The AIT Times

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AMITY INSTITUTE OF TECHNOLOGY
A JOINT INITIATIVE WITH
TATA TECHNOLOGIES
INDUSTRY PARTNER

5th International Conference on Entrepreneurship, Innovation and Leadership

Theme : Nextgen Tools and Strategies for Business Growth in Industry 5.0

(Page 11)

CONFERENCE CHAIR

Prof. (Dr.) Balvinder Shukla
Vice Chancellor, Amity University

SESSION CHAIR

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Founder & MD, JEVPL

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AHODS Technologies

Mr. Sudhir Kr. Nagar
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North Zone

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JEVPL

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Aster E Technologies

Mr. Rakesh Pandey
Global Head for PLM, DM,
XR at L&T Technology Services

MODERATOR

Prof. Vivek Kumar
Head, AIT, Amity University

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September 2023

The AIT Times

Future Mobility and Net Zero

EDITORIAL TEAM :

- JAYA KUSHWAHA
- A. SAI VISVAKESH
- ASMIT BHATTACHARJEE
- KH RAISUDDIN SHAH
- GNANVITHA KOSARAJU

Inside this issue:

Message from Program Director, TATA Technologies

Dear Students,

We are delighted to know that AIT has introduced a new newsletter focused on automotive and aeronautical engineering. Join us as we explore the dynamic shifts and innovations shaping these industries and share your insights, project work, research findings, event experiences, and achievements to contribute to their ever-evolving landscapes.

Both the automotive and aeronautical markets are currently experiencing transformative changes due to the influence of advanced technologies and evolving consumer demands. In the automotive sector, the emergence of Electric Vehicles (EVs) has become a significant driving force alongside AI, machine learning, Internet of Things (IoT), cloud computing, and data analytics. These innovative technologies are revolutionizing the industry by facilitating the development of autonomous driving systems, predictive maintenance solutions, personalized customer experiences, as well as additive manufacturing techniques for complex designs and rapid prototyping. Together, these advancements are reshaping the automotive landscape, paving the way for a more efficient, sustainable, and customer-centric future.

Similarly, in aeronautical engineering, these advancements are making a significant impact, especially in aircraft design and manufacturing. AI and machine learning optimize aerodynamics, resulting in fuel efficiency and reduced emissions. Cloud computing facilitates collaboration and real-time data sharing. Data analytics optimizes aircraft performance, maintenance, and fuel consumption. Additive manufacturing produces lightweight, durable components, minimizing waste and enabling rapid prototyping.

Your unique perspectives and innovative ideas will enrich our understanding of these transformations, particularly in automotive and aircraft design and manufacturing. Share your project work, research findings, event experiences, and achievements in automotive and aeronautical engineering, focusing on latest technologies and Innovations. Whether it's project reports, research papers, case studies, event summaries, or personal experiences, your contributions will inspire others and contribute to the collective knowledge and progress of the automotive and aeronautical communities.

Join us on this exciting journey as we explore and celebrate the transformations shaping the automotive and aeronautical industries. Together, let's make a lasting impact on these fields!

Best regards,
Dr Ishtiaq Khan
Program Director
Tata Technologies Ltd

Message from Editorial Desk Lead

From commencement of new year and welcoming our new comers into the institution to the various educational events held in this quarter, this quarter never lost its festive busy essence.

The Annual Sports Event Sanghathan was inaugurated on 12/09/23 and many students from our institution have been actively participating in various sports.

Our institution had the privilege to host a session under the 5th International Conference on Entrepreneurship, Innovation and Leadership.

Our souls were filled with patriotism celebrating the Independence Day and our hearts expressed our gratitude to our teachers by grand celebration of Teachers' Day.

It was a festive time and many students participated in the university level celebrations during the festivals.

A "Training on wheels" session was organized along with many EV expo visits. The students had the opportunities of industrial visits to IPL Tech and Motherson Technologies. A Road Safety Awareness Quiz was held and the students studying specialization courses got the opportunity to visit the International Drone Expo.

Overall, it was a very eventful quarter filled with many celebrations, achievements and educational trips.

- **Gnanvitha Kosaraju**
Editorial Team Lead

Message from Head of Institution, AIT

"It's not the will to win that matters– but the will to prepare to win matters."

Dear Readers,

Warm Greetings and a very happy festival season to all of you !!!

It is my pleasure to present you with the third edition of **The AIT Times,** the quarterly newsletter of Amity Institute of Technology, which includes information on this quarter's events. The odd semester of 2023–2024 saw a lot of achievements and events. The students had a wonderful learning experience on organised industry visits to IPL Tech Electric Pvt Ltd, Manesar, Motherson Techno Tools, Noida, EV India Expo, Greater Noida, and the 4th International Drone Expo held in New Delhi during the last quarter.

AIT successfully organized a session on "**Advancement in Future Mobility and Opportunities For Start-Ups**" on 15th September 2023 during **5th International Conference on Entrepreneurship, Innovation and Leadership (ICEIL - 2023) in which industry leaders** - Mr. Satyendra Pal, Founder and MD, Jeetsons Electric Vehicles Private Limited (JEVPL), Mr. Sudhir Kumar Nagar, GM Lubes, HPCL, North Zone, Mr. Harish Sharma, Co-Founder & Director, JEVPL, Mr. Rakesh Pandey, Global Head for PLM, DM, XR, L&T Technology Services, Mr. Vinod Kumar Gupta, Founder and President, Imperial Society of Innovative Engineers deliberated on the topic and informed audience about emerging technologies in this field.

Amity Institute of Technology also organized a **Training on Wheels** by Volvo Eicher Commercial Vehicle Ltd (VECV) in collaboration with Automotive Skills Development Council (ASDC) on 2nd August 2023 for proliferation of emerging technologies in Automobile domain.

The Piston Craft club of AIT organized a quiz on Responsible Road Riders (Road Safety Awareness Campaign) on 28 and 31/07/2023 to create awareness about road safety and traffic rules among students, faculty and staff members and encourage safer road behaviour to eventually reduce the number of road accidents on city roads and highways.

I am happy to report that Prince Chauhan, a student at our institute who completed B Tech in Aeronautical Engineering, was chosen to work for United Airlines. Nitish Rana, another student with a B. Tech. in Aeronautical Engineering, was chosen by Aviotron Aerospace. EVI Technologies hired two B. Tech. (Automobile Engineering) students, Aditya and Ashutosh Negi. We appreciate all our recruiters' continuous support in recruiting AIT students.

The admissions to the various programs offered by AIT have also improved, and the team at AIT continues to work hard to attain academic excellence and provide students with experiential learning opportunities. I commend everyone of the faculty members, staff, and students for their efforts and accomplishments, and I promise to continue supporting them.

I applaud and thank the student editorial team for their sincere efforts in preparing the newsletter's third edition for publication in time.

To make the newsletter more relevant and have an impact on society, I ask all readers to share technical articles about cutting-edge technologies.

My sincere thanks and best wishes to all the readers.

Regards,
Prof. Vivek Kumar
Head, Amity Institute of Technology

AIT Students with AIT Banner

Sangathan Inaugural Ceremony

The inauguration ceremony commenced with a spectacular march past, featuring students from various institutions of Amity University. As the sports captain of AIT, **Gurneet** led the institute's contingent with pride and enthusiasm along with the students - **Payal, Hardik and Vyom**. The unity and discipline displayed by our students was commendable, and it was a proud moment for all of us.

Following the march past, all gathered around the flagpole to hoist the flag of "Sanghatan," signifying the commencement of this exciting sports extravaganza. The flag-raising ceremony was a symbol of unity, sportsmanship, and the spirit of competition that would define the days to come.

In addition to raising the Sangathan flag, the students of AIT proudly unfurled the banner of AIT during the ceremony. The banner showcased our institute's dedication to sports and our commitment to excel in the various events and competitions.

We are grateful to the organizers of the Sangathan sports event for providing us with this platform to celebrate the spirit of sports and competition. The event's success would not have been possible without their meticulous planning and hardwork.

The institute looks forward to the upcoming sports events with great anticipation and excitement, and we are confident that this year's Sangathan will be a resounding success.

Interview with Mr. Satyendra Pal

Mr. Satyendra Pal is the Founder & Managing Director at **Jeetsons Electric Vehicles Pvt Ltd.** He completed his B.Tech in Electronics & Communication Engineering. He has more than 15 years of diverse experience in Sales & Marketing, Power Solution Service Providers, Two-Wheeler Sales, Dealer Development & EV Sales, Urban Mobility. He has Worked with Pragati Electrocom Pvt Ltd, Adhunik Power Systems Pvt Ltd, Videocon Industries Ltd, Honda Motorcycle & Scooter India Pvt Ltd (HMSI). In the e-Mobility segment, he has worked with Smart Dreams Pvt Ltd (EV Start -up Company of Modi Group), URV Enterprises (Authorized Marketing Partner of Coslight Group of Companies- Cosbike & Cospower, Remark Electric Vehicles Pvt Ltd, I-Power Batteries Pvt Ltd).

"Jeetsons Electric Vehicles Private Limited" (JEVPL), a 100% Indian electric vehicles consultancy services-oriented company, with a mission to create Two-wheelers, Three -Wheelers & Four-Wheelers that can drive our present towards a sustainable future with its consistent focus on technological innovation, has attained heights unheard of, in the largely unorganized industry.

