Bi-Annual E-Magazine of Mechanical Engineering Department





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CHANDRAYAAN 3

A Mission Of Hope For a The Future Of Space Exploration

CONTENTS





01	Vision & Mission	03
02	HOD Message	04
03	Departmental Activity and Events	05
04	Parent Teachers Meeting	13
05	Annual Cultural Fest (REVA Fest 2023)	14
06	Student Startup & Innovation Policy	15
07	IE (I) Student Chapter Activity	16
08	MOUs of Department	17
09	Technical Article	18
10	Student Speaks	21
11	Students and Faculty Achievements	24
12	Students Corner	30
13	Placement	33
14	Theme Article	35
15	Editor Desk	37

Vision & mission







DEPARTMENT

Vision:

To play an active role in producing globally competent mechanical engineers to make technologically proficient, innovative, enthusiastic, future leaders and responsible citizen possessing human values to contribute significantly to wards meeting global challenges.

Mission:

- 1) To provide sound basic knowledge of basic principles of engineering by imparting theoretical and practical understanding of various aspects of Mechanical Engineering.
- 2) To explore Institute Industry linkage for fostering professional skill of students enabling them to become industry ready.
- 3) To bring in good governance ,transparent evaluation system and professional standards for ethical and human values in students.
- 4) To design and organise training programme to offer wide choice to industry and academia for their skills enhancement.
- 5) To promote faculty and staff members to become resourceful, innovative and through various development programmes.
- 6) To serve society through innovation and excellence.

YANTRAM

Vision:

To be a preeminent Instrument that depicts technical and nontechnical matters among the department.

Mission:

To be the great resource for the quality reporting and analysis of departmental stuffs.

HOD MESSAGE...









Albert Einstein said, "Education is not about learning of facts but training young minds to think."

Learning is not confined up to the four walls of Classroom rather it is beyond that. It is not limited up to a prescribed curriculum. The world is changing at an accelerated rate & we as educators need to pause & reflect on the entire system of education. Thus we need to forge ahead with a well balanced curriculum, facilities that nurture not only academic areas but co-curricular areas too. Our mission is to provide an outstanding education and inspire our in both academic and enriching extra-curricular students to engage programmes. We aim at sharpening of skills and enhancement of knowledge base in our students through various extra-curricular, co-curricular and curricular activities. This is enabled through our faculty who not only keep themselves at par with the current developments but also contribute to the expansion of the body of knowledge in their field of expertise. And it is proved by through this e-magazine in which the Department has shown various activities conducted to upgrade young minds.

So dear students remember

"We innovate to change.

Accept, Adopt, Adapt to Achieve.

Fear not, take a big step & cross the chasm."



Mr. Samir D. Jariwala,

Head, Department of Mechanical Engineering, Shroff S. R. Rotary Institute of Chemical Technology, UPL University of Sustainable Technology.





Sr. No.	Industry name	Tentative Schedule	Semester
1	SPRERI, Anand	23-01-23	4 th , 6 th , 8 th BE
2	Adani Mudra Port	28-02-23 to 02-03-23	6 th and 8 th BE
3	Miranda Tools, Ankleshwar	16-03-23	4 th , 6 th BE
4	Shreeji Engineers	18-3-23	4 th (BE & DE)
4	Hem Marketing Solutions	18-3-23	4 th (BE, DE)
5	Analpa Industries, Ankleshwara	21-03-23	4 th & 6 th BE 4 th DE
6	Sundha Engineering Works, Ankleswar	05-04-23	4 th (BE & DE)
7	Amalff, Ankleshwar	06-04-23	4 th (BE & DE)
8	NPCIL, Kakrapar	11-05-23	4 th , 6 th , 8 th BE





Industrial visit to Shreeji Engineers Industries, Baroda for (BE 2nd, 4th & DE 4th) Semester Mechanical Engineering students on: 18/03/2023. Students are able to deeply understand the working of different types of machines used in engineering works.







Industrial visit to Hem Marketing Solution Industries, Baroda for (BE 2nd, 4th & DE 4th) Semester Mechanical Engineering students on :18/03/2023. Students are able to deeply understand the working of different types of machines used in engineering works.







