



HINDUSTAN
INSTITUTE OF TECHNOLOGY & SCIENCE

SCHOOL OF MECHANICAL SCIENCES

DEPARTMENT OF MECHANICAL ENGINEERING

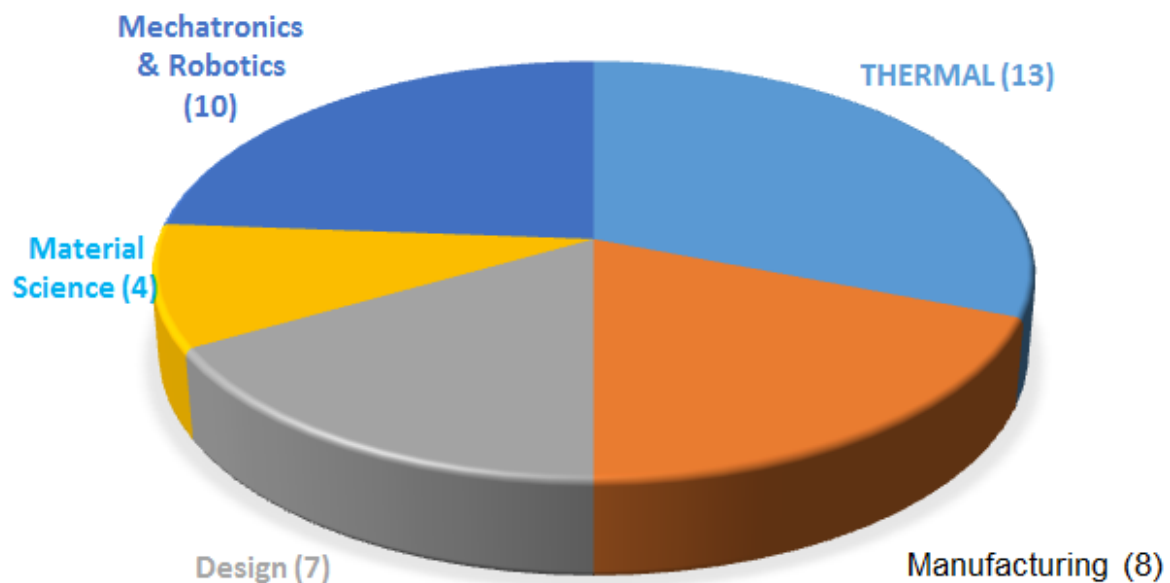
Genesis -School of Mechanical Sciences



STRENGTHS & UNIQUENESS

1. On going research, funded by MNRE, DRDO, NRB, DST- FIST
2. Faculty with Industry experience and Academic exposure
3. More than 30% of Faculty with Ph.D. and another 30% pursuing Ph.D.
4. Strong tie-up with industries having Research facilities
5. Prominent Alumni serving at highest level in various Government and private sectors.
6. Research in thrust areas:
 1. Condition Monitoring
 2. Computational Fluid Dynamics
 3. Internal Combustion Engines
 4. Refrigeration and Air-conditioning
 5. Composites

FACULTY COMPETENCY



STUDENTS PROJECT, AWARDS AND ACHIEVEMENTS

Baja

2015

1. 5th position in Suspension and Traction
2. 4th position in Hill Climbing
3. 20th position in Overall Ranking (Out of 118 Competitors from India)



2014



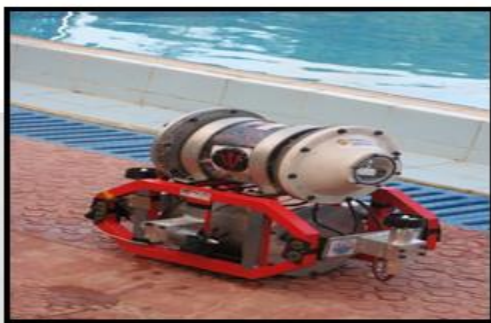
2013



2012



2011



2015 Hindustan University Team
-POSEIDON

Secured 3rd Position





2015 Go-kart

1. 6th fastest kart to clear the Technical Inspection out of 22 teams
2. Won the fastest skid pad in 30.27 seconds
3. 1st to line up for Endurance and it was also the 1st kart to complete Endurance
4. In static Events team stood 2nd position in Best Business Plan out of 51 teams



FSAE 2012



FSAE 2013



SUPRA 2014



Team : TAIYO ZEN 2015 Electric Solar Vehicle Championship 2014 by Imperial Society of Innovative Engineers

All India Rank 5th – in virtuals
(Only Team from Southern India in Top 5)

Indo-Asian Solar Challenge by Robotics and Intelligent System Community- LPU

All India Rank 3rd – in virtuals
(Only Team from Southern India in Top 5)

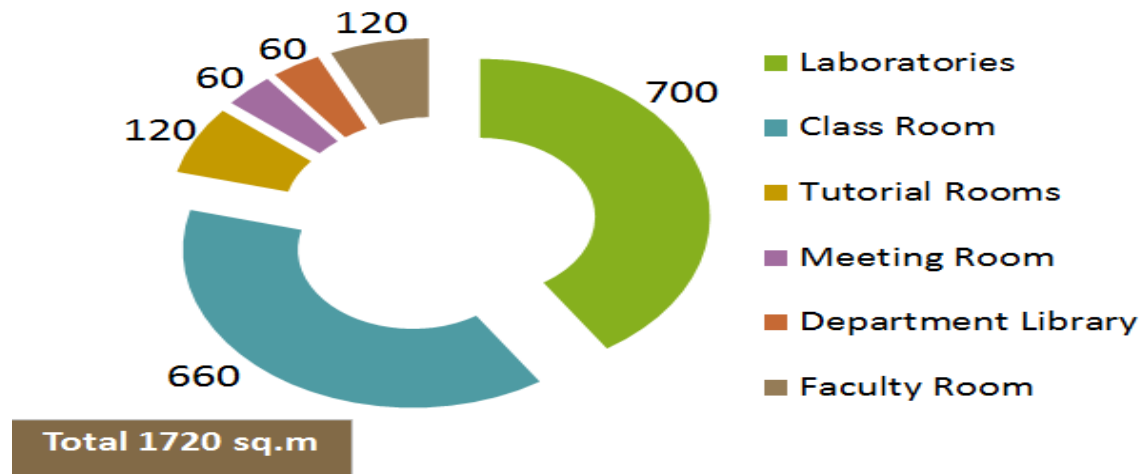


MARS Rover

Hindustan Mars Rover Team Project
ranked 18 globally in **NASA** Tech
competition developed by a team of 8
students from CSE, ECE, EEE,
Mechanical, Aeronautical and EIE

INFRASTRUCTURE

Laboratories, Faculty Rooms, Class Rooms (Area in sq. m)



Mechanical Laboratories

S.No	Name of the Laboratory
1	Heat Transfer Lab
2	Fluid Machinery Lab
3	Thermal Engineering Lab
4	Machine Shop
5	Special Machine Shop
6	Basic Work Shop
7	CAD Lab
8	SMC Automation Lab
9	Robotics Lab
10	CNC Lab
11	Metrology and Measurements Lab
12	Dynamics Lab
13	Refrigeration and Air conditioning Lab
14	CAM Lab
15	Mechatronics Lab

CAD LAB



3D Digital Printing



SMC – Automation Lab

Computing Facility

Computing Facilities- Hardware

Sl.No.	Lab/Place Installed	Total
1	CAD Lab-JB107	60
2	Mechatronics Lab	16
3	Robotics Lab	22
4	SMC Lab	5
5	CNC Laser lab	3
6	Administration	6
		112

Computing Facilities- Software

S. No	Name of the Lab	Name of the software	No. of Licence
1	CAD LAB	ANSYS V12	25
2		Pro E V 5.0	30
3		Solid works 2014	65
4		AutoCAD 2015	Freeware
5		AutoCAD 2016	Freeware
6	CAM LAB	Edgecam 2015	15
7	SMC LAB	AUTOSIM	5
8	ROBOTICS LAB	Solid works 2015	13
9		MOTOSIM	16
10		ADAMS	2
11		LAB VIEW	5
12	MECHATRONICS LAB	HYDRAULIC SIM V 4.0	5
13		FLUID SIM V 4.0	5
14		LAB VIEW	5
15	METROLOGY	GEOMAGIC	1

INDUSTRY/INSTITUTION COLLABORATION

Industrial collaboration / Consultancy					
S. No.	Year / Month	Name of Faculty	Project Title (Nature of consultancy)	Name of the Company / Organization	Value (Rs.) /Service
1	2016 February	Dr.D.Dinakaran Dr D G Harris Samuel	Ultrasonic Testing for Casting Skill Development Programme	Nelcast Ltd., Chennai	1,00,000/-
2	2016 January	Dr.D.Dinakaran Dr D G Harris Samuel	Computerized thickness gauging of casting components	Nelcast Ltd., Chennai	8,25,000/- (Ongoing)
3	February 2012	Dr.D.G.Roy Chowdhury Dr.D.Dinakaran	Plant Assessment Study	Superauto Forge Ltd., Chennai	1,08,000/-
4	May 2012	Prof.G.Ravikumar Solomon Dr.T.S.Ravikumar Mr.B.Prabakaran	Design of oil cooler for diesel locomotives	Universal Radiators, Coimbatore	1,21,000/-
5	August 2012	Dr.D.G.Roy Chowdhury Dr.T.S.Ravikumar Dr.D.Dinakaran Mr.P.Vijayabalan	Development of Guiding System for Heat Sealing Machine	Goodrich/UTC Aerospace Ltd., Bangalore	Students Development/ Placement
6	February 2012	Dr.D.Dinakaran Mr.Muthukumaran Mr K Anand	Analysis of Base Plate of a Bottle Filling Machine	Barry – Wehmiller International	Head Start Program for Students offered by BWIR
7	November 2011	Dr.D.G.Roy Chowdhury Mr.Muthukumaran	Failure Analysis in Centrifuge	Orchid Chemicals, Chennai	Students Project / Internship

STUDENT INTERNSHIP IN INDUSTRIES

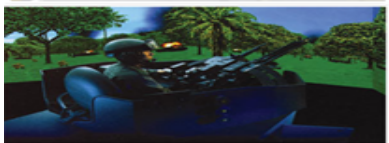
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|--|---|
| • Neyveli Lignite Corporation, Neyveli | • Core Plasto Enterprises, sidco industrial estate, guindy. |
| • Super Auto Forge, Thirumudivakkam | • Precision Equipments, Sriperumpudur, |
| • HIM Techno forge, Chandigarh | • CPRI, Bangalore, |
| • ELAC private ltd, Chandigarh | • Global Automations. |
| • Rambal India Ltd., | • Jindal Steel Works (JSW) Ltd., Bellary, Karnataka. |
| • TAFE, Pudupakkam, Chennai | • Global Automation, Bangalore |
| • Auto Micro Tech | • Chennai Port trust |
| • Ind Bharat Power Plant Tuticorine Port Trust | • Madras radiators, Chennai |
| • Dr. Cherian Hospital, Gummudipoondi | • Gandhimathi Appliances, Chennai |
| • TAFE Gears, Pudupakkam, Chennai | • Bangalore coil manufacturing company, Bangalore |
| • Steel Authority Of India, Salem | • Ennore Thermal Power Station |
| • Ashok Leyland, Ennore, Chennai | • North Madras Thermal Power Plant |
| • Ti Metal Forming, Murugappa Group, Padi, Chennai | |

FUNDED PROJECT



Design and Development of 1kW Hybrid Vertical Turbine system for low wind speed regimes

Funded by MNRE - (Rs.28 Lakhs) Dr. T. Michakumar



Trainer for Tactical Warfare

Funded by CVRDE – DRDO (Rs. 10 Lakhs)
Dr M M Ramya



Intelligent System for Underwater Imaging

Funded by NRB – DRDO (Rs. 20.01 Lakhs)
Dr M M Ramya

Total : 66.25 Lakhs



Non Destructive Ultrasonic Inspection of Casting

Funded by - NELCAST (Rs. 8.25 Lakhs)
Dr D Dinakaran, Dr Harris Samuel

PUBLICATION

Research Scholars Registered in Mechanical Dept. (37)

S. No.	Year	Internal Registration	External Registration	Total Registered	Completed
1	2014 – 15	4	10	14	
2	2013- 14	6	4	10	
3	2012- 13	1	1	2	2
4	Before 2012	4	7	11	

S.No.	Research Areas	No. of Scholars
1	Numerical Simulations and CFD	3
2	Composites	8
3	Material behavior	4
4	Condition monitoring	4
5	Alternate Fuels	3
6	Heat Transfer	3
7	Manufacturing processes	9
8	Energy	3

PATENT APPLIED

S.No	Patent Title	Faculty	Period
1	Human and Animal Waste Scooping machine	Dr. D. Dinakaran	June 2014*
2	Thermal storage with PCM	Dr. G. Ravikumar Solomon	Dec 2014*
3	A Novel Design of Circular Axis Four Stroke Engine	Dr. T.S. Ravikumar	Dec 2014*
4	Modified gear shifter for two wheelers	Mr. Ramanarayanan	Dec 2014
5	Design and analysis of Vertical axis windmill	Dr. Micha Premkumar	Dec 2014



OTHER EVENTS



MAJOR EVENTS

← International conference on Recent Trends in Renewable Energy Systems - ICRTIRES - 2011

International Conference on Robotics, Automation, Control and Embedded systems - RACE 2015