In the 81st episode of the weekly discussion with Professor Vivek Kumar, the head of Amity Institute of Technology at Amity University Uttar Pradesh, the topic of discussion revolves around technology and EV charging infrastructure. The use of electric vehicles (EVs) is increasing rapidly, with major automobile companies like Maruti and Honda growing rapidly in the electric vehicle space. The main advantage of electric vehicles is their ability to reduce air pollution and import crude oil from India. However, the biggest concern in the market is the driving range of EVs. Most two-wheelers have a 100 km driving range, while four-wheelers have a 250-300 km range. This poses a challenge for consumers who need to travel long distances to recharge their vehicles. The government's target is to replace most vehicles by 2030, but there are challenges in this area. For two-wheelers, charging stations are available at home, while for four-wheelers, there are no charging stations in metro cities like Noida or Greater Noida. While new societies are being built with charging points for EVs, existing multi-story buildings and commercial centers lack such arrangements, raising concerns about how to charge batteries in case of full discharge. In the past, there has been a huge jump in the use of EVs worldwide, with an estimated number of EVs expected alongside vehicles with IC engines and future technologies such as hydrogen and hybrid engines. Satyendra Pal, Founder & Managing Director at Jeetsons Electric Vehicles Pvt Ltd, shares his insights on the challenges and opportunities in the EV charging infrastructure. In conclusion, the rapid rise of electric vehicles and the need for charging infrastructure are crucial factors in the development of EVs. As the industry continues to evolve, it is essential to address the challenges and opportunities associated with the transition to electric vehicles. The issue of EV batteries being manufactured by companies and vehicles without standardization is a major concern. Consumers face issues with charging facilities using different methods, such as AC, AC level 1, or DC, which can deplete battery life. Manufacturers must find uniformity in charging facilities. Charging infrastructure should be built quickly, especially on highways, to ensure charging is available even after 50-100 kilometers. The government has focused on battery swapping players and is drafting a battery swapping policy. BSP plays a crucial role in this process. Companies like ABP are working on establishing EV charging stations, with plans to have charging stations every 50 kms by 2026. However, some argue that every 100 km is not sufficient. The government is also working on a battery swapping policy, with suggestions from BSP being considered.

The government is investing heavily in EV charging infrastructure development for 4 wheelers and buses, with a focus on every 50 km, starting with a first phase of every 100 kms, and allotting budgets for Fame 1, Fame 2, and Fame 3.

Q: Many charging stations have been opened in Noida and Delhi but most of the charging stations do not even have 50% occupancy, So how can this be improved?

A: The shift from ICE engines to electric vehicles (EVs) is slow due to factors such as slow customer interest and higher costs in India due to lithium shortage and import costs. However, finding lithium sources in India could reduce costs by 20% and encourage faster adoption of EVs. The preference for multiple vehicles has led to a shift towards EVs, but the lack of working charging stations can be frustrating for customers. The government is focusing on renewable energy and increasing grids to meet charging station needs, with the newly constructed Delhi to Mumbai Highway charging stations primarily running on solar energy. The government is confident that these efforts will be outrun soon, allowing customers to find charging stations in working condition.

Q: You talked about the government initiatives that gives motivation to the customers and users. And I would like to know that if someone wants to make their own charging station, do they get support from government by their policies?

A: Charging stations are license-free, unlike petrol or diesel pumps, allowing anyone to install them. There are two types: high speed and low speed. Government subsidies provide electricity for charging stations, with electricity being provided for Rs. 6.8 per unit in Uttar Pradesh. Restaurant owners can install fast, high-speed charging stations on highways, that can charge Nexon in 52 minutes. No installation requirements exist.

Q: Can you please tell what are the differences between the AC and DC charging stations. Also it is said that by repeatedly using DC charging, the battery life becomes lesser. So how much is this statement true.

A: Charging is basically of two types: AC charging also called as slow charging and DC Charging also called as fast charging. For example, Nexon EV for slow charging at 22KW AC, it will take 6 to 8 hours, but for fast charging at 24KW DC, it will take only 52 minutes. The difference occurs that for better battery life, AC is preferred but if one is using DC Charging, it is suggested to take it off only after full charging . This is due to the fact that for DC supply, it makes the battery cells imbalanced, and to balance it, it is necessary that the plug is taken off only after full charging. And starting the car after that, it faces technical and warranty issues.

Q: Normally the companies gives warranty of 3 years for battery and after that it needs to be replaced. So is there a possibility of recycling battery?

A: Yes sir. The government has bought the recycling policies. And for the lead acid battery and lithium batteries, there are licenses issued for it. The components lithium, phosphate, nickel, cobalt, iron, manganese can be separated and used separated in their own industry applications. This provides supply to company at cheaper rates and removes the issue of Battery scraping.

"EV provides many opportunities but only challenges."

Q: You spoke earlier about the availability of lithium in Jammu and Kashmir and other places. So, what is the estimated time that it will in use ?

A: The government had handed over it to the concerned departments and authorities. They are trying their best to bring it to usable state. Because many processes are involved and government states that by 2030 40% percent will turn into electric. There are many critical processes involved and hence I am confident that within one year they would be operational. Big companies like Leclanche in Gujrat, Amar Raja will have lithium in subsidized price and hence will be able to develop battery at minimum price. This will reduce the cost of vehicle and eventually customer adoption would increase.

Q: For the Startups or Research Scholars, what are the technical opportunities that they can get?

A: Talking about startups, our company was also a startup in 2021. This is our 3rd financial year. Earlier we were corporate employe and now we are entrepreneur. We are now doing employment of the people whereas earlier we were only employee of the corporate. So we are doing it for social welfare and employment opportunities. The upcoming chances, like in Artificial Intelligence, the young entrepreneurs, startups, students, researchers and Innovators can try this field. There is a lot of research field available. So there are opportunities but challenges as well.

Q; For job roles, can you throw some light on the skills required.

A: Technical Skills is the most important aspect. The minimum educational qualifications has to be B.Tech and M.Tech, and in case of management, BTech and MBA are required. Because the minds that have these combination qualification can do research work more than normal graduates. So technically manpower will be involved and the future of these students and the industry will be bright. The industry can never be 100 % converted into electric. So chances are 40 or 50% will turn to electric and the remaining will be in hybrid mode. This arises another opportunity that is the retrofit kit. And once a nice model of retrofit kit is approved by the government, it can be fit with IC Engines to enable the car to be driven in both IC and electric mode,

Q: For example when the CNG kit was introduced, it rapidly increased the market sales. So similarly, is there any work going on on such kits such as hydrogen driven kit or retrofit kit?

A: The work has already started. The prototyping is done, and many companies have advanced to the testing process. Bu the government ruling is left. The major challenge is that it should be mentioned in RTO. So the legal formality is left to be sorted out.

Q: What is the message that you would like to give to our startups, students and consumers?

A: The only thing that I would like to say is the road is tough but not impossible. And the future is very bright. So I would suggest that the students should also think about Entrepreneurship along with corporate jobs. To make our country self-dependent we have to think in this direction. I myself think that I am late. After years of corporate job, I entered this field. We are working EV laboratories in colleges and trying to fulfil our social duties so that the students can develop the EV Skills. We are doing lectures and encourage the students to come forward and we will be there to support to establish the venture.

Concluding Remarks: Many best wishes for your future. You surely will be an inspiration for many young entrepreneurs.

Alumni Speak

Amity Institute of Technology is one the finest passage for all Automotive enthusiasts to turn their dreams into reality and entering the professional Automotive Industry with class-leading technologies and super-advanced labs which provides the practical knowledge of machines and their mechanism. Collaboration with Tata Technologies has made the boat sail smoother than ever as the best possible instructors from the industry have been guiding us and providing us with all the real-world experience they have gained in their service to the field. Due to all this only, I have been able to join the industry I have always dreamt of serving.

-**Mayank Bhatia**
B.Tech(AME)- 2016– 2020
Trainee, Tata Technologies Ltd.

I am extremely grateful to Amity Institute of Technology for creating a vibrant ambience for learning, exploring and for molding us from amateur individuals to young professionals, ready to take-on the challenges in our industry with confidence. Enriched with the golden experience and expertise of the faculty and subject matter experts from Tata technologies and Hindustan Aeronautics Limited, it is truly a beautiful amalgamation of the industry and academia. Glad to be a part of this wonderful synergy, imbued with optimism and passion for teaching, skilling and preparing industry-ready engineers.

- **Parush Bumrah**
B.Tech(ANE)- 2017-2021
Master of Aerospace Engineering, Concordia University

My institute, Amity Institute of Technology is in collaboration with Tata Technologies Ltd. And this was the opportunity that I grabbed and entered Tata Technologies Ltd. as an Automobile Engineer which fulfilled my dream. I am very much thankful to my institute for providing me a platform to showcase my talent and supporting the recruitment.

- **Ishaan Jha**
B.Tech(AME)- 2016-2020
Engineer, Tata Technologies Ltd.

I am very grateful that I got opportunity to learn at Amity Institute of Technology. It improved me as a person and as a student to a great extent. The industry exposure that one get here is very helpful in future prospects. It's really a place where you get lot of opportunities in every domain. The teachers and every faculty member here is so experienced in their respective fields that I felt privileged to be a graduate from here. The support I got throughout was so great .

- **Shashank Kumar**
B.Tech(ANE)- 2016-20
M.Tech Aerospace IISc Bangalore 2021

Aeronautical Updates– July to September

1st electric Commuter flights to San Francisco

Honeywell's Aspire 350

BN2T-4S turboprop Islander aircraft

A220 aircraft

"Aeronautics was neither an industry nor a science. It was a miracle."
- Igor Sikorsky

A new air India is unveiled

AEROFUGIA Manned eVTOL Aircraft

MTU and MT Aerospace to develop liquid-hydrogen fuel system: MTU Aero Engines and MT Aerospace are partnering and starting with MTU's Flying Fuel Cell to reduce the climate impact of aviation from 2035.

Spirit AeroSystems to Build New Composite Fuselage for the New HondaJet: Spirit AeroSystems is expanding its manufacturing role for Honda Aircraft Company's HondaJet 2600 Concept, producing a composite fuselage and bonded frame to enhance performance and efficiency in regional and business jet aerostructures.

United Airlines and Eve Air Mobility Collaborating to Bring 1st Electric Commuter Flights to San Francisco: Plans to launch electric commuter flights in San Francisco using 200 electric vertical takeoff and landing (eVTOL) aircraft with a 60-mile range, aiming for sustainability and regional job creation.

New Rolls-Royce Small Engine Set to Begin Tests to Advance Hybrid-electric Flight: Rolls-Royce is set to test a new small gas turbine engine for hybrid-electric flight, targeting the Advanced Air Mobility market. This engine offers scalable power and aims to enable longer routes using sustainable fuels and hydrogen combustion, with support from the German Ministry for Economic Affairs and Climate Action.

Honeywell's Aspire 350 Selected For Dassault Falcon Fleet: Dassault has selected Honeywell's Aspire 350 communication system for its Falcon business aircraft, aiming to enhance connectivity, flight safety, and efficiency. Honeywell is known for its aerospace connectivity solutions..

Spirit Air India to acquire six BN2T-4S turboprop Islander aircraft: Spirit Air, an Indian airline, has signed a Letter of Intent with Britten-Norman, a UK manufacturer, to improve sub-regional connectivity in India.

Air India eyes 300% growth in cargo capacity in 5 years: Air India is set to increase its cargo capacity to 10 million tones by 2030. by adding new wide-body aircraft to its fleet.

Delta Air Lines Discloses Order for 12 Additional A220 Aircraft: Delta Airlines in its total firm order for A220s to 131. Delta is the world's largest A220 customer and operator, citing efficiency and flexibility as reasons for reordering. The A220 offers fuel efficiency and environmental benefits.

Dronamics Becomes the World's First Cargo Drone Airline with IATA and ICAO Designator Codes: Dronamics, a cargo drone airline has become the first cargo drone airline to receive these recognitions, enabling interline agreements and global aviation communication.

World First 100% SAF Transatlantic Flight Taxis Closer to Takeoff: Virgin Atlantic, with partners including Rolls-Royce and Boeing, plans to conduct the world's first 100% Sustainable Aviation Fuel (SAF) flight across the Atlantic in November 2023, aiming to demonstrate SAF's potential for decarbonizing aviation.

Air India finalizes LEAP engines order and signs services agreement: Air India has placed an order with CFM International for LEAP engines to power its new fleet of Airbus A320/A321neos and Boeing 737 MAX aircraft, strengthening its long-standing partnership with CFM.

A New Air India is Unveiled, Representing Bold New India on the World Stage: Air India, under Tata Group ownership, has unveiled a new brand identity with a gold window frame symbol and 'The Vista' logo, aiming to position the airline as premium and inclusive. Changes begin in December 2023.

Nomad Aviation strengthened business jet fleet with a Dassault Falcon 7X and will soon be welcoming its first Gulfstream G650ER: Nomad Aviation is expanding its managed aircraft fleet to 10 with a Dassault Falcon 7X and a factory-new Gulfstream G650ER. The company aims to offer comprehensive aviation solutions and personalized service.

Sino Jet Procures 100 AEROFUGIA Manned eVTOL Aircraft to Revolutionize Business Aviation: Sino Jet is acquiring 100 eVTOL aircraft from AEROFUGIA, a Geely Group subsidiary, to create an urban mobility ecosystem. They will collaborate on eVTOL airworthiness standards and aim to enhance travel efficiency and sustainability..

Etihad Cargo adds capacity for Europe, Asia: Etihad Cargo is expanding its cargo capacity with 29 weekly passenger flights to new and existing destinations. This includes new European routes in Denmark and Germany, as well as increased flights to Asian and Indian destinations, strengthening its global cargo network.

Star air adds third Embraer E175LR aircraft to its fleet: Star Air has added its third Embraer E175LR aircraft, becoming the largest privately held regional airline in India with over 8 aircraft. This expansion aims to enhance connectivity and offer a sustainable travel experience to passengers.

body aircraft to its fleet. The airline aims to support India's goal of growing its air cargo industry to 10 million tonnes by 2030.cargo drone airline to receive these recognitions, enabling interline agreements and global aviation communication.

Automobile Updates– July to September

AUTO Wholesale in July 2023 grow by 2.6%; 2-wheelers fall by 7.2%:SIAM: Update on Aug 10,2023:Vinod Aggarwal ,President, SIAM, said, "Though the passenger vehicle and three-wheeler segments performed well, there was a degrowth of two-wheelers in July 2023,compared to July 2022,the society of Indian Automobile manufacturers (SIAM)said".

TATA to launch Punch EV, Harrier EV, Nexon EV 2023 this year, Curve EV in 2024 Update on: 09 Aug 2023: Tata Motors is going to step up its EV offensive massively in coming days. The carmakers has confirmed that it will launch as many as four electric vehicles by the first quarter of 2024.

Mahindra & Mahindra sells 36,205 SUVs in July 2023**, logs 30% growth on-year; 'Record-breaking month', says auto-maker:** Update on Aug 02,2023: M&M Automotive Division President Veejay Nakra said that July has been a record-breaking month for the automaker. He added that around 1 lakh units of XUV700 have been sold in a record time of 20 months.

Toyota plans third India plant, new SUV as domestic sales surge: Updated on 27 sept, 2023: Toyota plans to build a third car plant in India to expand its production capacity, with a proposed initial capacity of 80,000-120,000 vehicles per year.

Honda SP125 Sports Edition launched in India: Update on 26 Sep 2023: On Tuesday, Honda Motorcycle & Scooter India (HMSI) introduced the SP125 Sports Edition in India, with an ex-showroom price of rupees 90,567 in Delhi.

TVS introduces India's first electric motorcycle **racing championship:** Update on 21 Sep 2023: TVS Motor Company has introduced the TVS Racing Electric One Make Championship (e-OMC), marking India's inaugural-electric racing competition for two-wheelers. With this move, TVS becomes the pioneer among the Indian manufacturers to enter the realm of electric motorcycle racing.

Bajaj Auto's Rajiv Bajaj signals at entry-level CNG **bike:** Update on 19 Sep 2023: Bajaj Auto Ltd managing director Rajiv Bajaj has signalled at an entry-level CNG bike, a cheaper option to offset the high petrol prices, a report by CNBC-TV18 said.

Tata Motors gears up for expansion with specialized EV dealerships in India: Update on 15 Sep 2023: Tata Motors Ltd. Is in the process of creating specialized dealerships in India, specifically designed to cater to electric vehicles, as part of strategy to further strengthen its position in the fast -growing electric vehicle market, as per Bloomberg.

Mercedes-Benz GenH2 Truck cracks 1,000km mark with one fill of liquid hydrogen: Update on 27 Sep 2023: A prototype Mercedes-Benz GenH2 Truck covered a distance of 1,047km between Woerth am Rhein and Berlin. The record drive with sealed tanks and controlled mileage was independently confirmed by TUV Rheinland.

UK's fossil fuel car ban delay may only stall investment: Update on 25 Sep 2023: UK delay unlikely to affect global pace of EV shift. Analyst say delay is political, unsettles investors.

Nissan says all new models coming to Europe will be fully electric: Update on 26 Sep 2023: Nissan Motor Co (720.T) said all its new European models will be fully electric and plans to sell only electric vehicles on the continent by 2030.

Volkswagen terminates three-shift production at Zwickau plant: Update on 27 Sep 2023: Volkswagen has initiated negotiations regarding a fresh production arrangement with the workforce at its all electric facility located in Zwickau, Germany.

Tesla proposes building battery storage factory in India: Update on 21 Sep 2023: Tesla has drawn up plans to make and sell battery storage systems in India and submitted a proposal to officials seeking incentives to build a factory, two people aware of the plan said, as Elon Musk continues a push to enter the country.

TVS India 1st electric motorcycle

TATA Nexon EV


Honda SP125 sports

"Cars are the sculptures of our everyday lives."
-Chris Bangle

Toyota SUV as domestic sales

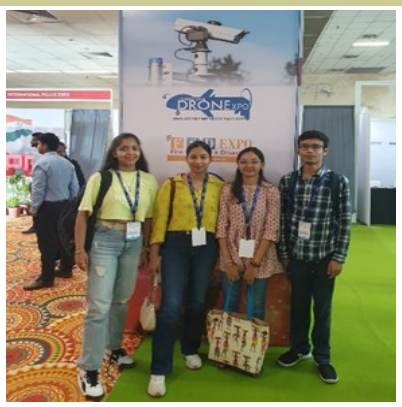
Mercedes-Benz Gen2 truck

Nissan fully electric vehicle

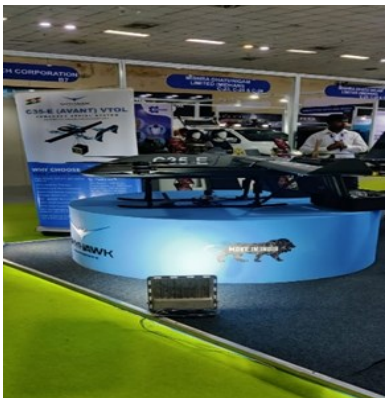
Tata Harrier EV


Tata Punch EV


Mahindra XUV400



AIT students at the Expo



Display at Expo

"One is safe on road not by only reading the signs, but by obeying them"

4th International Drone Expo Industrial Visit

27/07/2023: Drone International Expo was a display of capabilities, Drone & Anti Drone and unmanned systems for various applications. It was a platform to connect with a wide array of buyers and industry stakeholders. The end users were connected to manufacturers of drones and inputs for various suppliers. The expo is an ideal platform to penetrate the newly opened market of drones and unmanned systems and also a networking point for all the stakeholders of the sector. The event was a forefront for drones and related business and was conceptualized for highest level of B2B and B2G networking while every stakeholder gets undated news and industry insights. Aeolus Aerospace Pvt. Ltd (Skyhawk Aerospace) showcased its indigenously designed fixed-wing vertical take-off and landing (VTOL) multirole Pushpak and C35-E unmanned aerial vehicles (UAVs), The Pushpak is a tactical UAV designed to conduct high altitude cargo operations. The UAV features a skid landing gear system and can fly up to a maximum altitude of 5,700 m. Throttle Aerospace Systems (TAS) Showcased nimble-I, the nimble-i is a multirotor, electric -powered, micro-UAV developed to conduct intelligence, surveillance, and reconnaissance (ISR) operations. The UAV is designed to take on civil and military roles such as border surveillance, disaster management, and forest and wildfire monitoring. Airobotics Israel and Aero A2Z displayed Optimus System, a fully automated drone system and Iron Drone, Optimus Systems are deployed in Safe & Smart Cities, Defence, Homeland Security, and industrial projects & facilities, performing various automated aerial missions 24/7 without human intervention. Iron-Drone C-UAS is an advanced, patented counter-drone solution designed to defend assets against hostile drones in complex environments with minimal collateral damage. Maviyom Aviation showcased VTOL V3500-E: The VTOL V3500-E is a high-endurance surveillance drone designed for long-range missions, The VTOL V3500-E drone is suitable for long-range surveillance applications, including border surveillance, infrastructure monitoring, and large-scale security operations. Marvel Geospatial solutions, DCM Shriram Industries, Paras Anti Drone Technologies & Hild defence technologies showcased their Anti –drone systems. Scandron Pvt. Ltd, showcased, CargoMax logistics drones, with a payload capacity of 5 kg, flight range of over 30 Kms and endurance of about an hour, Scandron's drone products include logistics, agri and customised drones as well as anti-drones systems.

Student Participants: Smriti Mathur, Shivangi Singh, Garima Gangwar, Ajay Raj Singh

Teacher Coordinator: Dr. Himanshu Mishra

Road Safety Awareness Program

Pledge on Road Safety

Group Photo with participants

Awarding the participants

28/07/2023- 31/07/2023: In today's world road and transport has become an integral part of every human being. Everybody is a road user in one way or the other. The present transport system has minimized the distances but it has on the other hand increased the life risk. The objective of this event was to create awareness about road safety and traffic rules among students, faculty and staff members and encourage safer road behavior to eventually reduce the number of road accidents on city roads and highways. In stage 1, the online quiz was organized on 28th July in which 36 students of different institutes of Amity university participated. The stage 2 was held on 31st July 2023 in physical mode at Technology centre, E3 LG11. The event started nearly about 2:00 PM in the afternoon and all the judges and students reached the event at about 1:15 PM. The event was hosted by the Piston craft club of Amity Institute of Technology where the flow of the event was managed by Nakul and Tanushri. The event kicked off by greeting the judges and the Head of Institute, Prof. Vivek Kumar. After which the competition began, where the participants had to drive the car in simulated environment following all the safety rules and guidelines. Based on their performance, they were judged and graded. All the performances were full of energy and mesmerizing. It was thoroughly enjoyed not only by students but by professors and judges too. More than 30 student participants were there to compete for the positions. Prof Vivek Kumar, HOI, AIT was also invited on stage, towards the end of the event, to speak a few words about the event and motivate the participants. Finally, the results were announced by the judges which are as follows: 1st prize was bagged by Mr. Aditya Parihar from ASET, 1st runner up was Mr. Saurabh Singh Rawat from ASET and 2nd runner up was Aryan Rehman from AIT. The judges deeply appreciated the efforts of the participants, and many compliments were received too. In the end, the pledge was taken by all participants and organisers for road safety and health awareness. The event ended with a vote of thanks.

Faculty Coordinator: Dr. Gaurav Ninawe

Student Coordinators: Nakul, Tanushri, Sukrit, Shantanu, Vedant, Aaryan, Ananya, Akshara, Hardik, Anoushka, Sanjit. (Participants –36)

5th International Conference on Entrepreneurship, Innovation and Leadership

Theme : Nextgen Tools and Strategies for Business Growth in Industry 5.0

15/09/2023: The 5th International Conference on Entrepreneurship, Innovation, and Leadership was hosted by Amity Institute of Technology in Noida. The purpose of the conference was to educate attendees on the latest developments in future mobility as well as opportunities for start-up businesses. During the session, attendees discussed the recent developments in the electric vehicle (EV) industry, as well as the current trends and prospects in the EV sector. After then, Dr. Bedatri Moulik, Assistant Professor at AIT Noida, gave the address of welcome, and then Professor Vivek Kumar, Head of AIT, provided an introduction to the topic of discussion for the session. He greeted all of the engineers by wishing them a Happy Engineers Day and then spoke about the significance of the day as well as its rich history. He provided a synopsis of the Amity Institute of Technology to the audience. After that, he welcomed the attendees by giving them Tulsi saplings and introduced the session chair as well as the speakers. Mr. Satyendra Pal, the Session Chair was invited to speak first about the topic. He discussed the mission of the company, which is to standardize the market for electric automobiles. He discussed the current developments in electric vehicles, as well as EV sales and progress figures. He spoke on the state of electric vehicles (EVs) in India and gave a graphical presentation of the sales patterns of electric cars and buses in the country. Mr. Harish Sharma, the first speaker, discussed his transition from the creation of e-rickshaws to the development of electric vehicles (EVs) in his talk. He talked about the Internet of Things (IoT) and artificial intelligence (AI) as potential contributions to future transportation innovations. In the section where he discussed opportunities, he discussed the startups and the ways in which the central government has been supporting the growth of this industry by offering subsidies and other forms of assistance. Mr. Sudhir Kumar Nagar, the second speaker, began by making a profound assertion, stating, "We are not making mobility, we are the promoters of mobility itself." He addressed people's concerns about the impending extinction of internal combustion engines (IC) and reassured them that the market will still be driven by hybrid vehicles. He gave a presentation highlighting the company's achievements in the field of e-mobility and motivated the students by demonstrating how they may help startups to build a brighter future. The chair of the session agreed with him and stated that it is predicted that just forty percent of vehicles will be electric by the year 2040, while sixty percent will be hybrid. The third speaker, Mr. Vinod Kumar Gupta, spoke about the opportunities in the field of electric vehicles (EV). He discussed how the mobility industry is adapting to the new technology that is on the horizon and how it has incorporated artificial intelligence into the mobility industry. He addressed the widespread misunderstanding that exists among students regarding the choice between employment and starting their own business. He urged the students to pursue their areas of interest and enumerated the benefits of each potential path for them to consider. The final presenter, Mr. Rakesh Pandey, delivered a presentation online. He talked about the industrial phases, important changes in mobility, and electrification in his presentation. He discussed how the method of smart manufacturing may be utilized as a means to optimize the processes that are employed in the manufacture of goods. He gave an explanation of the connecting mechanism that exists between engineering, manufacturing, and services. A well-known phrase by Steve Jobs, which he used to close his presentation, was as follows: "We human beings are tool builders.

Gifting Saplings to the Speakers

Memento distribution by Dr. K M Soni

"Industry 5.0 is the revolution in which man and machine reconcile and find ways to work together to improve means and efficiency of

Moderator, Dy. Dean, Session Chair & Speakers

Group Photo of Panel & Organizers

Lecture by Mr. Suresh Bhatt

Group Photo with AIT, ASDC and Eicher

"Witnessing the magic of industrial processes is a truly enriching experience."

Training on Wheels by Volvo Eicher Commercial Vehicle Ltd

2/08/2023: Amity Institute of Technology, Amity University, Noida, organized a Training on Wheels by Volvo Eicher Commercial Vehicle Ltd (VECV) in collaboration with Automotive Skills Development Council (ASDC) for proliferation of emerging technologies in Automobile domain. The students of various engineering discipline (Auto mobile/ Aeronautical/ Mechanical / Electrical /ECE / Defense Technology / Renewable Energy etc. attended the training session at Amity Noida campus on Wednesday, 2nd August 2023 from 9:30 AM till 5 PM. Prof Vivek Kumar, HOI-AIT, introduced the event and welcomed technical trainer from Volvo Eicher, Mr. Suresh Bhatt. The event started with 2 hours classroom session by technical trainer of Volvo Eicher on various aspects of Automobile, new technologies emerging in the field and emission norms. Followed by practical session in small batches on commercial engines, Exhaust After Treatment System (EATS), sensors, and various electrical components of vehicle. The event focused on hands-on training provided for more than 60 students of Engineering & Technology. The Volvo Eicher Commercial Vehicle Ltd (VECV) activities to be performed on working cut sections of the instrument cluster, ECU, various types of sensors, working on two commercial vehicle engines, working of starter motors, BS6 components introduced to get lesser emissions by Vehicles, Cut sections of Inline and Box EATS (Exhaust After Treatment System), EGR system, Relay working, Fuel injection system, Various different types of electronic devices were demonstrated. The training session was graced by Prof (Dr) K M Soni, Dy Dean, Engineering & Technology, AUUP, during practical session in Training on Wheels Van. He appreciated the efforts and thanked Volvo Eicher and ASDC for arranging this very useful hands on training for Amity students.

IPL Tech Electric Pvt. Ltd Industrial Visit

Group Photo at IPL Tech Electric Pvt. Ltd. Manesar Plant

1/09/2023: IPL Tech Electric is an Indian company that designs and manufactures India's first 55-ton payload capacity EV Truck. Their mission is to provide electric trucks for the commercial transportation industry and make India's freight more environmentally friendly. The objective of the visit to the IPL Tech Electric, Manesar Plant was to gain industry-level knowledge about the Manufacturing and assembly of the industrial heavy payload capacity vehicles and learn from industry experts working in the plant from the lower to upper level in the pyramid of the firm. Situated in Manesar, the plant is set up in neighboring big brands like Maruti Suzuki. The design objective of the trucks was to build an EV truck with an already designed great design philosophy of the IC engine trucks and incorporate design changes for the specifications, performance, and stability of the vehicle. During the visit of the plant, the assembly line was functioning and many insights were also seen in the process ranging from assembly components to the welding of the battery structures. The firm has strong opportunities and plans for its future scope in the segment expanding day by day.

Students who visited: Sukrit Kumar, Shantanu Rusia, Sanjit Mathur, Abhay Kumar Kaushik, Hardik Sehgal, Navya Rathi, