



SurTech

**Dr. Sudhir Chandra Sur Institute of Technology & Sports Complex**

540, DumDum Road, Surer Math (Near Dum Dum Jn. Station), Kolkata-700074

Website: [www.surtech.edu.in](http://www.surtech.edu.in), Email ID: [info@dsec.ac.in](mailto:info@dsec.ac.in)

Affiliated to Maulana Abul Kalam Azad University of Technology

West Bengal, WBSCTVESD and Approved by AICTE



**JIS GROUP**  
Educational Initiatives

# IGNITION

## NEWSLETTER

### DEPARTMENT OF AUTOMOBILE ENGINEERING

Volume: 3

DECEMBER, 2021



## Contents

- ❖ From Managing Director's Desk
- ❖ From Principal's Desk
- ❖ From HoD's Desk
- ❖ Departmental News
  - General
  - Faculty Achievements
  - Student Achievements
- ❖ Departmental Events



## From Managing Director's Desk



The main focus of our group is to empower students with sound knowledge, wisdom, experience and training both in the academic level of Engineering and Technology in the highly competitive global industrial market.

Adequate care is taken to give every student an enjoyable, well-rounded and secure educational environment. Help and care is always at hand for the students. Publishing departmental newsletter indicates a continuous growth of not only the department but also the faculty and students. I wish the best for all our students, and the members of the college who reiterate their aims at providing the best in academic and extra-curricular fields on excellent lines.

**Sardar Taranjit Singh**

## From Principal's Desk



The key to Happiness is not that you never get Angry, Upset, Frustrated, Irritated or Depressed. It's how fast you decide to get out of it.

Dear Students, If you are determined to work hard to achieve your goal, nothing in this world can deter you from achieving your goal. However, if at the outset you fail to get your goal, figure out whether some changes are needed in your set goal as per your potential.

Again work with great vigor you will definitely achieve your goal. If you have set your goal, strive hard to achieve it and the success will be yours. Making excuse for not doing things is very easy, equally easy is finding reasons, ways and means for doing it. Try to develop positive mindset and attitude, so that a value based success and goal can be achieved. A quotation for all my budding technocrats:

"I was always looking outside myself for strength and confidence, but it comes from within. It is there all the time."

– Anna Freud

**Till next newsletter all the best!**

**Prof. (Dr.) Saradindu Panda**



## From HoD's Desk



It is our great pleasure to present you the Newsletter 'IGNITION' of Automobile Engineering Department, Dr. Sudhir Chandra Institute of Technology and Sports Complex. The Newsletter focuses on all the Departmental Activities enlightening the actions, events, proceedings in which our departmental students and faculty members have participated with great zeal.

We believe you'll be creative enough in your lives to make the best of this situation. We must start fighting instantly after falling down because of a failure. This is how stories will be made; stories of fighting and indomitable spirit. We, the Department of Automobile Engineering promise to help you at every point of your endeavors. So, focus on your studies. Focus on your lives and try to make it better every day. We are here to help you out. On behalf of all the faculty members and as the mentor of Automobile Engineering Department, I would like to say that, we are here to take care of you and we assure that we will provide the best education possible at all and every conditions.

**Mr. Arindam Mukherjee**



SurTech

# Departmental News



JIS GROUP  
Educational Initiatives

## Webinars Conducted

**INSTITUTION'S INNOVATION COUNCIL, DSCSDEC**

**ORIENTATION SESSION ON NATIONAL INNOVATION AND STARTUP POLICY (NISIP)**

**Speaker**  
**Mr. Tanmoy Kundu**  
NISIP Coordinator, DSCSDEC

**18th January, 2021**  
**7.30 PM onwards**

**Meeting Link**  
[meet.google.com/gcs-kgrp-fhs](https://meet.google.com/gcs-kgrp-fhs)

Orientation Session on National Innovation and Startup Policy

**Dr. Sudhir Chandra Sur Institute of Technology & Sports Complex**  
540, Dum Dum Road, Suremath, Kolkata -700074  
Phone: +91 33 25603880, Website: www.dsec.ac.in  
Email: info@dsec.ac.in  
Approved by AICTE and affiliated to MAKAUT, WB and WBSCTVESD

**WEBINAR ON PRODUCT DEVELOPMENT PROCESS**

**MR. SAPTAK SARKAR**  
SENIOR MANAGER  
RESEARCH & DEVELOPMENT CELL  
TATA MOTORS LIMITED

**Joining Link**  
<https://meet.google.com/qyz-miwv-aso>

**13TH MAY, 2021**  
**7:00 PM ONWARDS**

**ORGANISED BY**  
**DEPARTMENT OF AUTOMOBILE ENGINEERING**

Webinar on Product Development Process

### Webinars conducted by Department of Automobile Engineering

SL NO	DATE OF EVENT	TOPIC DISCUSSED	NAME OF THE SPEAKER	COLLEGE/ UNIVERSITY/ INDUSTRY NAME	STUDENT PRESENT
1	18.01.2021	Orientation Session on National innovation and Startup Policy	Mr. Tanmoy Kundu	Dr. Sudhir Chandra Sur Institute of Technology and Sports Complex	105
2	13.05.2021	Webinar on Product Development Process	Mr. Saptak Sarkar	TATA Motors Limited	132



SurTech

# Departmental News



JIS GROUP  
Educational Initiatives

## Webinars Conducted




PRESENTS  
WEBINAR ON :  
**DESIGN FAILURE MODE EFFECT ANALYSIS**






**SPEAKER:**  
**Mr. SAMBIT PAL**  
 (PARTS DESIGNATION MANAGER,  
 JOHN DEERE PVT. LTD.  
 / ALUMNI OF AUTOMOBILE DEPARTMENT, DSCSITSC)

[www.dsec.ac.in](http://www.dsec.ac.in)    6TH JUNE, 2021 | 11 AM ONWARDS    [www.jisgroup.org](http://www.jisgroup.org)



Sur Institute of  
 Technology  
 JIS GROUP  
 DEPARTMENT OF AUTOMOBILE ENGINEERING  
 PRESENTS  
 WEBINAR ON :  
**SERVICE INDUSTRIES RELATED TO  
 AUTOMOBILE SECTOR**





**SPEAKER:**  
**MR. ARUNANGSHU PAL**  
 (IN HOUSE MOTOR ENGINEER,  
 ROYAL SUNDARAM GENERAL INSURANCE CO LTD)

[www.surtech.edu.in](http://www.surtech.edu.in)    24TH JUNE, 2021 | 5.30 PM ONWARDS    [www.jisgroup.org](http://www.jisgroup.org)

Webinar on Design Effect Mode Analysis

Webinar on Service Industries related to Automobile Sector

### Webinars conducted by Department of Automobile Engineering

SL NO	DATE OF EVENT	TOPIC DISCUSSED	NAME OF THE SPEAKER	COLLEGE/ UNIVERSITY/ INDUSTRY NAME	STUDENT PRESENT
3	06.06.2021	Webinar on Design Effect Mode Analysis	Mr. Sambit Pal	John Deere Private Limited	124
4	24.06.2021	Webinar on Service Industries related to Automobile Sector	Mr. Arunangshu Pal	Royal Sundaram General Insurance Company Limited	118

## Webinars Conducted



Sur Institute of Technology  
JIS GROUP

INSTITUTION'S INNOVATION COUNCIL  
(Ministry of HRD Initiative)

Presents  
**Session on  
Innovators in Campus: Budding Ideas**

To Join Scan QR Code

Speaker  
Anurag Shaw & Team 'Delta Electric'  
Project - Lipstick Teaser

20th August, 2021 | 06:00 PM Onwards

[www.surtech.edu.in](http://www.surtech.edu.in) [www.jisgroup.org](http://www.jisgroup.org)

Innovators in Campus: Budding Ideas



Sur Institute of Technology  
JIS GROUP

INSTITUTION'S INNOVATION COUNCIL  
(Ministry of HRD Initiative)

Presents  
**Workshop on Prototype/Process Design and Development - Prototyping**

To Join Scan QR Code

Speaker  
Mr. Sourabh Mondal

1st August, 2021 | 4:00 PM Onwards

[www.surtech.edu.in](http://www.surtech.edu.in) [www.jisgroup.org](http://www.jisgroup.org)

Webinar on Service Industries related to Automobile Sector

### Webinars conducted by Department of Automobile Engineering

SL NO	DATE OF EVENT	TOPIC DISCUSSED	NAME OF THE SPEAKER	COLLEGE/ UNIVERSITY/ INDUSTRY NAME	STUDENT PRESENT
5	20.08.2021	Innovators in Campus: Budding Ideas	Mr. Anurag Shaw and Team Delta Electric	Students of SurTech	85
6	01.08.2021	Workshop on Prototype, Process Design and Developments	Mr. Sourabh Mondal	Research Scholar, IIT Kharagpur	60



# Departmental News

SurTech



JIS GROUP  
Educational Initiatives

## Webinars Conducted





Presents

**Mentorship Session for Innovators (or)  
Student Entrepreneurs**

To Join Scan QR Code



Speaker  
**Mr. Aashutosh Jaiswal**

22nd August, 2021 | 05:00 PM Onwards

[www.surtech.edu.in](http://www.surtech.edu.in) [www.jisgroup.org](http://www.jisgroup.org)

Mentorship Session for Student Entrepreneurs





Presents

**One Day Workshop on Business Canvas Model**

To Join Scan QR Code



Speaker  
**Mr. Atanu Roy Chowdhury**

8th September, 2021 | 5:00 PM Onwards

[www.surtech.edu.in](http://www.surtech.edu.in) [www.jisgroup.org](http://www.jisgroup.org)

Webinar on Business Canvas Model

### Webinars conducted by Department of Automobile Engineering

SL NO	DATE OF EVENT	TOPIC DISCUSSED	NAME OF THE SPEAKER	COLLEGE/ UNIVERSITY/ INDUSTRY NAME	STUDENT PRESENT
7	22.08.2021	Mentorship Session for Student Entrepreneurs	Mr. Aashutosh Jaiswal	Alumni. DSCSITSC	73
8	08.09.2021	Business Canvas Model	Mr. Atanu Roy Chowdhury	An AIOT Evangelist and founder of "Capsule Labs"	80





SurTech

# Departmental News



JIS GROUP  
Educational Initiatives

## Webinars Conducted

DEPARTMENT OF AUTOMOBILE ENGINEERING  
PRESENTS  
WEBINAR ON :  
**SUSTAINABLE MACHINING PROCESSES**

**SPEAKER:**  
**MR. RANAJIT MAHANTI**  
(PHD SCHOLAR, IIT GUWAHATI)

27<sup>TH</sup> NOVEMBER, 2021 | 4.30 PM ONWARDS

www.surtech.edu.in | www.jisgroup.org

Webinar on Sustainable Machining Processes

DEPARTMENT OF AUTOMOBILE ENGINEERING  
PRESENTS  
WEBINAR ON :  
**INDUSTRIAL SAFETY MANAGEMENT**

**SPEAKER:**  
**MR. BISWADEEP MUKHERJEE**  
MAINTENANCE MANAGER  
FORSOC CHEMICALS (INDIA) PVT. LTD.

11<sup>TH</sup> DECEMBER, 2021 | 4.00 PM ONWARDS

www.surtech.edu.in | www.jisgroup.org

Webinar on Industrial Safety Management

### Webinars conducted by Department of Automobile Engineering

SL NO	DATE OF EVENT	TOPIC DISCUSSED	NAME OF THE SPEAKER	COLLEGE/ UNIVERSITY/ INDUSTRY NAME	STUDENT PRESENT
9	27.11.2021	Webinar on Sustainable Machining Processes	Mr. Ranajit Mahanti	Research Scholar, IIT Guwahati	67
10	11.12.2021	Webinar on Industrial Safety Management	Mr. Biswadeep Mukherjee	Maintenance Manager, Forsoc Chemicals (India) Pvt. Limited.	65



SurTech

# Departmental News



JIS GROUP  
Educational Initiatives

## MoU's Signed



MoU with Nikhil Bharat Shiksha Parishad (NBSP) registered under MCA, Govt. Of India for Department of Automobile Engineering



SurTech

# Departmental News



JIS GROUP  
Educational Initiatives

## MoU's Signed



India witnessed its one-of-a-kind Memorandum of Understanding between Logiczap NextGen Technologies & Dr. Sudhir Chandra Sur Institute of Technology and Sports Complex, West Bengal on Thursday, 7<sup>th</sup> October, 2021.

The SurTech institute has signed an MoU with Logiczap NextGen Technologies for setting up a world-class Electric Vehicle LAB & Classroom inside Institute campus to meet the future demand for trained manpower in EV Industry. The Electric Vehicle (EV) LAB is expected to setup by Logiczap NextGen Technologies before end of Dec 2021 & to be officially inaugurated by Jan 2022.

## Industrial Visits



Sl. No	Name of the Industry	Date of Visit	Outcome
1	Mukesh Hyundai Training Academy	07.08.2021	Students understood the recent technologies that are used in Automotive Industries
2	Bhandari Motors	10.12.2021	
3	Mukesh Hyundai Training Academy	11.12.2021	



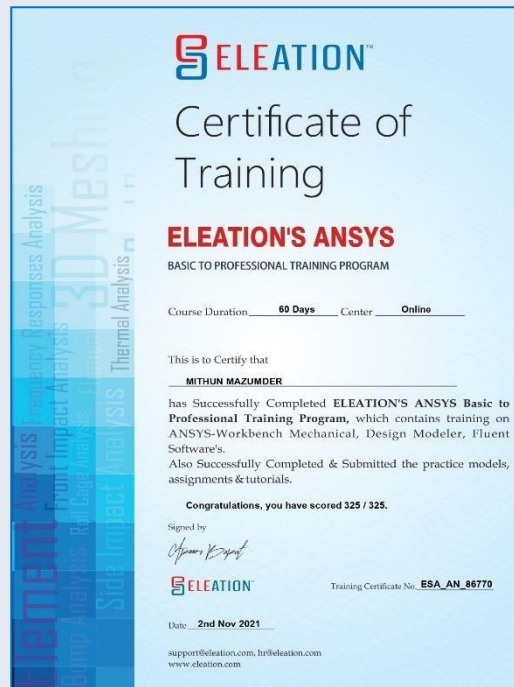
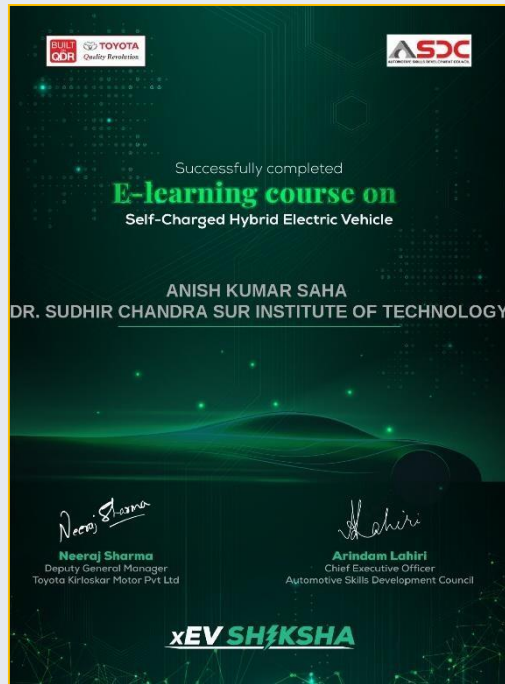
SurTech

# Departmental News



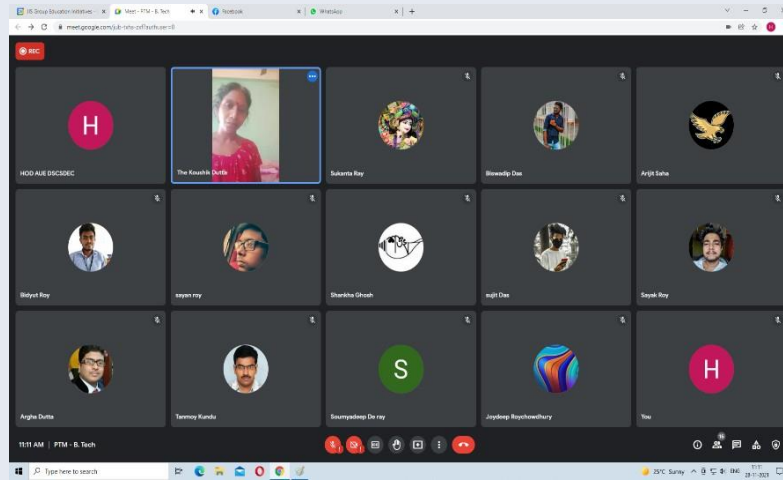
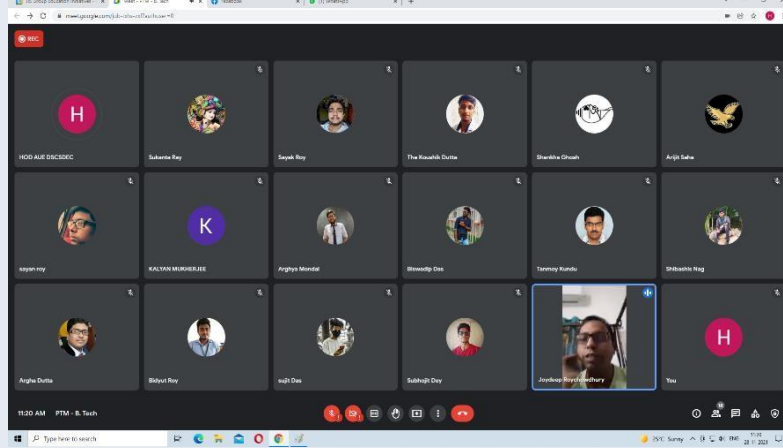
JIS GROUP  
Educational Initiatives

## Industrial Training



Sl. No	Name of the Industry	Date of Training	Outcome
1	Mukesh Hyundai Training Academy	07.08.2021	Students understood the recent technologies that are used in Automotive Industries
2	Eleation	02.09.2021	
3	Toyota Kirloskar	01.10.2021	

## Parent- Teacher's Meeting



S1. No.	Date	Participants	Programming Highlights/ Objective
1.	31.07.2021	35 Students and parents	<ol style="list-style-type: none"> <li>1. Online class conduction</li> <li>2. Modified Examination Structure</li> <li>3. Vaccination Drive</li> </ol>
2.	28.11.2021	41 Students and Parents	<ol style="list-style-type: none"> <li>1. Safety measures taken by our Institute related to the Blended Mode of Teaching.</li> <li>2. Examination pattern for this semester</li> <li>3. Student Credit Card Applications</li> <li>4. Swami Vivekananda Merit-cum Means Scholarship</li> <li>5. Accessing the LMS Portal.</li> </ol>

## Hyundai Graduation Day

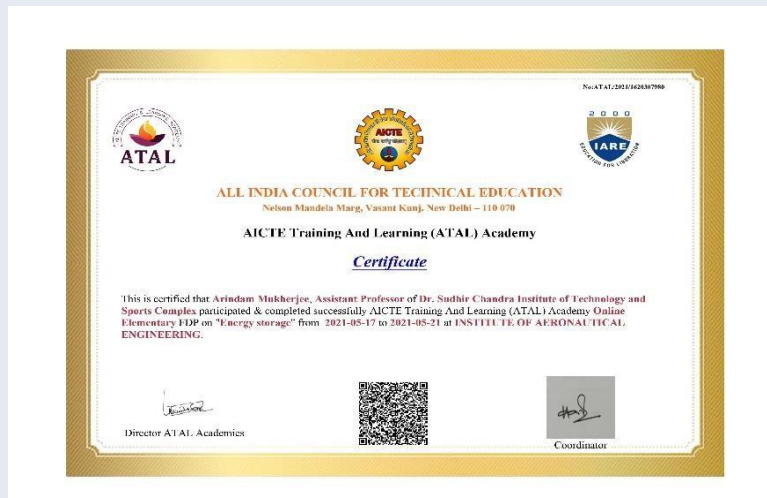


On Hyundai Graduation Day, Hyundai Motors Private limited, India celebrates by visiting institutions and screening students for their upcoming projects in their organization. It is a special day for DSCSITSC that students from Automobile Department would get a chance to be a part of this giant automobile company.

Mr. Asim Chakraborty, Zonal Manager Service Training along with the representatives of Hyundai Mr. Tapan Majumder and others visited the Department of Automobile Engineering and appreciated the infrastructure of our college.



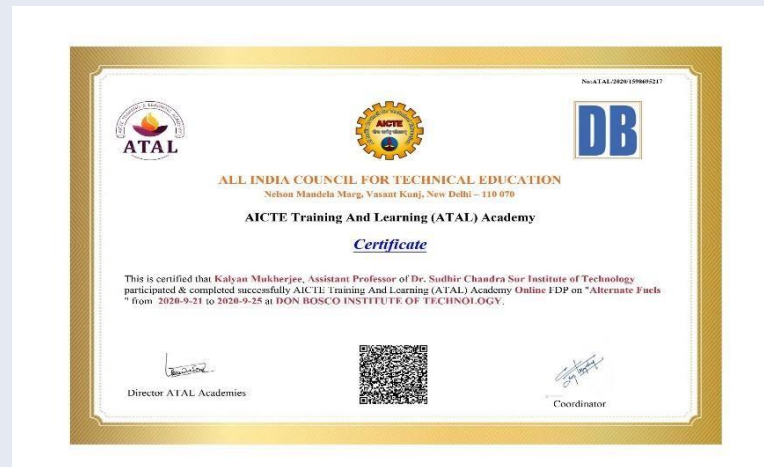
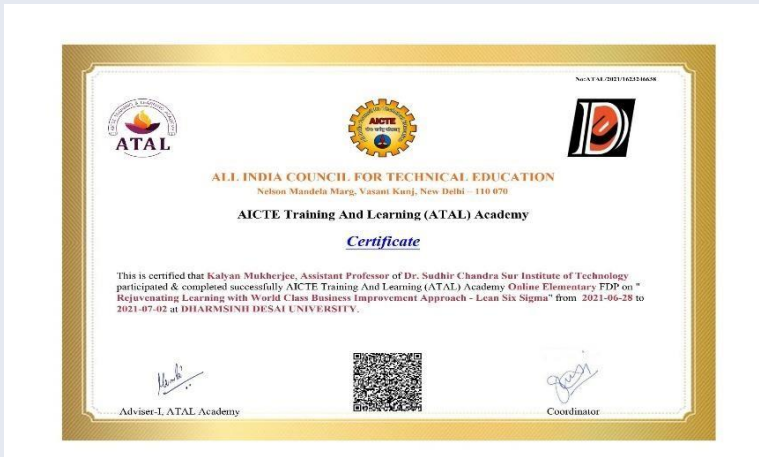
## Participation in FDP's



SI NO.	Attended by	TOPIC	DATE
1	Arindam Mukherjee	Energy Storage	17.05.2021- 21.05.2021
2		Alternative Fuels for IC Engines	02.08.2021- 06.08.2021
3		Electric Vehicles : Research Issues and Challenges	23.08.2021- 27.08.2021
4		The Role of Additive Manufacturing in the era of Industry 4.0	21.06.2021- 25.06.2021



## Participation in FDP's



SI NO.	Attended by	TOPIC	DATE
1	Kalyan Mukherjee	Rejuvenating Learning with World Class Business Improvement Approach - Lean Six Sigma"	17.05.2021-21.05.2021
2		Alternative Fuels	02.08.2021-06.08.2021
3		Alternative fuels :Biofuels	23.08.2021-27.08.2021
4		Novel Materials	21.06.2021-25.06.2021



SurTech

# Faculty Achievements



JIS GROUP  
Educational Initiatives

## Participation in FDP's



SI NO.	Attended by	TOPIC	DATE
1	<b>Mr. Tanmoy Kundu</b>	Rejuvenating Learning with World Class Business Improvement Approach - Lean Six Sigma"	17.05.2021-21.05.2021
2		Alternative fuels :Biofuels	23.08.2021-27.08.2021



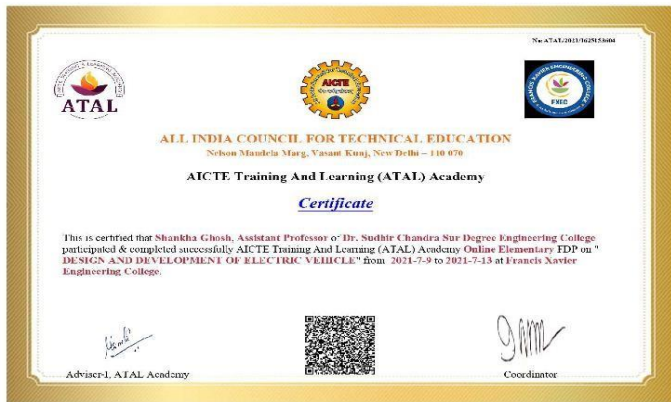
SurTech

# Faculty Achievements



JIS GROUP  
Educational Initiatives

## Participation in FDP's



SI NO.	Attended by	TOPIC	DATE
1	Shankha Ghosh	Electric Vehicles	02.11.2021- 06.11.2021
2		Rejuvenating Learning with World Class Business Improvement Approach- Lean Six Sigma	28.06.2021- 02.07.2021
3		Design and Development of Electric Vehicles	09.07.2021- 13.07.2021
4		Alternative Fuels: Biofuels	04.10.2021- 08.10.2021



SurTech

# Faculty Achievements



JIS GROUP  
Educational Initiatives

## Toyota E-Learning Course



SI NO.	Attended by	TOPIC	DATE
1	<b>Kalyan Mukherjee</b>	E-Learning Course on Self Charged Hybrid Electric Vehicle	13.11.2021
2	<b>Shankha Ghosh</b>		



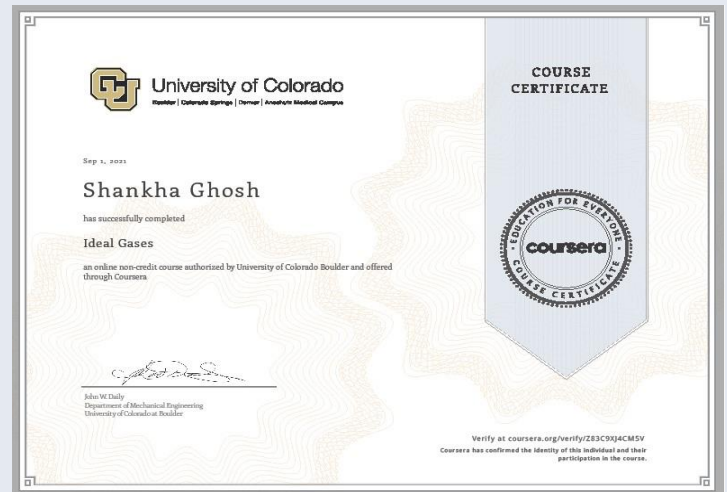
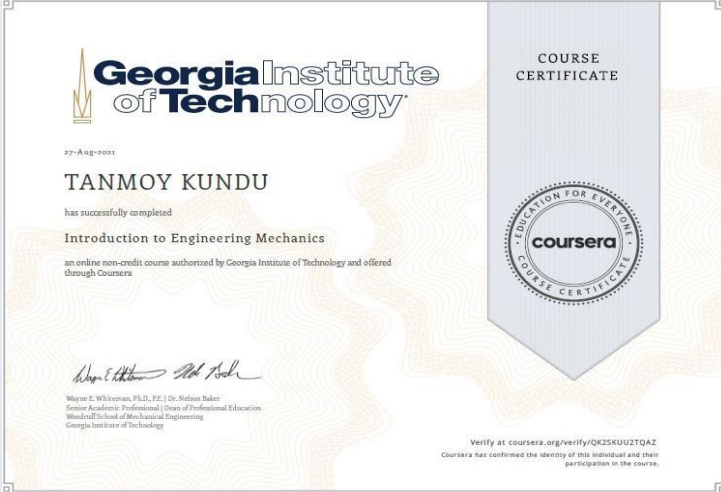
SurTech

# Faculty Achievements



JIS GROUP  
Educational Initiatives

## Coursera



### Faculty Achievement on Coursera

Name	Course Name	University
Mr. Arindam Mukherjee	Ideal Gases	University of Colorado
Mr. Kalyan Mukherjee	Introduction to Engineering Mechanics	Georgia Institute of Technology
Mr. Tanmoy Kundu	Introduction to Engineering Mechanics	Georgia Institute of Technology
Mr. Shankha Ghosh	Ideal Gases	University of Colorado



SurTech

# Faculty Achievements



JIS GROUP  
Educational Initiatives

## Ki Hote Chai

**Ki Hote Chai**  
2021

**JIS GROUP**  
Educational Initiatives

**Automobile Engineering পড়ে কেরিয়ার**

**EPISODE-25**

**@ DD Bangla LIVE**

Friday | 10 December, 2021 | 7:30 PM Onwards

**Speakers:**

**Mr. Kalyan Mukherjee**  
Professor, Department of Automobile Engineering  
Dr. Sudhir Chandra Sur Institute of Technology & Sports Complex

**Mr. Sambit Pal**  
Industrial Expert: Parts Designation Manager  
John Deere Private Limited

[www.jisgroup.org](http://www.jisgroup.org)

f t in @ y

JIS Group organized a Career Objective LIVE talk show for class 12 Students, Friday 10<sup>th</sup> December, 2021 on DD Bangla at 7:30 PM. Kalyan Mukherjee, Faculty of Automobile Engineering Department was one of the speakers. The speakers mainly discussed about the following points:

1. Eligibility Criteria required to study B. Tech in Automobile Engineering
2. The current situation of Automobile Industries
3. The promising sectors of Automobile Engineering like the Electric Vehicles and Hybrid Vehicles
4. State and Central Government initiatives to boost the Automobile Industry
5. The future of Automobiles in West Bengal and India



SurTech

# Faculty Achievements



JIS GROUP  
Educational Initiatives

## Participation in Staff Development Program



Mr. Jayanta Si, Mr. Sandip Bhadra and Mr. Supriya Dhara has successfully completed the One Week Virtual Staff Development Program on "Academic & Non-academic Workplace Evolution" held between 20.09.2021 and 24.09.2021 at Narula Institute of Technology, Agarpara.



SurTech

# Student Achievements



JIS GROUP  
Educational Initiatives

## Participation in Chatra Viswakarma Awards



Serial No.	Name of the participant	Project Name	Team Name
1	Debjyoti Dutta	Rainwater Usage for Agricultural Purposes in Hill Regions	ENVIRON- MENTALISTS
2	Ripom Banerjee		
3	Ayushman Patra		





SurTech

# Student Achievements



JIS GROUP  
Educational Initiatives

## IIW Technical Paper Writing Competition



Mr. Sumit Sinha, a student of Department of Automobile Engineering stood first in the Technical Paper Writing competition jointly organized by Indian Institute of Welding, Kolkata Branch and Kalyani Government Engineering College.

Mr. Ayushman Patra, Mr. Sabyasachi Das of B.Tech, 4<sup>th</sup> Year from Department of Automobile Engineering, DSCSITSC also participated in this Technical Paper Writing Competition.



# Student Achievements

SurTech



JIS GROUP  
Educational Initiatives

## Toyota E-Learning Course



### Student Achievements

Serial No.	Name	Details
1	ANISH KR. SAHA	E-Learning Course on Self Charged Vehicles by Toyota
2	ARITRA CHAKRABORTY	
3	AYAN GHOSH	
4	JOYDEEP ROYCHOWDHURY	
5	BISHAL GHOSH	
6	RAKTIM ROY	
7	JIBITESH BISWAS	
8	SOUMYA DEY	
9	SOUVIK DUBEY	
10	SUBHAJIT NANDY	
11	ANISH KR. SAHA	
12	ARITRA CHAKRABORTY	
13	AYAN GHOSH	
14	JOYDEEP ROYCHOWDHURY	



## Participation in MOOCs

Serial No.	Name	Details
1	SARTHAK KUMAR KAR	Generative Design for Additive Manufacturing
2	SUMIT SINHA	3D Printing Applications
3	RISHAV SHAW	Generative Design for Additive Manufacturing
4	SABYASACHI DAS	Generative Design for Additive Manufacturing
5	MITHUN MAZUMDER	3D Printing Applications
6	ABHISHEK PATHAK	3D Printing Applications
7	BISWARUP BISWAS	Generative Design for Additive Manufacturing
8	RANJANADITYA ROY	3D Printing Applications
9	SUNNY SAMANTA	Generative Design for Additive Manufacturing
10	RITWIK SEN	Generative Design for Additive Manufacturing
11	SOURAV DHALI	3D Printing Applications
12	ROHAN DEY	Generative Design for Additive Manufacturing
13	AYUSHMAN PATRA	Generative Design for Additive Manufacturing
14	ARNAB DAS	Generative Design for Additive Manufacturing
15	SUBHADEEP NAYEK	Generative Design for Additive Manufacturing
16	SOUMYA DE	Generative Design for Additive Manufacturing
17	ANKAN MANDAL	Generative Design for Additive Manufacturing
18	SURADIP MANDAL	3D Printing Applications
19	RAJDEEP MANDAL	Generative Design for Additive Manufacturing
20	DEBJIT BHATTACHARJEE	Generative Design for Additive Manufacturing
21	ARIJIT SAHA	Introduction to Self-Driving Cars
22	SOURAV KURI	Introduction to Self-Driving Cars



## Participation in MOOCs

Serial No.	Name	Details
1	SUBHAJIT NANDY	3D CAD Fundamental
2	JIBITESH BISWAS	3D CAD Fundamental
3	SAJAL MONDAL	Introduction to Self-Driving Cars
4	DIPTANU DUTTA	Introduction to Self-Driving Cars
5	SOUJIT BANERJEE	3D CAD Fundamental
6	KUNDAN SHARMA	Introduction to Self-Driving Cars
7	ARGHYADIP BHOWMICK	Introduction to Self-Driving Cars
8	SNEHASIS DEY	Introduction to Self-Driving Cars
9	BIDYUT ROY	Introduction to Self-Driving Cars
10	PUSPENDRA KUMAR	3D CAD Fundamental
11	SHIBASHIS NAG	Introduction to Self-Driving Cars
12	SUJIT DAS	Introduction to Self-Driving Cars
13	DEBRUP RAKSHIT	Introduction to Self-Driving Cars
14	RAVINESH SHRAMA	Introduction to Self-Driving Cars
15	RUDRA SOM DUTTA	Introduction to Self-Driving Cars
16	PRANTIK RAKSHIT	Introduction to Self-Driving Cars
17	NAUSHAD ALAM	Introduction to Self-Driving Cars
18	AYAN BAG	Introduction to Engineering Mechanics
19	AYAN GHOSH	MBSE: Model-Based Systems Engineering
20	BISWADIP DAS	Introduction to Thermodynamics: Transferring Energy
21	JOYDEEP ROYCHOWDHURY	MBSE: Model-Based Systems Engineering

## Battle of Minds: Debate Competition



Department of Automobile Engineering organized the Virtual Debate Competition 'Battle of Minds' for 3 days, from 8<sup>th</sup> January - 10<sup>th</sup> January 2021.

In the Qualifier round, 70 participants in 10 groups participated which was further reduced to 20 participants in 4 groups for the Semifinal round & Finals was between 2 Team Hexagon and Team Barracks debating on the topic "Should Government of India take more initiatives and invest on the research of Bio-fuels to replace conventional fuels?". The competition was really neck to neck where Team Barracks won the competition by a margin of 0.4 marks only.



# Departmental Events

SurTech



JIS GROUP  
Educational Initiatives

## Octane : Wall Magazine (3<sup>rd</sup> Edition)

**Octane Wall Magazine**  
Department of Automobile Engineering  
Sur Institute of Technology and Sports Complex

### A PUSH TOWARDS HYDROGEN ECONOMY

**Point of Focus**

FAME Phase II Subsidies announcement by Government of India

India recently announced the FAME Phase II subsidies; walking along with it Reliance Industries also announced an investment of Rs 75,000 crore to create a new energy ecosystem. This plan includes building four gigafactories, two of which are dedicated to renewable, green hydrogen. Just like battery electric vehicles are considered as green similarly fuel cell electric vehicles are also considered environment friendly, but there are many BEVs currently on production, unfortunately there are no FCEVs currently on sale in the country at present.

Let us also talk a little scientifically, to be precise hydrogen have a specific energy of 142MJ/KG, the highest of any practical fuel. That's more than 3 times that of gasoline and 200 times more than lithium-ion batteries.

Also, as we know that there is a disadvantage of any BEV, that the recharging time is a humongous, though DC charging is now available in urban areas but are not available everywhere. Whereas, FCEVs does not require such long awaited period charging time it can be done within few minutes.

There are many countries to aiming and have interest in hydrogen-based economy, where our nation India is also gradually climbing up the ladder.

What do you think of fuel cell vehicles? Also let us know, what would you choose, a battery electric vehicle or a fuel cell electric vehicle?

Let us know in the comments below.

### Point of focus

**New law issued by Ministry of Road, Transportation and Highways**

Mitsubishi Electric Mass-producing Auto Industry's First Crankshaft ISG System for 48V Hybrid Vehicles

MITSUBISHI ELECTRIC has begun mass-producing the auto industry's first crankshaft-mounted integrated starter-generator (ISG) system for 48V hybrid vehicles, which is being mounted in Mercedes-Benz vehicles. The system had been exhibited during 45th Tokyo Motor Show 2017 at the Tokyo Big Sight exhibition complex.

**Integrated starter generator (ISG)**

Engine Motor Transmission

Mitsubishi Electric developed its ISG system a crankshaft direct-driven system for idling-stop-start, energy recovery and torque assist to achieve higher output power, better fuel efficiency (15%). Mitsubishi Electric plans to develop smaller, lighter-weight and higher-power ISG systems to reduce CO<sub>2</sub> emissions.

**FEATURES:**

1. Crankshaft-Mounted Motor realizes Excellent Fuel Efficiency as it produces higher output power.
2. Thin-Profile, High Power Motor as Mitsubishi Electric Original Coil Winding requires a high density configuration thick coils used in 48 V high current Motor.
3. Compact, Optimally Designed and Highly Reliable Inverter enhances cooling performance along with transfer-moulded power module for 48V systems reduces heat resistance and enhances durability.

### Point of focus

**New law issued by Ministry of Road, Transportation and Highways**

Do You Know?

Seatbelt that saves our lives during car crash was invented by a Volvo Engineer named NILS BOHLIN.

He invented modern 3-point safety belt in the year 1959, his cross-type seatbelt was easy to use and were much safer. His invention was soon adopted by every car manufacturer all over the world as 'Precaution is better than cure'.

He patented the design of modern seatbelt, however Volvo Company left the patent open and free for all manufacturers. So that everyone can promote and provide safety in their cars.

Volvo proudly proclaims that 'few people have saved as many lives as Nils Bohlin'.

In India it is mandatory for all to wear seatbelts while driving.

Wonder-Wheels on behalf of Automobile Engineering Department, SurTech urges everyone to wear seatbelts and follow traffic rules while driving.

### Departmental Activity Details

DEPARTMENT OF AUTOMOBILE ENGINEERING PRESENTS  
WEBINAR ON SERVICE INDUSTRIES RELATED TO AUTOMOBILE SECTOR  
24th June, 2021 | 8:30 PM onwards

Department of Engineering Presents  
INTERNATIONAL WEBINAR ON SCOPE OF HIGHER EDUCATION IN AUTOMOTIVE ENGINEERING  
SPEAKER: Mr. Pankaj Agarwal  
27th September, 7:00 PM IST

WEBINAR ON PRODUCT DEVELOPMENT PROCESS  
MR. SAPTAJ SENGU  
13TH MAY, 2021 | 9:00 PM ONWARDS

RABINDRA JAYANTI CELEBRATION  
May 19, 2021 | 6:00 PM onwards

PRESENTS WEBINAR ON DESIGN FAILURE MODE EFFECT ANALYSIS  
SPEAKER: Mr. Sankar Pal  
8th June, 2021 | 11 AM onwards

BATTLE OF MINDS - A REMOTE COMPETITION  
Department of Automobile Engineering  
13th and 17th January 2021 | 8:30 AM ONWARDS

### Point of focus

**New law issued by Ministry of Road, Transportation and Highways**

**BIKERS BE CAUTIOUS!**

Do you know that the twenty thousand helmets you are wearing is illegal?

Yes, you read that right, whether you wear the SNELL, ECE standard or the renowned United States Department of transportation standard, importing or selling any such standard is now illegal.

According to the newest law issued by ministry of road transport and highways every helmet manufacturer must test their helmet right from Bureau of Indian Standards and get ISI certified to sell their helmets in India.

So, companies like Aral, Shoei, AGV, if they want to sell their helmets in India now, they must legally represent themselves to BIS as a helmet manufacturer, get their helmet tested and get ISI certified.

Well, for the motor bikers this law is not a great issue, but the helmet distributors and sellers might be in a little trouble, because now it is an offence to stock and sell non-ISI helmet.

Just like with great power comes great responsibility, premium helmet like BELL, AGV and SHOEI does have better standard than India standard but it is their responsibility to prove with proofs that their helmets are superior with great power to prevent almost any kind of head injury and to stay and sell in the Indian market.

This law is not unreasonable, let us assume an Indian helmet manufacturer wants to sell their helmet in some foreign country, the foreign country must ask the Indian company to meet their standards to sell the helmet, isn't it? Similarly, ministry of road transport is asking all the foreign helmet manufacturers to get their helmet tested from BIS and get ISI certified, all these processes must take a lot of paper work, experiments and consume a lot of time but it is for our good as well as this will also empower and create more jobs.

What do you think about the new MARSHI law?

Let us know in the comments below.



SurTech

# Departmental Events



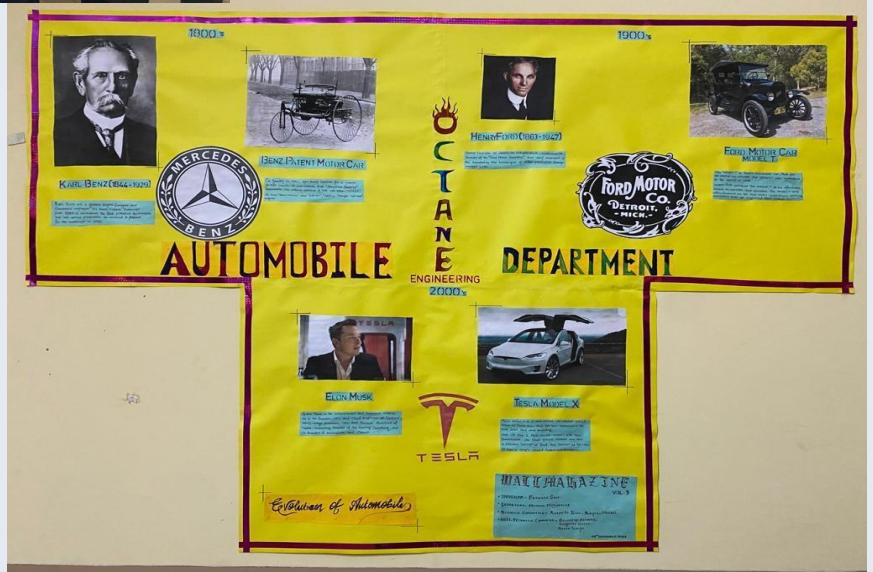
JIS GROUP  
Educational Initiatives

## Octane: Wall Magazine (4<sup>th</sup> Edition)



Wall Magazine 'Octane' of the Department of Automobile Engineering was published on 28th December, 2021.

The theme of the Wall Magazine was “Evolution of Automobile”.



The magazine contains some detailed write-ups and blogs by the students and faculty members about chronological evolution of the Automobile worldwide.



SurTech

# Departmental Events



JIS GROUP  
Educational Initiatives

## Essay Competition on Failure of Start-ups

The poster features a light blue background with decorative green and red shapes in the corners. At the top left is the SurTech logo, at the top center is the Institution's Innovation Council logo (Ministry of HRD Initiative), and at the top right is the JIS Group logo (Educational Initiatives). The main title 'ESSAY COMPETITION ON FAILURE OF START-UPS' is centered in bold blue text. Below the title is a circular graphic showing a hand holding a coin above a lightbulb filled with gears. The text 'OPEN FOR ALL STUDENTS OF DEPARTMENT OF AUTOMOBILE ENGINEERING' is in red, followed by 'Submission Link' in blue. A QR code is centered below the text. At the bottom, 'LAST DATE OF SUBMISSION 24TH AUGUST, 2021' is written in bold black and blue text.

The Department of Automobile Engineering in collaboration with Institutions Innovation Council of Dr. Sudhir Chandra Sur Institute of Technology and Sports Complex organized an Essay competition on the topic entitled as 'Failure of Start-Ups' to celebrate World Entrepreneurs day.



## Ideate and Innovate: Project Competition



The poster features the logos of JIS GROUP Educational Initiatives and SurTech. The title is "Ideate and Innovate Innovative Project Competition organized by Department of Automobile Engineering". It includes a QR code with the text "To Join Scan QR Code" and a prize money section: "Prize Money 1st Position: Online Voucher of Rs. 250 2nd Position: Online Voucher of Rs. 150 3rd Position: Online Voucher of Rs. 100". The event date is "17th December, 2021 | 03:00 PM Onwards". At the bottom, it lists the websites "www.surtech.edu.in" and "www.jisgroup.org", and a note: "E-Certificates will be provided to all the participants."

Department of Automobile Engineering organized a Project Demonstration along with an Innovative Project Competition on 17<sup>th</sup> December, 2021 3 PM onwards in the physical mode.



The theme of the Project Competition was Renewable Energy, Modern Vehicles and Automobiles during COVID-19.



### Projects Submitted

1. Material Transportation using Drone
2. Two Wheeler Anti-Theft Fingerprint Sensing Device
3. Electric Bike with 6 Speed Gear Box
4. Electro-Mobile, an E-Bike
5. Vehicle Clay Model
6. Hybrid Power Bank

## National Pollution Control Day



Department of Automobile Engineering, Dr. Sudhir Chandra Sur Institute of Technology and Sports Complex remembered the National Pollution Control Day (2<sup>nd</sup> December of every year) by preparing posters to spread awareness about controlling pollution.



SurTech



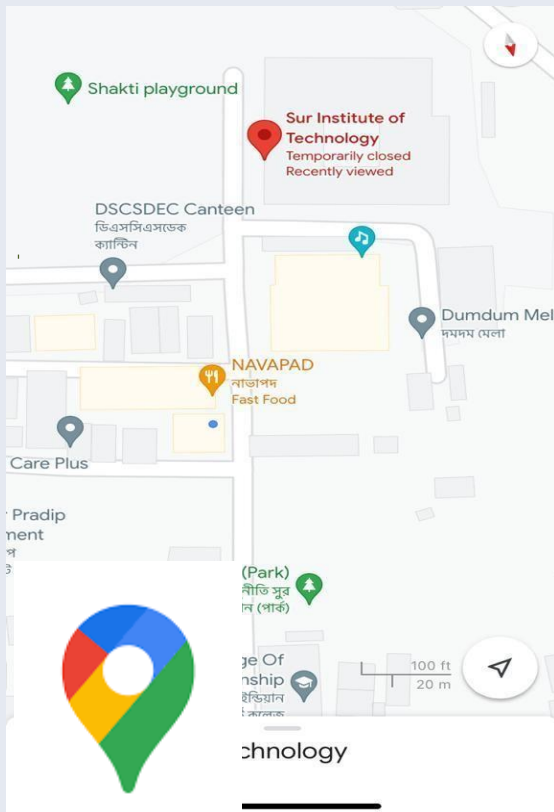
JIS GROUP  
Educational Initiatives

## Department of Automobile Engineering

The Department of Automobile Engineering was established in the year 2009 at the very inception of DSCSITSC with high end laboratory facilities to provide hands on training to the students in this emerging specialized field.

### Courses Offered

Course Name	Intake
B.Tech in Automobile Engineering	60
Diploma in Automobile Engineering	60



### Visit us at

<https://www.surtech.edu.in/>

<https://www.facebook.com/AutomobileSURTECH>

<https://www.youtube.com/channel/UCrSHeQ6rHS9ETRMNxCyCDhQ>

### Contact Us at

+91 - 7557826702

+91 - 8902496652

+91 - 6291977707

+91 - 9073322508