Industrial visit to Analpa Industries, Ankleshwar for (BE 4th, 6th & DE 4th)

Semester Mechanical Engineering students on 21/03/2023. During the visit students have understood the working of different types of machines used in engineering works.







Industrial Tour to Adani Port and Thermal Power Plant of Adani Infrastructure, Kutch

Under the Project UDAAN From 28/02/2023 to 02/03/2023



Industrial tour to Adani Port and Thermal Power Plant of Adani Infrastructure, Kutch, for Mechanical engineering students. Total 38 Students were visited the plant and all were enriched with the complete knowledge of industry.



EXPERT LECTURES



Mer





Sr. No.	Industry name	Name of Expert	Designation of Expert	Address	Subject
1	Alembic Pharmaceutical Ltd.	Mr. Kalpesh Berawala	AGM, HR & Administration	Vadodara	Personality Development
2	Shree Ambica Auto Sales & Services	Mr. Jaydeepgiri Goswami	General Manager (HR)	Amboli, Surat	Ethical Values
3	United Phosporus Ltd.	Mr. Ankur Modi	Team Leader	Jhagadia	Basics of Power Plant
4	Xoriant	Mr. Vaibhav Sumant	Presales Director	Pune	Tech plus business
5	Mechman Solution	Mr. Ankur Patel	Education Team Leader	Vadodara	Orientation of CAD-CAM
6	United Phosporus Ltd.	Mr. Meet Shah	Graduate Engineer Trainee	Jhagadia	Roles of Mechanical Engineers in the industry

PEER LEARNING INITIATIVE



	Therease I have been a second as a second						
Sr. No	Enrollment No. of Student	Name of student with SEM	Date of PLI	PLI Subject Name	Name of Concerned Faculty		
1	210990119503	RANA SANDEEPKUMAR	04/03/23	OR	Dr Divyang		
2	210990119503	RANA SANDEEPKUMAR	17/03/23	OR	Dr. Divyang		
3	200990119014	DUBEY HIMANSHU S.	12/04/2023	SOM (DE)	Mr.Chetan R. Patel		
4	190990119509	RAJPUROHIT AKSHAY ROOPSINGH	17/04/2023	AE	Mr.Chetan R. Patel		
5	210990119503	RANA SANDEEPKUMAR	18/04/2023	SOM (DE)	Mr.Chetan R. Patel		
6	190990119510	RANA MIHIRKUMAR DEEPAKKUMAR	18/04/2023	AE	Mr.Chetan R. Patel		
7	210990119503	RANA SANDEEPKUMAR	17/04/23	MP	Sandhya Shetty		
8	210102106001	ANJEET KUSHWAHA	17/4/23	HT (DE)	Mr. Gunjan Kumar		
9	210102106001	ANJEET SKUSHWAHA	18/04/23	TE (DE)	Mr. Satish Verma		

PARENTS TEACHER MEETING





Parents teacher meeting conducted by Mr. Samir D. Jariwala, HOD of mechanical engineering on 4th May. Parents were informed about the department activities, events, exams and placement.



ANNUAL CULTURAL FEST

REVA FEST 2023

Rendezvous with Entertainment in Variety of Arts





REVA FEST 2023 "Annual Cultural Festival" of UPL University of Sustainable Technology was celebrated on 21st April 2023 at Ankleshwar Gymkhana under the theme of G20 and program was organized by department of mechanical engineering, coordinated by Dr. Hiren Mahida. The program was grand success and appreciated by UPL Management.





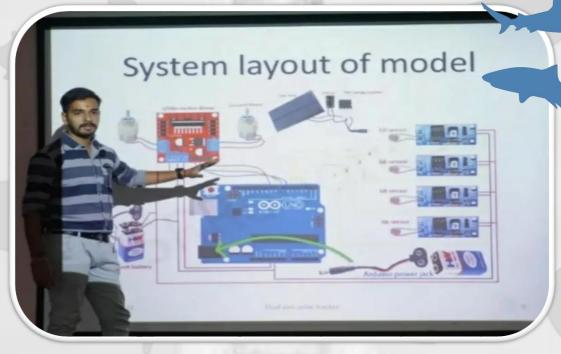


STUDENT STARTUP & INNOVATION POLICY



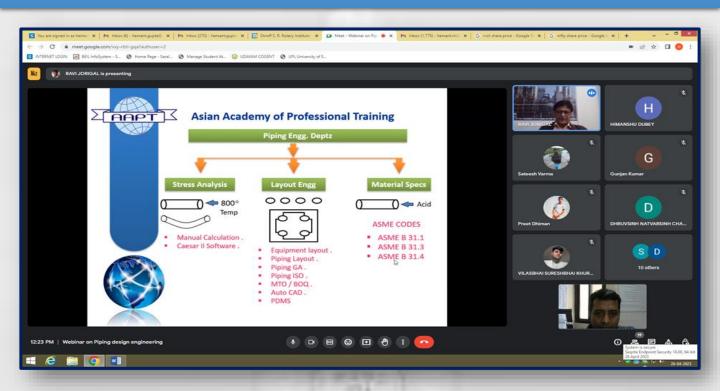


SHARK ATEEN



- > SSIP Shark Teen Event was organized by SSIP Team on 21st March-2023.
- > DE-4th Sem. Mechanical (Nilesh Yadav & his team)
- > BE-4th Sem. Mechanical (Choksi Jay & his team)
- These 2 teams were mentored by Mr. Samik P Bhatt
 (Asst. Prof. MED, SRICT, UPL University) and from these 2 teams budget was asked for further growth. Both the teams of Mechanical had been appreciated based on their proposed work in SSIP by all the sharks.

IE (I) STUDENT CHAPTER ACTIVITY



Under IE (I) Student Chapter, A Webinar was conducted on "Career Opportunities in Piping Design Engineering" on 26th April, 2023 by Mr. Ravi Jorigal, Manager- Development Asian Academy of Professional Training India Pvt. Ltd., Pune.



MOUS OF DEPARTMENT



Rangam Industries

On 24th March, 2023



Shree Sundha Engineering

On 29th March, 2023



Pratish Industries

On 24th February, 2023



HEM Marketing Services

On 28th April, 2023



Mechman

On 28th April, 2023.



TECHNICAL ARTICLE



SPACE TECHNOLOGY IN INDIA SRRI ISPO

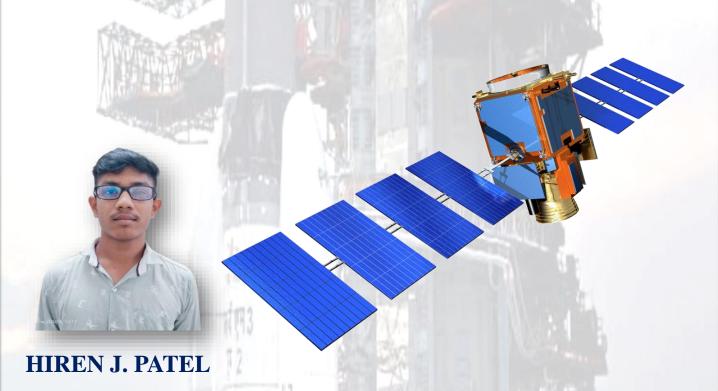
Universe and the solar system residing inside it has always attracted the humans from a very anoint Time. There always has been a battle to explore further and research as much as possible. Developed nation have always domination this sector due to their advanced technologies and resources. But today INDIA is also counted among most successful space organizations of the world.

INDIA space programmer began in 1962 under the leadership of Vikram Sarabhi. And then in 1969, ISRO was established for future development of the space and technology in India abbreviation "ISRO" stand for the Indian space research organization. Dr. Sarabhai was appointed as first chairman of this organization. Objective of the ISRO was towards self-reliant use of space technology and data for the development of India. India lunched its first space satellite "Arya Bhatta" on April 19th, 1975. It was launched with the help of a soviet rocket. The second satellite "Bhaskar" was lunched 7th June 1917 from a Soviet Cosmodrome and then "Rohini" was lunched.

18

The launching of chandrayan-1 in 2008 marked a millstone in history of India. Then on wards India made success programs in the file of space research. Chandrayan-2 is India's second launcher mission developed by ISRO after Chandrayan-1. Then Chandrayan-3 it the third lunching exploration mission by the ISRO. It was launched 14th July, 2023, from the Satish Dhawan space Centre in Sriharikota, Andhra Pradesh, India. The mission objectives of Chandrayan-3 are to demonstrate a sate and soft landing on the Luna's surface, to demonstrate rover roving on the moon and to conduct in-site scientific experiments. To achieve the mission objectives, several advanced technologies are person in lander & RF based altimeters, vela meters. Propulsion system etc.

Mechanical engineers play several important roles at ISRO. Across various divisions and project. Mechanical engineers are involved in the design and analysis, satellites, launch vehicles, and ground – based infrastructure. They utilize Computer Aided Design (CAD) software and engineering systems and also contribute to the manufacturing & fabrication.

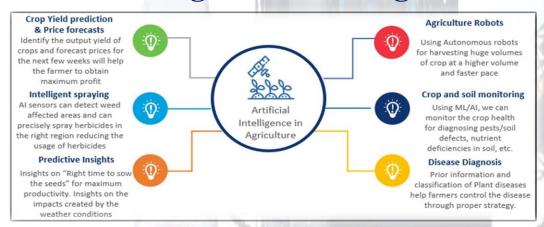


B.E. Mechanical Engineering (2021 Batch)

TECHNICAL ARTICLE



Using AI for Intelligent Spraying Of Chemicals -Brings in cost savings



Every day, farms produce thousands of data points on temperature, soil, usage of water, weather condition, etc. With the help of artificial intelligence and machine learning models, this data is leveraged in real-time for obtaining useful insights like choosing the right time to sow seeds, determining the crop choices, hybrid seed choices to generate more yields and the like.AI systems are helping to improve the overall harvest quality and accuracy – known as precision agriculture.

AI technology helps in detecting disease in plants, pests and poor nutrition of farms. AI sensors can detect and target weeds and then decide which herbicide to apply within the region. This helps in reduced usage of herbicides and cost savings. Many technological companies developed robots, which use computer vision and artificial intelligence to monitor and precisely spray on weeds. These robots are able to eliminate 80% of the volume of the chemicals normally sprayed on the crops and bring down the expenditure of herbicide by 90%.

These intelligent AI sprayers can drastically reduce the number of chemicals used in the fields and thus improve the quality of agricultural produce, and bring in cost efficiency.



Himanshu Dubby B.E. Mechanical Engineering (2020 Batch)

STUDENTS SPEAKS



Warm greetings to all to be mechanical engineers I am glad to share my experience of 4 years journey in UPL University which was known as SRICT previously. My journey of Mechanical engineering was a blend of education as well as enjoyment. I also came to know about ROTARACT CLUB in the college which enhanced my professional as well as personal skills.

This college also opened many doors of opportunities for leadership and team management skills and this built up the confidence in me. The teachers of the mechanical department are very cooperative in both curricular as well as career growth. They also taught me many life lessons. The friends that I made in this college were a plus point for me which made my 4 years full of happiness and mischief too.

Currently I am placed at the UPL Ltd. Vapi. Its been a honour to call

myself as an "SRICTian"



CHIRAG MODI
Mechanical Engineering
(Batch 2019)

STUDENTS SPEAKS



National Cadet Corps

The National Cadet Carps is the youth wing of the Indian armed forces. It is a tri-service organisation comprising of the Army, Navy and Air wing. The motto of NCC is Unity and Discipline. (Ekta aur Anushasan) which was taken in the 12th CAC meeting held on 12th October 1980.

The NCC was founded by the Government of United Kingdom on 16 April 1948, however it came into existence from is July 1948. The NCC is headed by a director who is responsible for the functioning of NCC in country through the NCC Headquarters situated at New Delhi. The current director general of NCC is Lt. General Gurbirpal Singh. NCC has its own Flag. It contains NCC Crest in, gold in the middle, with the letters "NCC" encircled by a wreath of 17 lotuses with a background in Red, Blue and light Blue. Red depicts the Army, Deep Blue depicts the Navy and Light Blue depicts the Air Force. The 17 lotuses represent the 17 state Directorates. Unity and Discipline" (Ekta or Anushasan) is written at the bottom of NCC Flag.

22

NCC aims at developing Leadership, Discipline, team spirit, Courage and confidence. The total training period for a cadet is 3 years for seniors with an extension of I year permissible & training period for juniors is of 2 years. Every cadet of the Senior or Junior Division has to undergo service training for a period of at least 4 hours per week during the training year.

I would like to share some of my thoughts that's I have experienced in NCC. To be a NCC cadet is like being unique, hardworking, dedicated, punctual, and most of all, an achiever. It inculcates the attitude of never giving up, makes you optimistic and builds a lot of selfconfidence and character. The life as a cadet is one of the best experiences one can ever have as it teaches them life as it is and shows how it is to be an officer in the Indian Armed Forces. NCC, however is a bit underrated when it comes to joining the armed forces. As matter of fact, NCC cadets live life like an officer without being a part of the premier Indian military training institutes like NDA and IMA.

I really proud to be a part of NCC subunit of UPL University of sustainable technology.



Vilash Khurkutiya GJ22SDA0521 BE-mechanical

STUDENT ACHIEVEMENTS





Elite

nline Certification Funded by the MoE, Govt. of India)



This certificate is awarded to

HIMANSHU SURYAMANI DUBEY

for successfully completing the course

Operations Management

with a consolidated score of

Online Assignments 24.06/25 Proctored Exam

Total number of candidates certified in this course: 1053



Jan-Apr 2023 (12 week course)





Indian Institute of Technology Roorkee

Roll No: NPTEL23ME45S34700018

To validate the certificate



No. of credits recommended: 3 or

Himanshu Suryamani Dubey & Ritik Singh students of mechanical engineering successfully completed Online Certification courses in "Operation Management".



Elite

nline Certification



(Funded by the MoE, Govt. of India)

This certificate is awarded to

RITIK SINGH

for successfully completing the course

Operations Management

with a consolidated score of

Online Assignments | 22.81/25 | Proctored Exam 40.5/75

Total number of candidates certified in this course: 1053



Prof. Sanjeev Manhas Coordinator, Continuing Education Centre

Jan-Apr 2023 (12 week course)

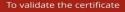




Indian Institute of Technology Roorkee









SPORTS





KABADDI



















Abhay Mishra
Mechanical Engineering
(2021 Batch)



Shining Stars of Mechanical Engineering





Mihir Rana
B.E Mechanical Engineering
SPI-10 | CPI- 9.07



Vilash Khurkutiya

B.E Mechanical Engineering

SPI-9.25 | CPI- 9.41



Nilesh Yadav
Diploma Mechanical Engineering
SPI-10 | CPI-9.80

FACULTY ACHIEVEMENTS



Mr. Girish Bramhakshatriya of mechanical engineering successfully completed NPTEL Online Certification courses in "Impaction and quality control in manufacturing" & "Introduction to machining and machining fluids".



Elite

NPTEL Online Certification



Funded by the MOE, Govt. of India)

This certificate is awarded to GIRISHKUMAR MOHANLAL BRAMHAKSHATRIYA

for successfully completing the course



Introduction to Machining and Machining Fluids

with a consolidated score of

To validate the certificate

76

Online Assignments

17.5/25 Proctored Exam

am 58.5/75

Total number of candidates certified in this course: 114



Dr. Bharath Kumar Chairman, Centre for Continuing Education IIT Tirupati

Roll No: NPTEL23ME22S35650182

Jan-Mar 2023 (8 week course)





Indian Institute of Technology Tirupati



No. of credits recommended: 2 or 3



Elite

NPTEL Online Certification



(Funded by the MoE, Govt. of India)

This certificate is awarded to

GIRISHKUMAR MOHANLAL BRAMHAKSHATRIYA

for successfully completing the course

Inspection and Quality Control in Manufacturing

with a consolidated score of 64

%

Online Assignments 20/25

5 | F

Proctored Exam

43.5/75

Total number of candidates certified in this course: 719



Prof. Sanjeev Manhas Coordinator, Continuing Education Centre IIT Roorkee Jan-Feb 2023 (4 week course) Prof. Priti Maheshwari
NPTEL Coordinator
IIT Roorkee



Indian Institute of Technology Roorkee

No. of cr

No. of credits recommended: 1 or 2

Roll No: NPTEL23ME47S45650309

To validate the certificate

FACULTY ACHIEVEMENTS



Ms. Sandhya B N & Mr. Satish Verma was completed 15 Days online FDP on "TOT The Program on 3D Printing/Additive Manufacturing" conducted by NIELIT, Calicut.





FACULTY ACHIEVEMENTS

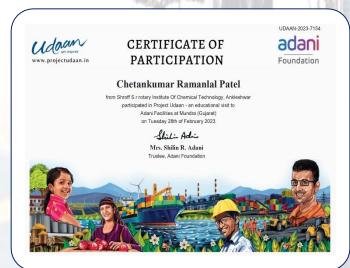
Dr. Hemant Gupta was invited as a session chair & speaker during 5th International Conference PICET-2023 at Parul University on 5th May 2023.

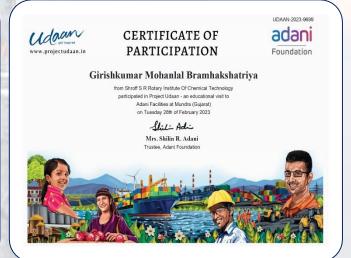






Mr. Chetan Patel and Mr. Girish Bramhakshatriya participated in industrial tour along with students at Adani Port and Thermal Power Plant of Adani Infrastructure, Kutch.





STUDENTS CORNER

Photography

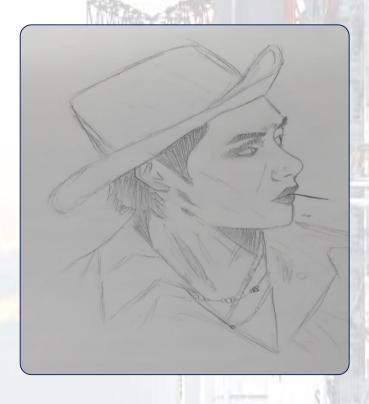


Nilesh Yadav
Diploma Mechanical Engineering
(2021 Batch)









Pencil Sketch



Jenish RajwadiDiploma Mechanical Engineering
(2021 Batch)

STUDENTS CORNER

National Service Scheme

वृक्ष लगाओ, प्रकृति को सजाओ, प्रेम से रखो इनका ख्याल।

हरियाली से सजे, धरती का अंगन, वृक्षों के बिना कैसे होगा संसार संतुलित और समृद्ध। वृक्षारोपण करना है आज जरूरी, हम सब मिलकर करें प्रयास, सुंदर बनाएं भविष्य हमारी। वृक्षों को बचाएं, प्राकृतिक सौंदर्य सजाएं, प्रकृति के रंगों में खो जाएं।

वृक्ष हैं जीवन के महान, प्राकृतिक संतुलन के रखने में उनका बड़ा योगदान।

जीवन दान करें, वृक्ष हैं महान, प्राणियों का वह आधार स्थान।

हर वृक्ष से भरा, है यह संसार, प्रकृति के रंगों में खो जाएं।

वृक्ष लगाना है आज जरूरी, प्रकृति को बचाएं,

बनें सब साथी।

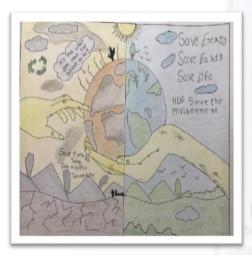


Nilesh Yadav
Diploma Mechanical Engineering
(2021 Batch)



STUDENTS CORNER

Pencil Sketch & Drawing







Preet Dhiman

B.E. Mechanical Engineering



Vilash Khurkutiya
B.E. Mechanical Engineering







Kreish Devenbhai Desai
B.E Mechanical Engineering

PLACEMENT

Congratulations

Achieving 100% Placement



Mihir Rana



UPL Limited



Dhruv Prajapati



Bhargav Vansia



Chirag Modi



Akshay Rajpurohit





Sohang Patel

PLACEMENT

Congratulations

Achieving 100% Placement





Pentaphos Industries Pvt. Ltd.

Piramal Pharma Ltd.





Jaydeep Vansia



Saurabh More



Gujarat **Fluorochemicals** Ltd.

Meghmani Finechem Ltd.





Paithviraj Chuauhan





Meghmani **Industries** Ltd.

THEME ARTICLE

Chandrayaan-3







Chandrayaan-3 was launched on 14th July 2023, at 2:35 PM IST as scheduled, from Satish Dhawan Space Centre Second Launch Pad in Sriharikota, Andhra Pradesh, India. The spacecraft has been effectively placed in the trajectory it will take to reach the moon. It is anticipated that the Chandrayaan-3 mission will achieve a soft landing on the lunar South Pole region on 23rd August.

Chandrayaan-3 is a follow-on mission to Chandrayaan-2 to demonstrate end-to-end capability in safe landing and roving on the lunar surface. It consists of Lander and Rover configuration. It will be launched by LVM3 from SDSC SHAR, Sriharikota. The propulsion module will carry the lander and rover configuration till 100 km lunar orbit. The propulsion module has Spectro-polarimetry of Habitable Planet Earth (SHAPE) payload to study the spectral and Polari metric measurements of Earth from the lunar orbit.

Lander payloads: Chandra's Surface Thermophysical Experiment (ChaSTE) to measure the thermal conductivity and temperature; Instrument for Lunar Seismic Activity (ILSA) for measuring the seismicity around the landing site; Langmuir Probe (LP) to estimate the plasma density and its variations. A passive Laser Retroreflector Array from NASA is accommodated for lunar laser ranging studies. Rover payloads: Alpha Particle X-ray Spectrometer (APXS) and Laser Induced Breakdown Spectroscope (LIBS) for deriving the elemental composition in the vicinity of landing site.

Chandrayaan-3 consists of an indigenous Lander module (LM), Propulsion module (PM) and a Rover with an objective of developing and demonstrating new technologies required for Inter planetary missions.

35

The Lander will have the capability to soft land at a specified lunar site and deploy the Rover which will carry out in-situ chemical analysis of the lunar surface during the course of its mobility.

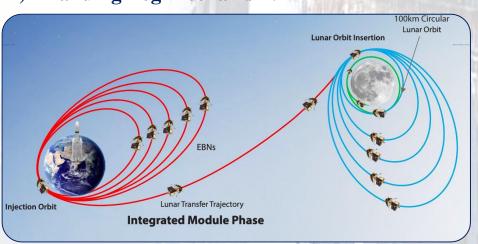
The Lander and the Rover have scientific payloads to carry out experiments on the lunar surface. The main function of PM is to carry the LM from launch vehicle injection till final lunar 100 km circular polar orbit and separate the LM from PM. Apart from this, the Propulsion Module also has one scientific payload as a value addition which will be operated post separation of Lander Module. The launcher identified for Chandrayaan-3 is GSLV-Mk3 which will place the integrated module in an Elliptic Parking Orbit (EPO) of size 170 x 36500 km.

The mission objectives of Chandrayaan-3 are:

- 1. To demonstrate Safe and Soft Landing on Lunar Surface
- 2. To demonstrate Rover roving on the moon and
- 3. To conduct in-situ scientific experiments.

To achieve the mission objectives, several advanced technologies are present in Lander such as,

- 1) Altimeters: Laser & RF based Altimeters
- 2) Velocimeters: Laser Doppler Velocimeter & Lander Horizontal Velocity Camera
- 3) Inertial Measurement: Laser Gyro based Inertial referencing and Accelerometer package
- 4) Propulsion System: 800N Throttle able Liquid Engines, 58N attitude thrusters & Throttle able Engine Control Electronics
- 5) Navigation, Guidance & Control (NGC): Powered Descent Trajectory design and associate software elements
- 6) Hazard Detection and Avoidance: Lander Hazard Detection & Avoidance Camera and Processing Algorithm
- 7) Landing Leg Mechanism.





Sandhya Shetty Lecturer in MED

FROM THE DESK OF EDITOR..

A news letter is like a mirror which reflects the clear picture of all sorts of activities under taken by the Department. It is a matter of great pride and satisfaction for Mechanical Engineering to bring out the Newsletter. We are confident that this issue of the Mechanical Engineering Department newsletter will send a positive signal to all the students, faculty and staff. We are indeed very happy and proud in bringing this newsletter about the latest developments and Programs in the department. Newsletter acts as a communication channel among the alumni, faculty, students and experts in Mechanical Engineering fields.

Congratulations to the Editorial Board of this newsletter who have played a wonderful role in accomplishing the task. Heartfelt gratitude to HOD, Faculty, staff members and Students for their fruitful effort during the period.











Department of Mechanical Engineering

CONGRETULATIONS

For 100% Result & Placement



All the best for your future endeavors