhwaha


Dr. R.N. Patel


Dr. A.M. Lakdawala


Dr. A.M. Lakdawala




Director, IT

2. Scanned copy of programme approval from Director General, NU

Date: 09/01/2018

Submitted:

Sub. : STTP on "Advances in Thermal and Fluid Science"

The Mechanical Engineering Department is planning to organize a Short Term Training Program titled "Advances in Thermal and Fluid Science" for two weeks starting from 19th June – 30th June 2018. This program is planned for faculty members of engineering institutions, personnel from R & D organizations, industries and research scholars. The meeting of program committee was called for designing the frame work and to finalize the list of proposed of speakers.

The budget for the program is attached as per Annexure-I. The budget provision is made in financial year 2018-19 for this STTP.

The list of proposed speakers planned to be invited is attached herewith as per Annexure II.

The proposed brochure for the program is attached as per Annexure III.

You are kindly requested to approve the same.

Handwritten signature

Dr. A M Lakdawala
Coordinator, STTP
Associate Professor,
Mechanical Engg. Department
IT, NU

Through:

1. Head, Mechanical Engg. Department, IT, NU

Handwritten signature
10/1/18

2. Dy. Registrar, Administration

Handwritten signature
11/1

3. Director, IT, NU

Handwritten signature
12/1

4. Director, ADR Cell

The proposal is in order.

5. Executive Registrar, NU

Recommended for approval.
Handwritten signature
20/1/18

To,
Director General
Nirma University

Approved
Handwritten signature
22/1

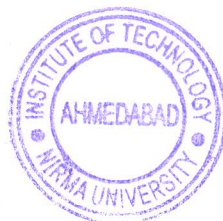
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16 Directors-DR&I

22/1/18

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20-1-18

13213
15/20/18
Handwritten signature

Handwritten signature
Dr. A M Lakdawala



Handwritten signature
Director, IT


3. Scanned copy of approval of collaboration with external agency if any

NA

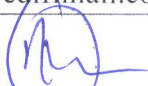
4. Program brochure and list of academic/research organizations/industries to whom the brochure was sent.

The brochure is attached herewith. The list of academic/research organization/industries to whom the brochure was sent is as follows:

1	Dharmsinh Desai University DDU Nadiad	deantechno@ddu.ac.in
2	Engineering MSU-Baroda	dean-techo@msubaroda.ac.in
3	Vallabh Vidyanagar Technical Institute VVNagar	bvm_princi@yahoo.com
4	LDCE Ahmedabad	ldce_ciiilp@yahoo.com
5	L E COLLEGE MORBI	principallecollege@gmail.com
6	GEC Modasa	modasa_engg@yahoo.co.in
7	SSEC Bhavnagar	principal@ssgec.ac.in
8	GEC Gandhinagar City	principal_gecp@yahoo.co.in
9	VGEC Chandkheda	principal@vgecg.ac.in
10	GEC Rajkot	gec_raj_2004@yahoo.co.in
11	GEC Surat	gec_deg_surat@yahoo.com
12	GEC Surat	gecsrt@yahoo.com
13	GEC Dahod	gec_dahod@yahoo.co.in
14	GEC Bharuch	gecbharuch@yahoo.co.in
15	GEC Bhavnagar	gecbhav@gmail.com
16	GEC Valsad	gecvalsad@rediffmail.com
17	GEC Bhuj	gecbhuj@yahoo.com
18	GEC Godhra	gecgodhra@yahoo.com
19	GEC Palanpur	gec_palanpur@live.in
20	GEC Patan	principalgecpatan@gmail.com
21	BBIT VVNAGAR	kirit.bbit@gmail.com
22	Dharmsinh Desai University DDU Nadiad	deantechno@ddu.ac.in
23	Dharmsinh Desai University DDU Nadiad	registrar@ddu.ac.in
24	M. S. University Polytechnic Vadodara	principal-poly@msubaroda.ac.in
25	Tolani Foundation Gandhidham Polytechnic Adipur	tfgpadp@yahoo.co.in
26	Dr. SSS Ghandhy College Surat	gecsrt612@gmail.com
27	Govt. Polytechnic Gandhinagar	principal_gpg@yahoo.com
28	Surendranagar CUS Polytechnic	cucilp@yahoo.co.in
29	Govt. Poly for Girls Ahmedabad	principal.gpgahmedabad@gmail.com
30	PRINCIPAL LECOLLEGE MORBI	principallecollege@gmail.com
31	Govt. Poly for Girls Surat	gpgsurat.615@gmail.com
32	K J Poly. Bharuch	kjpolytechnic@gmail.com
33	Govt. Poly. Ahmedabad	gpahmedabad2000@yahoo.co.in
34	Govt. Poly. Dahod	polydahod@yahoo.com
35	Govt. Poly. Jamnagar	gpjamnagar@yahoo.com
36	Dr. J. N. Mehta Polytechnic Amreli	drjnmgp@gmail.com
37	Govt. Poly. Porbandar	gpporbandar@hotmail.com
38	AVPTI Rajkot	avpti1948@yahoo.com
39	Govt. Poly. Palanpur	gppalanpur05@rediffmail.com


Dr. AML Lakdawala




Director, IT

40	Govt. Poly. Palanpur	gppalanpur05@yahoo.co.in
41	Govt. Poly. Rajkot	do-64478-raj@gujarat.gov.in
42	Govt. Poly. Rajkot	gprajkot@yahoo.com
43	Government Polytechnic Himatnagar	gphimatnagar_13@yahoo.co.in
44	KD Polytechnic Patan	principalkdp@yahoo.com
45	Government Polytechnic Chhotaudepur	gpchhotaudepur@yahoo.co.in
46	Government Polytechnic Valsad	gpvalsad2004@yahoo.co.in
47	Government Polytechnic Vadnagar	gpvadnagar@yahoo.co.in
48	Sir Bhavsinhji Polytechnic Bhavnagar	prin.gp.bpt.bvn@gmail.com
49	Government Polytechnic Godhra	polygodhra@yahoo.com
50	Govt. Polytechnic Junagadh	gpjunagadh@yahoo.in
51	Morbi-LEC Diploma	gpmorbi.lec@gmail.com
52	Govt. Polytechnic Waghai	gpwaghai2010@yahoo.com
53	GP-Kheda	gpkheda@gmail.com
54	Govt. Polytechnic Rajpipla	gprajpipla@gmail.com
55	Govt. Polytechnic Vyara	gpvyara@gmail.com
56	GP-Navsari	gpnavsari2013@gmail.com
57	RCTI Ahmedabad	rctisola@yahoo.com
58	Govt.MCA	gmcacmnagar@gmail.com
59	B. K. Mody Rajkot	principalpharmacy@rediffmail.com
60	Rai university	hemant.patil@raiuniversity.edu
61	GSFC Ltd.	pbishnoi@gsfcltd.com
62	SSIT	ssit.director@gmail.com
63	Ganpat University	admin.uvpce@ganpatuniversity.ac.in
64	ADIT	principal@adit.ac.in


5. Program learning outcomes and program content module wise.

Program learning outcome:

- Get update with ongoing research activities in the field of Thermal and Fluid Science designing of Mechanical systems; which include thermal systems, production systems as well.
- Apply various aspects of processing equipment design;
- Appreciate the actual implementation of various update in technologies for their knowledge enhancement.

6. Evaluation criteria as finalized and mechanism of its communication to participants in Advance.

The evaluation criterion was discussed in the CQAAD meeting in the presence of Director General, NU. Following criterion is decided for the evaluation.


Dr. A. M. Lakdawala




Director, IT

Evaluation Criteria for STTP



- Formative Assessment : Assignment (06 Nos.)
60% weightage
- Summative Assessment : Written Test
40% weightage

18th to 30th June 2018

STTP- Overview

10

The question paper of final examination is attached herewith.

Nirma University
Institute of Technology
Mechanical Engineering Department
STTP on "Advances in Thermal & Fluid Science"
18th June to 30th June 2018

Q. 1 Select the most appropriate answer. 20 Marks

- One litre of water occupies a volume of
A. 1000 cubic cm B. 100 cubic cm C. 250 cubic cm
D. 500 cubic cm
- As per Newton's Law of Viscosity, Shear stress and shear rate of fluid are _____ to each other
A. Directly proportional B. indirectly proportional
C. equals D. quadratically proportional
- The pressure less than atmospheric pressure is known as
A. suction pressure B. vacuum pressure
C. negative gauge pressure D. All of these.
- An ideal fluid is frictionless and incompressible.
A. True B. False C. Can't say
- The total radiation from a black body per second per unit area is _____ fourth power of the absolute temperature. This statement is known as Stefan-Boltzmann law.
A. directly proportional to B. equal to
C. inversely proportional to D. none of these
- The amount of radiation mainly depends upon the
A. nature of the body B. temperature of the body
C. type of surface of the body D. all of these
- A perfect black body is one which
A. absorbs heat radiations of all wave lengths falling on it
B. is black in colour
C. reflects all the heat radiations

Dr. A M Lakdawala





Director, IT

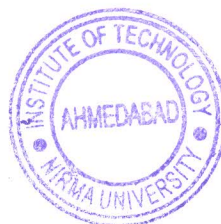
- D. transmits the heat radiations
8. The entropy _____ in an irreversible cyclic process.
- A. increases
B. decreases
C. remains constant
D. none of these
9. The system which permits the transfer of mass to and from the system, is known as
- A. Isolated System
B. Open System
C. Close system
D. none of these
10. The amount of heat required to raise the temperature of the unit mass of gas through one degree at constant volume, is called
- A. specific heat at constant volume
B. specific heat at constant pressure
C. kilo Joule
D. none of these

- Q 2 The inner surface of a plane brick wall is at 60 °C and outer 04
surface is at 35 °C temperature. Calculate the rate of heat transfer
per m² of surface area of wall, which is 220 mm thick. The thermal
conductivity of brick is 0.51 W/m °C.
- Q 3 A hypothetical device is supplied with 2 kg/s of air at 4 bar, 300 K. 10
Two separate streams of air leaves the device, from two end. Each
stream is at an ambient pressure of 1 bar, and the mass flow rate
is the same for both streams (1 kg/s each). One of the exit streams
is said to be at 330 K while the other is at 270 K. The ambient
temperature is at 300 K. Determine whether such a device is
possible?
- Q 4 The vertical pipeline carrying oil of specific gravity of 0.87, changes 06
in diameter from 200 mm at small end to 500 mm at bigger end
which is 4 m higher than smaller end. If pressure at smaller end is
9.81 N/cm² and bigger end is 5.89 N/cm², whereas discharge is
200 lps. Find the loss of head between two ends and direction of
the flow.

The grading criterion is decided as follows:

91 to 100	A
81 to 90	B
71 to 80	C
< 70	Repeat


Dr. A. M. Lakdawala




Director, IT

7. Detailed programme schedule with information about names and affiliation of all resource persons

Nirma University
Institute of Technology
Mechanical Engineering Department
Schedule of Short Term Training Program (STTP) on "Advances in Thermal and Fluid Science"- 18th June to 30th June 2018 (A-101)

Date Day	08: 45 am to 09:00 am	09: 00 am to 11:00 am	11:00 am to 11:15 am	11:15 am to 01:15 pm	01:15 pm to 02:00 pm	02:00 pm to 04:00 pm	04:00 pm to 4:15 pm	04:15 pm to 06:15 pm
18/06/18 Mon		Registration & Inaugural Function		Dr. A. M. Lakdawala, Asso. Professor, MED, IT, NU "Concepts of Thermodynamics"		Dr. N.M. Bhatt Director, GIT, Gandhinagar "Exergy Analysis of Thermal System"		
19/06/18 Tue		Dr. S.V. Jain Asso. Professor, MED, IT, NU "Concepts of Fluid Mechanics"		Dr. Sanjay Mittal Professor, Aerospace Engg. Department, Coordinator, National Wind Tunnel Facility, IIT, Kanpur "Aerodynamic Shape Optimization and badminton shuttle cock"		Dr. V.J. Lakhera Professor & Head MED, IT, NU "Concepts of Heat Transfer"		
20/06/18 Wed		Dr. R.N. Patel Professor, ME Dept, IT, NU	Tea Break	Dr. Amit Agrawal, Professor, ME Dept, IIT, Bombay "Analysis of Rarified Gas Flow"	Lunch Break	Dr. A.M. Lakdawala Asso. Professor MED, IT, NU "Application of Heat Transfer to solve industrial problems"	Break	
21/06/18 Thu		Dr. Atul Bhargav, Asso. Prof. IIT, Gandhinagar "Fues Cell Technology"		Dr. R.D. Shah, Associate Professor, SVNIT, Surat "Investigation on CAN combustor"		Dr. Purnanand Bhale, Associate Professor, SVNIT, Surat "Bio-Diesel as an Alternative Fuels for IC Engine"		
22/06/18 Fri		Dr. Kunal Ghosh Professor (Visiting), MED, IT, NU "Boundry layer Theorm and its application to solve fluid mechanics problems"		Dr. Vipul Tanna IPR, Gandhinagar		Dr. Sandip Sonawane, Professor, Sawitribai Phoolle Engineering Collage, Nasik "Heat Transfer Enhancement Using NanoFluid"		Dr. N.K. Shah, Asso. Professor, MED, IT, NU "Discrete simulation Monte Carlo Methods for analysis of flow in micro channel"



Dr. A.M. Lakdawala

Director, IT

Date Day	08:45 am to 09:00 am	09:00 am to 11:00 am	11:00 am to 11:15 am	11:15 am to 01:15 pm	01:15 pm to 02:00 pm	02:00 pm to 04:00 pm	04:00 pm to 4:15 pm	04:15 pm to 06:15 pm
25/06/ 18 Mon	High Tea		Tea Break		Lunch Break		Tea Break	
	Dr. V.J. Lakhera Professor & Head MED, IT, NU "Experimental Investigation on Boiling Heat Transfer"	Dr. S.V. Jain Asso. Professor MED, IT, NU "Pump as Turbine for Micro -Hydro Power Plant"	Dr. A.W. Date IIT Bombay "Improvement in the efficiency of wood stove"	Dr. Mitesh Shah, Professor ADIT, Anand "Radiation Heat Transfer"	Dr. A.M. Achari Asso. Professor, MED, IT, NU "Heat Transfer analysis during Jet Impingement"	Prof. B.A. Shah, Asst.Prof., ME, IT, NU "Demonstration of experimental facilities in the area of Thermal and Fluid Science at MED, IT, NU"		
26/06/ 18 Tue	Dr. Chandrasekhar Sewatkar, HOD, COEP, Pune "Lattice-Boltzmann Method for Analysis of Flow Over an Array of Square Cylinders"	Dr. A.W. Date IIT Bombay "Improvement in the efficiency of wood stove"	Dr. A.M. Achari Asso. Professor, MED, IT, NU "Heat Transfer analysis during Jet Impingement"	CFD Lab (Grid Generation) Dr. S.V. Jain/Prof. Anand S. Patel				
27/06/ 18 Wed	Dr. S. Kachhawaha Professor, MED, PDPU, Gandhinagar "Advances in Refrigeration Engineering"	Shri Deepak Gadhia Chairman, Excellent Renewable Pvt Ltd "Solar Technology"	CFD Lab (Laminar Flow) Dr. S.V. Jain/Prof. Arvind Sankhla	CFD Lab (Laminar Flow) Dr. V.J. Lakhera/Prof. Prashant J. Bagga				
28/06/ 18 Thu	Dr. Siddhartha Tripathi, Assistant Professor BITS, Goa "Experimental Analysis of Blood Flow in Micro Channel"	Dr. Vijay Duryodhan Assistant Professor IIT, Bhubai "Heat Transfer Analysis of Flow in Converging- Diverging Micro Channel"	Industrial visit	Industrial visit				
29/06/ 18 Fri	CFD Lab (Turbulent Flow) Dr. N.K. Shah/Prof. Vishal Mehra	CFD Lab (Techplot) Dr. A.M. Lakdawala	Dr. J. Banerjee, Associate Professor, SVNIT, Surat "Experimental Analysis of Multi-phase Flow"	Industrial visit				
30/06/ 18 Sat	Dr. Manoj Gupta IPR, Gandhinagar	Moodle Test	Valictory	-----				

Dr. A.M. Lakdawala



Director, IT

8. Sample of invitation letter and thanks letter given to external resource persons

Invitation Letter (NOTE: Get From Lakdawala Sir's Email)

NU/IT/ME/STTP/2018

Date: 17/04/2018

To,
Dr. N.M. Bhatt
Director,
GIT, Gandhinagar

Subject: Invitation to be an expert resource person in STTP organized by Mechanical Engineering Department, Institute of Technology under the Auspices of CQAAD, Nirma University.

Dear Bhatt


Nirma University has been recognized as a leading centre for education in technology, management, pharmacy, science, law and architecture. The graduate, post-graduate and doctoral level programmes offered by university are rated highly by accreditation agencies, industry, business magazines and students. Today the University is identified with cutting edge research, robust academic programmes, quality teaching-learning process and over-all personality development interventions of its students.

The University has established Centre for Quality Assurance and Assessment Department (CQAAD) for the continuous review of the teaching-learning process, including curricula, pedagogy, and assessment. The functions of this Cell are primarily to monitor and guide the constituent Institutes and to raise the standard of academic and research activities. CQAAD imparts training to the University faculty by organizing induction programme, orientation programme, refresher programme, short term training programme (STTP), research orientation programme, etc.

ISTE approved two week STTP on "Advances in Thermal and Fluid Science" from June 18-June 30, 2018 is organized by Mechanical Engineering Department, Institute of Technology, Nirma University under the Auspices of CQAAD. The proposed STTP is envisaged to address various aspects of ongoing developments in the field of thermal and fluid science.

It is our great pleasure to invite you for delivering the session in the STTP.

Date : **18 JUN 2018**
Day : **MONDAY**
Time : **2:00 pm to 04:00 pm**
Topic : **"Exergy Analysis of Thermal System"**


Dr. AM Lakdawala




Director, IT

To facilitate the participants for the advanced preparation and reference, we would be highly obliged, if you can send us the details of learning material/ppt presentation/video etc, pertaining to the topic of your session.

The participants would be extremely benefited if you can further include discussion of case studies, group exercise/group discussion by participants, viewing of video lecture etc. in addition to theory during your session.

The learning of the participants would be evaluated during the programme by conducting the examination. Therefore, we would be grateful, if you send us 5 MCQ related to your session topic. We are sure that the participants of the programme would be highly benefited by your talk.


The honorarium and transportation will be paid as per the Nirma University rules. It is kind request you to give your consent to deliver the lecture on above said details. **If the above schedule is not convenient to you please let us know the schedule of your convenience.**

In case of any queries, please feel free to contact the undersigned.

Warm Regards,

Head
Mechanical Engineering Department
Institute of Technology
Nirma University

Encl: Programme Brochure


Dr. A.M. Lakdawala




Director, IT

Thanks Letter

26th June 2018



NIRMA
UNIVERSITY

INSTITUTE OF TECHNOLOGY

To,
Dr. A. W. Date
Professor
Dept of Mechanical Engineering
Indian Institute of Technology, Bombay
Powai, Mumbai-400076

Subject: Short Term Training Programme at Institute of Technology, Nirma University from 18th June to 30th June 2018.

Dear **Dr Date**

On behalf of Mechanical Engineering Department, Institute of Technology, Nirma University, we convey our sincere thanks for the invaluable contribution you made by means of the expert talk on "Use of Thermo-Fluid Science in Modeling Rural Technologies" on 26th June 2018 at the Short Term Training Programme' on "Advances in Thermal and Fluid Science" from 18th June to 30th June 2018 organized by Mechanical Engineering Department under the Auspices of CQAAD, Nirma University.

We appreciate the time you spent from your busy schedule to join us and thank you for sharing your insights and expertise.

Warm Regards,

Dr. V.J. Lakhera
Professor & Head
Mechanical Engineering Department
Institute of Technology
Nirma University, Ahmedabad

Dr. A.M. Laxdewala



Director, IT

9. Details of Percentage of total sessions conducted by External / University resource persons.

External resource persons = 75 %

1. Dr. N.M. Bhatt, Director, Gandhinagar Institute of Technology, Gandhinagar
2. Dr. Sanjay Mittal, Professor, Aerospace Engg. Department, IIT, Kanpur
3. Dr. Amit Agrawal, Professor, ME Dept, IIT, Bombay
4. Dr. Atul Bhargav, Asso. Prof., IIT, Gandhinagar
5. Dr. R.D. Shah, Associate Professor, SVNIT, Surat
6. Dr. Purnanand Bhale, Associate Professor, SVNIT, Surat
7. Dr. Vipul Tanna, IPR, Gandhinagar
8. Dr. Sandip Sonawane, Professor, Sawitribai Phoolle Engineering Collage, Nasik
9. Dr. Mitesh Shah, Professor, ADIT, Anand
10. Dr. Chandrashekhar Sewatkar, HOD, COEP, Pune
11. Dr. A.W. Date, Professor Emeritus, IIT Bombay
12. Dr S. Kachhawaha, Professor, MED, PDPU, Gandhinagar
13. Shri Deepak Gadhia, Chairman, Excellent Renewable Pvt Ltd
14. Dr. Siddhartha Tripathi, Assistant Professor, BITS, Goa
15. Dr. Vijay Duryodhan, Assistant Professor, IIT, Bhilai
16. Dr. Manoj Gupta, IPR, Gandhinagar

Internal resource persons = 15 %

1. Dr. R N Patel, Additional Director, SOE, IT, NU
2. Dr. V J Lakhera, Professor & Head, ME, IT, NU
3. Dr. A.M. Lakdawala, Associate Professor, ME, IT, NU
4. Dr. N K Shah, Associate Professor, ME, IT, NU
5. Dr. S V Jain, Associate Professor, ME, IT, NU
6. Prof. B.A. Shah, Assistant Professor, ME, IT, NU

10. Details of Inauguration, valedictory sessions.

Inauguration function was organized for the planned STTPs on 18th June 2018 at A-101. Dr R N Patel, Dr V J Lakhera and Dr A M Lakdawala had graced the dais during the inauguration function. Dr V J Lakhera had given welcome address, Dr R N Patel had given keynote address and Dr A M Lakdawala had presented overall outline of the programme.

At the end of STTP on “**Advances in Thermal and Fluid Science**” the valedictory function was organized as per the scheduled time on 30th June at A-101. The function was started by welcome Head of Department Dr. V J Lakhera, and all the participants by the co-ordinators. Dr. V J Lakhera & Dr. R N Patel has congratulated co-ordinators of the STTP on successful completion. The participants have shared their experiences on the enjoyable period during the STTP and what knowledge the gain beyond their expertise. Overall, all the participants have appreciated well organized sessions of STTP, covering all the aspects of current developments and theories especially in the field of Thermal engineering and Fluid mechanics. At the end, co-ordinators have given vote of thanks for the supports and co-operations received from various places/individuals/committees and management of Nirma University for successful completion of the STTP.

11. Details of all activities arranged other than theory sessions

- An industrial visit to Institute of Plasma Research (IPR), Bhat, Gandhinagar was organized on 28th June 2018 during last two sessions of STTP. Where an expert practices was discussed by Dr. Vipul


Dr. A M Lakdawala




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Tanna, Scientist, IPR, and Gandhinagar on nuclear fusion reactors (SST-1 and Aditya Tochange). All the participants had good interactive session with the experts, who are working on different areas of nuclear reactors on cryogenics, operating parameters and safety constraints for reactors available at IPR, Bhat, and Gandhinagar.

- The hands on practice sessions using CFD packages for different flow fields like laminar and turbulent were planned by providing Lab sessions in the schedule. The different aspects of computational fluid dynamics using software packages were covered during lab sessions especially on solid model generation, grid generation, laminar & turbulent fluid flow problems, pressure and velocity contours etc.

12. Details of break-up of participants from industry/academics/from within University, etc.


Sr No.	Name of Faculty member	
1.	Dr. Kaushik. M. Patel	Mech. Engg. Dept., IT, NU
2.	Dr. Bharat A. Modi	Mech. Engg. Dept., IT, NU
3.	Dr. Reena.R. Trivedi	Mech. Engg. Dept., IT, NU
4.	Dr. Niraj K. Shah,	Mech. Engg. Dept., IT, NU
5.	Dr. Sanjay.V.Jain	Mech. Engg. Dept., IT, NU
6.	Dr. Nilesh .D. Ghetiya	Mech. Engg. Dept., IT, NU
7.	Dr. Mitesh Panchal	Mech. Engg. Dept., IT, NU
8.	Dr. A. Madhusudan Achari	Mech. Engg. Dept., IT, NU
9.	Dr. Jatin M. Dave	Mech. Engg. Dept., IT, NU
10	Prof. Darshita J. Shah	Mech. Engg. Dept., IT, NU
11	Prof. Vipul .M. Bhojawala	Mech. Engg. Dept., IT, NU
12	Prof. Ashish M. Gohil	Mech. Engg. Dept., IT, NU
13	Dr. Mihir M. Chauhan	Mech. Engg. Dept., IT, NU
14	Prof. Balkrushna A Shah	Mech. Engg. Dept., IT, NU
15	Prof. Dhaval B. Shah	Mech. Engg. Dept., IT, NU
16	Prof. Ath S Singhal	Mech. Engg. Dept., IT, NU
17	Prof. Shruti N. Mehta	Mech. Engg. Dept., IT, NU
18	Prof. Anand A. Bhatt	Mech. Engg. Dept., IT, NU

Dr. A M Lakdawala



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Sr No.	Name of Faculty member	
19	Prof. Tejas N Raval	Mech. Engg. Dept., IT, NU
20	Prof. Mayur A Makhesana	Mech. Engg. Dept., IT, NU
21	Prof. Rudreshkumar D Makwana	Mech. Engg. Dept., IT, NU
22	Prof. Saumil Desai	Mech. Engg. Dept., IT, NU
23	Prof. Prashant Bagga	Mech. Engg. Dept., IT, NU
24	Prof. Shebaz Memon	Mech. Engg. Dept., IT, NU
25	Prof. Anand Patel	Mech. Engg. Dept., IT, NU
26	Prof. Arvind Sankhla	Mech. Engg. Dept., IT, NU
27	Prof. Vishal Mehta	Mech. Engg. Dept., IT, NU
28	Prof. Roshan Tandel	Mech. Engg. Dept., IT, NU


Dr. AM Lakdawala




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ISTE Approved
Short Term Training Programme
on

“Advances in Thermal and Fluid Science”

18th June— 30th June 2018

Under the Auspices of
Centre for Quality Assurance and Academic Development (CQAAD)
Organized by

Mechanical Engineering Department, Institute of Technology, Nirma University


Dr. A M Lakshminarayana




Director, IT

15. Sample of written feedback form taken from the participants

Nirma University
Institute of Technology
Mechanical Engineering Department
Centre for Quality Assurance and Academic Development (CQAAD)
STTP on "Advances in Thermal and Fluid Science"
18th June to 30th June 2018

Feedback Form for Programme Content

1. In order to know about the effectiveness of the programme, we need your honest feedback.
2. Your feedback will help us to improve the organization of future programmes.
3. Your feedback will be kept confidential and your responses will be anonymous.
4. Please give the answers in detail whenever is required.

1. Give your views about achieving the programme learning outcomes after participation in the programme.

After successful completion of the STTP, the faculty participant will be able to

Sr. No.	Learning Outcome	YES / NO, if NO give details
(a)	Get update with on going research activities in the field designing of Mechanical systems; which include thermal systems, production systems as well.	Yes
(b)	Apply various aspects of industrial design and mechanical design;	Yes
(c)	Appreciate the actual implementation of various update in technologies for their knowledge enhancement	Yes

2. Give your view about adequacy of time duration of the programme for achieving all the Programme Learning Outcomes.


- The time duration was adequate to covers all aspects of theme of STTP.

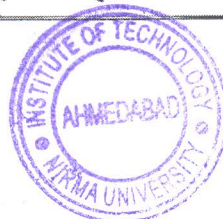
3. Give your views about relevance of all topics covered in the programme with the programme learning outcomes.


- All the topics were relevant to the programme

4. Give your views about usefulness of knowledge acquired by you in the programme for enhancing your teaching and research abilities.

- Various softwares can be explored to explain the modelling of problem/phenomenon.
- Inter disciplinary Projects may be offered.


Dr. A M Lakdawala




Director, IT

5. Give your views about usefulness of knowledge acquired by you in the programme to your department and institute.

^s - Inter disciplinary projects may be offered.

6. Highlight topics covered in this programme (upto five) which according to you is most relevant to the programme learning outcomes as well as having no relevance at all with the programme learning outcomes.

a. Topics having significant relevance:

- Fundamental of Fluid Mechanics

- Exp. Analysis of fluid flow in micro channel

- Solero Technology

b. Topics having no relevance: Radiation Heat Transfer, Concept of thermodynamics

7. Suggestions for addition of topics not covered in the present programme but having significant relevance with programme learning outcomes.


All the topics were covered.

8. Give your suggestions for the areas/topics for which training is required by you in order to facilitate the department/institute to conduct future training programmes.

- Computational Fluid Dynamics

9. Suggestions for further improvement for the present programme as well as in programmes to be organized in future.

Thank you


Dr. A.M. Lakdeewala




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Nirma University
Institute of Technology
Mechanical Engineering Department
Centre for Quality Assurance and Academic Development (CQAAD)
STTP on "Advances in Thermal and Fluid Science"
18th June to 30th June 2018
Faculty Feedback Form

Date and Day: 27/06/2018 - Wednesday

Session No.	Session Title & Speaker	Parameters related to Each Session	Rating				
			Excellent	Very Good	Good	Satisfactory	Unable to Judge
1	Advances in Refrigeration Engineering Dr S. Kachhwaha Professor, MFD, PDPU, Gandhinagar	Relevance of topic	✓				
		Content Quality	✓				
		Quality of Communication	✓				
		Overall Delivery	✓				
		Any Other Comments:					
2	Solar Technology Shri Deepak Gadhia Chairman, Excellent Renewable Pvt Ltd	Relevance of topic	✓				
		Content Quality	✓				
		Quality of Communication	✓				
		Overall Delivery	✓				
		Any Other Comments:					
3	CFD Lab (Laminar Flow) Dr. S.V. Jain/ Prof. Arvind Sankhla	Relevance of topic	✓				
		Content Quality	✓				
		Quality of Communication	✓				
		Overall Delivery	✓				
		Any Other Comments:					
4	CFD Lab (Laminar Flow) Dr. V.J. Lakhera/ Prof. Prashant J. Bagga	Relevance of topic	✓				
		Content Quality	✓				
		Quality of Communication	✓				
		Overall Delivery	✓				
		Any Other Comments:					


Dr. A.M. Lakdawala




Director, IT

1. Details of execution of formative and summative assessment for the participants along with the process of their grade allocation.

As per the prescribe procedure, 60% weightage of formative assessment of the participants have been carried out based on assignments given by the experts on the topic covered by them. And on the last day, the written test was arranged for all the participants of weightage 40%. The grade allocation was carried out as per rules of NU for STTP.

Marks	Grade
91 to 100	A
81 to 90	B
71 to 80	C
≤ 70	Not successfully completed

2. Sample of letter issued to unsuccessful participants

--- Not Applicable ---

3. Details of Pre-reading/Learning/Reading material/Book/ Registration material, etc. given

Separate soft files are provided in CD.

4. Analysis of feedback from participants


Annexure – I

Nirma University
Institute of Technology
Mechanical Engineering Department
Centre for Quality Assurance and Academic Development (CQAAD)
STTP on “Advances in Thermal and Fluid Science”
18th June to 30th June 2018


Faculty Feedback Form

1. In order to know about the effectiveness of the programme, we need your honest feedback.
2. Your feedback will help us to improve the organization of future programmes.
3. Your feedback will be kept confidential and your responses will be anonymous.
4. Please read the form carefully, tick on the most appropriate answer out of given five options.
5. Please give the answers in detail whenever is required.
6. Select “Unable to Judge” if you are not in a position to judge.
7. Weightage to be assigned to the rating of each parameter for every resource person session-wise is as follows:

- Excellent: 5
- Very Good: 4
- Good: 3
- Satisfactory: 2
- Unable to Judge: 1


Dr. AM Lakdawala




Director, IT

Faculty Feedback Form

Date and Day: 18/06/2018 - Monday

Session No.	Session Title & Speaker	Parameters related to Each Session	Rating				
			Excellent	Very Good	Good	Satisfactory	Unable to Judge
1	Concepts of Thermodynamics Dr. A.M. Lakdawala Asso. Professor, MED, IT, NU	Relevance of topic	23	4			
		Content Quality	23	4			
		Quality of Communication	21	6			
		Overall Delivery	20	7			
		Any Other Comments: Excellent					
2	Energy Analysis of Thermal System Dr. N.M. Bhatt Director, GIT, Gandhinagar	Relevance of topic	16	10	1		
		Content Quality	19	7	1		
		Quality of Communication	17	8	1	1	
		Overall Delivery	15	11		1	
		Any Other Comments: Very good					



Dr. A.M. Lakdawala



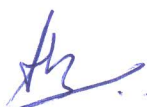
Director, IT



Faculty Feedback Form

Date and Day: 19/06/2018, - Tuesday

Session No.	Session Title & Speaker	Parameters related to Each Session	Rating				
			Excellent	Very Good	Good	Satisfactory	Unable to Judge
1	Concepts of Fluid Mechanics Dr. S.V. Jain Asso. Professor, MED, IT, NU	Relevance of topic	22	4			
		Content Quality	19	7			
		Quality of Communication	19	6	1		
		Overall Delivery	18	8			
		Any Other Comments: Excellent, Very good					
2	Aerodynamic Shape Optimazation Dr. Sanjay Mittal Professor, Aerospace Engg. Department, Coordinator, National Wind Tunnel Facility, IIT, Kanpur	Relevance of topic	25	2			
		Content Quality	25	2			
		Quality of Communication	24	2	1		
		Overall Delivery	24	2	1		
		Any Other Comments:					
3	Aerodynamic of cricket ball and badminton shuttle cock Dr. Sanjay Mittal Professor, Aerospace Engg. Department, Coordinator, National Wind Tunnel Facility, IIT, Kanpur	Relevance of topic	24	3			
		Content Quality	24	3			
		Quality of Communication	25	1	1		
		Overall Delivery	25	1	1		
		Any Other Comments: Superb					
4	Vortex Induced Vibration Dr. Sanjay Mittal	Relevance of topic	23	4			
		Content Quality	22	5			
		Quality of Communication	23	3	1		
		Overall Delivery	24	3			
		Any Other Comments: Simply Superb					
5	Concepts of Heat Transfer Dr. V.J. Lakhera Professor & Head MED, IT, NU	Relevance of topic	24	3			
		Content Quality	24	3			
		Quality of Communication	25	2			
		Overall Delivery	24	3			
		Any Other Comments: Excellent					


Dr. A.M. Lakshwala



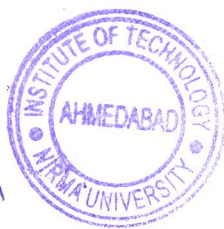

Director, IT

Faculty Feedback Form

Date and Day: 20/06/2018 - Wednesday

Session No.	Session Title & Speaker	Parameters related to Each Session	Rating				
			Excellent	Very Good	Good	Satisfactory	Unable to Judge
1	Dr. R.N. Patel Professor, ME Dept, IT, NU	Relevance of topic	24	3			
		Content Quality	24	2			
		Quality of Communication	23	4			
		Overall Delivery	22	5			
Any Other Comments:							
2	Analysis of Rarified Gas Flow Dr. Amit Agrawal, Professor, ME Dept, IIT, Bombay	Relevance of topic	16	11			
		Content Quality	15	1	1		
		Quality of Communication	17	10			
		Overall Delivery	16	11			
Any Other Comments:							
3	Application of Heat Transfer to solve industrial problems Dr. A.M. Lakdawala Asso. Professor MED, IT, NU	Relevance of topic	23	4			
		Content Quality	19	8			
		Quality of Communication	19	8			
		Overall Delivery	20	7			
Any Other Comments:							


 Dr. A M Lakdawala



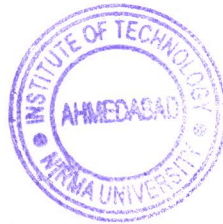

 Director, IT

Faculty Feedback Form

Date and Day: 21/06/2018 - Thursday

Session No.	Session Title & Speaker	Parameters related to Each Session	Rating				
			Excellent	Very Good	Good	Satisfactory	Unable to Judge
1	Fues Cell Technology Dr. Atul Bhargav, Asso. Prof. IIT, Gandhinagar	Relevance of topic	17	7	3		
		Content Quality	13	12		2	
		Quality of Communication	13	13	2		
		Overall Delivery	14	10	1	2	
		Any Other Comments:					
2	Investigation on CAN combustor Dr. R.D. Shah, Associate Professor, SVNIT, Surat	Relevance of topic	15	12			
		Content Quality	14	10	2	1	
		Quality of Communication	13	10	4		
		Overall Delivery	13	11	3		
		Any Other Comments:					
3	Bio-Diesel as an Alternative Fuels for IC Engine Dr. Purnanand Bhale,, Associate Professor, SVNIT, Surat	Relevance of topic	21	5	1		
		Content Quality	18	7	2		
		Quality of Communication	18	8	1		
		Overall Delivery	15	10	2		
		Any Other Comments:					


Dr. AMLakdawala




Director, IT

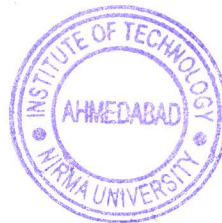
Faculty Feedback Form

Date and Day: 22/06/2018 - Friday

Session No.	Session Title & Speaker	Parameters related to Each Session	Rating				
			Excellent	Very Good	Good	Satisfactory	Unable to Judge
1	Boundry layer Theorem and its application to solve fluid mechanics problems Dr. Kunal Ghosh Professor (Visiting), MED, IT, NU	Relevance of topic	18	7	1	1	
		Content Quality	12	11	3	1	
		Quality of Communication	15	9	2	1	
		Overall Delivery	15	10	1	1	
		Any Other Comments:					
2	Dr. Vipul Tanna IPR, Gandhinagar	Relevance of topic	22	4	1		
		Content Quality	16	8	3		
		Quality of Communication	21	4	1	1	
		Overall Delivery	18	6	2	1	
		Any Other Comments:					
3	Heat Transfer Enhancement Using NanoFluid Dr. Sandip Sonawane, Professor, Sawitribai Phoole Engineering Collage, Nasik	Relevance of topic	18	8	1		
		Content Quality	12	14	1		
		Quality of Communication	16	8	3		
		Overall Delivery	15	9	3		
		Any Other Comments:					
4	Discrete simulation Monte Carlo Methods for analysis of flow in micro channel Dr. N.K. Shah, Asso. Professor, MED, IT, NU	Relevance of topic	18	7	1		
		Content Quality	16	9	1		
		Quality of Communication	15	8	2	1	
		Overall Delivery	16	9	1		
		Any Other Comments:					

th
Dr. A M Laxdewala

AM
Director, IT



Faculty Feedback Form

Date and Day: 25/06/2018 - Monday

Session No.	Session Title & Speaker	Parameters related to Each Session	Rating				
			Excellent	Very Good	Good	Satisfactory	Unable to Judge
1	Experimental Investigation on Boiling Heat Transfer Dr. V.J. Lakhera Professor & Head MED, IT, NU	Relevance of topic	24	3			
		Content Quality	22	4	1		
		Quality of Communication	20	7			
		Overall Delivery	19	7	1		
		Any Other Comments:					
2	Pump as Turbine for Micro - Hydro Power Plant Dr. S.V. Jain Asso. Professor MED, IT, NU	Relevance of topic	23	2	1		
		Content Quality	20	6			
		Quality of Communication	19	6	1		
		Overall Delivery	18	8			
		Any Other Comments:					
3	Radiation Heat Transfer Dr. Mitesh Shah, Professor ADIT, Anand	Relevance of topic	15	11	1		
		Content Quality	11	13	3		
		Quality of Communication	11	11	5		
		Overall Delivery	8	14	5		
		Any Other Comments:					
4	Demonstration of experimental facilities in the area of Thermal and Fluid Science at MED, IT, NU Prof. B.A. Shah, Assi.Prof., ME, IT, NU	Relevance of topic	19	8			
		Content Quality	15	11	1		
		Quality of Communication	18	6	3		
		Overall Delivery	16	9	2		
		Any Other Comments:					

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Dr. A M Lakdawala

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Director, IT



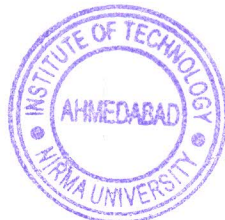
Faculty Feedback Form

Date and Day: 26/06/2018 - Tuesday

Session No.	Session Title & Speaker	Parameters related to Each Session	Rating				
			Excellent	Very Good	Good	Satisfactory	Unable to Judge
1	Lattice-Boltzmann Method for Analysis of Flow Over an Array of Square Cylinders Dr. Chandrashekhar Sewatkar, HOD, COEP, Pune	Relevance of topic	19	8			
		Content Quality	19	7	1		
		Quality of Communication	17	9	1		
		Overall Delivery	14	11	2		
		Any Other Comments:					
2	Improvement in the efficiency of wood stove Dr. A.W. Date IIT B	Relevance of topic	19	8			
		Content Quality	18	8	1		
		Quality of Communication	21	5	1		
		Overall Delivery	17	9	1		
		Any Other Comments:					
3	Heat Transfer analysis during Jet Impingement Dr. A.M. Achari Asso. Professor, MED, IT, NU	Relevance of topic	15	9	3		
		Content Quality	14	10	3		
		Quality of Communication	13	11	3		
		Overall Delivery	14	11	2	1	
		Any Other Comments:					
4	CFD Lab (Grid Generation) Dr. S.V. Jain/Prof. Anand S. Patel	Relevance of topic	19	6	2		
		Content Quality	17	9	1		
		Quality of Communication	20	6	1		
		Overall Delivery	18	8	1		
		Any Other Comments:					

Dr. A.M. Lakdawala

Director, IT



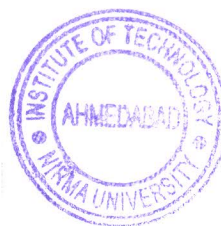
Faculty Feedback Form

Date and Day: 27/06/2018 - Wednesday

Session No.	Session Title & Speaker	Parameters related to Each Session	Rating				
			Excellent	Very Good	Good	Satisfactory	Unable to Judge
1	Advances in Refrigeration Engineering Dr S. Kachhwaha Professor, MED,PDP, U, Gandhinagar	Relevance of topic	20	7			
		Content Quality	18	5	4		
		Quality of Communication	19	5	3		
		Overall Delivery	17	8	2		
		Any Other Comments:					
2	Solar Technology Shri Deepak Gadhia Chairman, Excellent Renewable Pvt Ltd	Relevance of topic	23	3	1		
		Content Quality	24	3			
		Quality of Communication	21	6			
		Overall Delivery	18	9			
		Any Other Comments:					
3	CFD Lab (Laminar Flow) Dr. S.V. Jain/ Prof. Arvind Sankhla	Relevance of topic	19	5	1		
		Content Quality	15	8	2		
		Quality of Communication	16	7	2		
		Overall Delivery	17	7	1		
		Any Other Comments:					
4	CFD Lab (Laminar Flow) Dr. V.J. Lakhera/ Prof. Prashant J. Bagga	Relevance of topic	21	5			
		Content Quality	20	6			
		Quality of Communication	17	8	1		
		Overall Delivery	16	10			
		Any Other Comments:					


Dr. A M Laksheewala


Director, IT



Faculty Feedback Form

Date and Day: 28/06/2018 - Thursday

Session No.	Session Title & Speaker	Parameters related to Each Session	Rating				
			Excellent	Very Good	Good	Satisfactory	Unable to Judge
1	Experimental Analysis of Blood Flow in Micro Channel Dr. Siddhartha Tripathi, Assistant Professor BITS, Goa	Relevance of topic	20	7			
		Content Quality	17	8	2		
		Quality of Communication	19	8			
		Overall Delivery	20	6	1		
		Any Other Comments:					
2	Heat Transfer Analysis of Flow in Converging-Diverging Micro Channel Dr. Vijay Duryodhan Assistant Professor \$ IIT, Bhilai	Relevance of topic	20	7			
		Content Quality	18	8	1		
		Quality of Communication	20	6	1		
		Overall Delivery	18	8	1		
		Any Other Comments:					

Date and Day: 29/06/2018 - Friday

1	CFD Lab (Turbulent Flow) Dr. N.K. Shah/ Prof. Vishal Mehta	Relevance of topic	21	5			
		Content Quality	17	9			
		Quality of Communication	18	8			
		Overall Delivery	20	6			
		Any Other Comments:					
2	CFD Lab (Techplot) Dr. A.M. Lakdawala	Relevance of topic	22	5			
		Content Quality	22	5			
		Quality of Communication	21	6			
		Overall Delivery	20	7			
		Any Other Comments:					

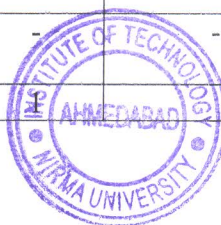
Date and Day: 30/06/2018 - Saturday

Session No.	Session Title & Speaker	Parameters related to Each Session	Rating				
			Excellent	Very Good	Good	Satisfactory	Unable to Judge
1	Dr. Manoj Gupta IPR, Gandhinagar	Relevance of topic	19	7			
		Content Quality	17	7	2		
		Quality of Communication	17	8	1		
		Overall Delivery	17	7	2		
		Any Other Comments:					

Programme Feedback Form

Sr. No.	Parameters	Rating				
		Excellent	Very Good	Good	Satisfactory	Unable to Judge
01	Reading Material	20	7			
02	Evaluation Methodology	21	5	1		
03	Visit to Industry	21	6			
04	Alumni Interaction	-	-	-	-	-
05	Group Discussion	18	8			

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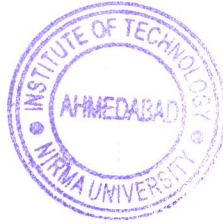
06	Inauguration Session	23	3	1		
07	Valedictory Session	22	5			
08	Audio-visual Aids	20	6	1		
09	Tea/Lunch	23	4			
10	Venue	25	2			
11	Other Arrangements	17	3			
Any Other Comments: STTP was very excellent and useful. The speakers are very excellent.						

AS

Dr. AM Lakdawala

MW

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Feedback Form for Programme Content

1. In order to know about the effectiveness of the programme, we need your honest feedback.
2. Your feedback will help us to improve the organization of future programmes.
3. Your feedback will be kept confidential and your responses will be anonymous.
4. Please give the answers in detail whenever is required.

1. Give your views about achieving the programme learning outcomes after participation in the programme.

After successful completion of the STTP, the faculty participant will be able to


Sr. No.	Learning Outcome	YES / NO, if NO give details
(a)	Get update with on going research activities in the field designing of Mechanical systems; which include thermal systems, production systems as well.	Yes (27)
(b)	Apply various aspects of industrial design and mechanical design;	Yes (27)
(c)	Appreciate the actual implementation of various update in technologies for their knowledge enhancement	Yes (27)

2. Give your view about adequacy of time duration of the programme for achieving all the Programme Learning Outcomes.

- Its relevant in every aspects of mechanical engineering
- The time duration was adequate to cover all aspects of thence of STTP
- The STTP could have been shifted to last week of June. Fist time management was excellent
- Time was adequate
- I feel its adequate
- Adequate time with discussion of in depth technical session
- Very good
- Very well planned
- Time was sufficient
- Sufficient time is provided
- If it would be for one week only, more external faculties can apply and get benefit of this STTP

3. Give your views about relevance of all topics covered in the programme with the programme learning outcomes.

- Most of the topics were relevant and we get the most benefit of it
- All the topics were relevant to the title of the programme
- All relevant from basic to advances
- Topics were very relevant
- All topics were relevant with multidisciplinary approach
- It was very good. Faculties who are not enrolled in Ph.D they can get more idea about topic selection
- Very good
- Relevant
- Excellent.

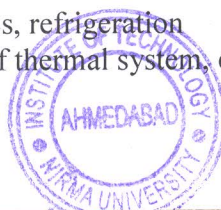

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4. Give your views about usefulness of knowledge acquired by you in the programme for enhancing your teaching and research abilities.
- Some of the lectures have got very much depth in the 2 hour lecture, which may create some problem
 - Various software can be explored to explain the modeling of problem / phenomenon
 - Interdisciplinary projects may be offered
 - It's relevant to enhance teaching ability
 - Very useful, got to know some area of research
 - Learned new things related to thermal engineering
 - Come to know about state of the research going on related areas
 - It will help in interdisciplinary research
 - Useful to have interdisciplinary project work
 - Very useful and interactive and gave much ideas for research
 - Very useful for class room teaching
 - Useful in - Technology learning and project guiding
 - It is helpful
 - Very good
 - Very much useful
5. Give your views about usefulness of knowledge acquired by you in the programme to your department and institute.
- Very much useful as far as knowledge up gradation is concern
 - Interdisciplinary projects may be offered
 - Its excellent to use for mini/minor projects
 - In fact I found all the topics relevant
 - Can be used and implemented for sponsored research project and M.tech. project
 - The knowledge would help in making the class room lecture more worthy
 - May definitely enhance ability to think in direction of new setup development in department / institute
 - interdisciplinary project like design, thermal can be performed
 - Project work for hydraulic and fluid mechanics
 - Very helpful
 - Most useful
 - Excellent
6. Highlight topics covered in this programme (upto five) which according to you is most relevant to the programme learning outcomes as well as having no relevance at all with the programme learning outcomes.
- a. Topics having significant relevance:**
- Application of heat transfer to solve industrial problems
 - Bio diesel as an alternative fuel for IC engine
 - CFD, techplot, optimization, fluid mechanics, cryogenics
 - Energy analysis, aerodynamics, rural technology, CFD
 - Air boiler design modification
 - Experiment analysis of blood flow in micro channel
 - Radiation heat transfer, concept of thermodynamics
 - Solar energy, nanofluids
 - Analysis of vapour refrigeration
 - Implementation of solar system in real life
 - Analysis of heat exchangers
 - Ice slurry and its use- fuel cells - biofuels
 - Nano fluid, IPR visit, Ice slurry
 - Thermodynamics, heat transfer, fluid mechanics, refrigeration
 - Concept of thermodynamics, energy analysis of thermal system, concept of fluid

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- mechanics, concept of heat transfer, boundary layer theory
- Introduction of thermodynamics
- Introduction of fluid mechanics
- TECPLOT introduction
- ANSYS heat transfer and fluent lab. session
- Solar energy and its future, cryogenic, basic topic, optimization
- Micro fluid
- Fluid mechanics
- Heat transfer
- Fuel types
- Experimental investigation on boiling heat transfer
- All
- Appropriate technology

b. **Topics having no relevance:**

- Boundary layer theorem
 - None
7. Suggestions for addition of topics not covered in the present programme but having significant relevance with programme learning outcomes.
- Renewable energy, future mobility
 - IC engines
 - All topics were covered
 - None
8. Give your suggestions for the areas/topics for which training is required by you in order to facilitate the department/institute to conduct future training programmes.
- Design engineering
 - Advances in CFD
 - Computational fluid dynamics lab session
 - Computational fluid dynamics
 - Nano technology
 - Alternative energy
 - Design and dynamics
 - Robotics technology
 - STTP in industry
 - Modeling of thermal system
9. Suggestions for further improvement for the present programme as well as in programmes to be organized in future.
- It should be limited to one week programme
 - None


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5. Group photographs and other important photographs along with suitable captions

Group Photos

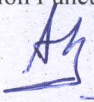
STTP - 2018

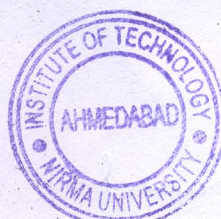


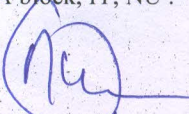
Group Photograph: STTP on "Advances in Thermal & Fluid Sciences"
18th June to 30th June 2018

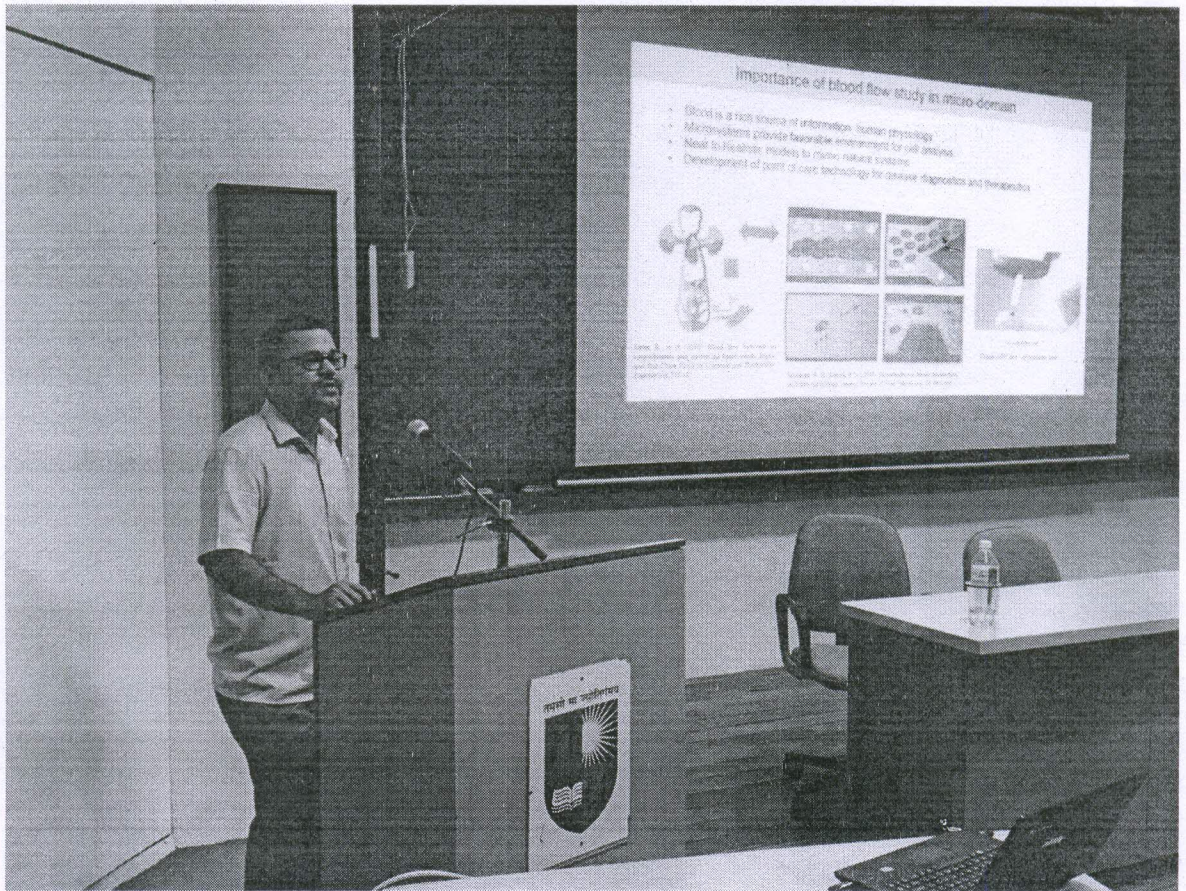


Inauguration Function of STTP on "Advances in Thermal & Fluid Sciences" @ A-201, A block, IT, NU.


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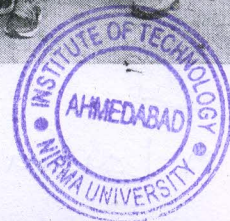

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Expert talk of Dr. Siddhartha Tripathi,,Assistant Professor ,BITS, Goa on “Experimental Analysis of Blood Flow in Micro Channel”



Industrial Visit at IPR, Bhat, Gandhinagar.
 Dr. A.M. Lakshminarayanan



Director, IT



Dr. R N Patel's expert talk on "Synthesis of Heat exchanger network in industries"

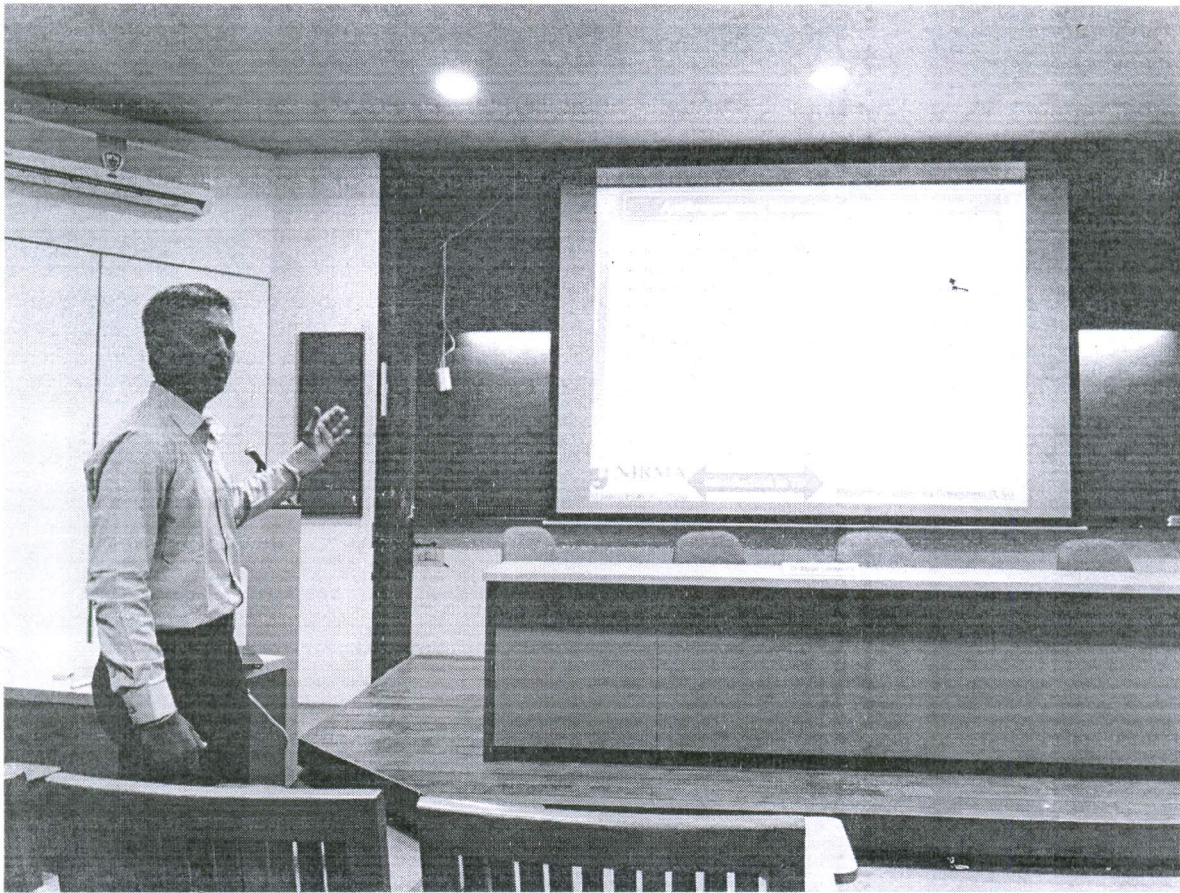


Dr. V J Lakhera's expert talk on "Experimental Investigation on Boiling Heat Transfer"

AM
Dr. A. M. Lakdawala



AM
Director, IT



Dr.A M Lakdawala has delivered lecture on "Application of Heat Transfer to solve industrial problems"

Dr.A M Lakdawala

Coordinator



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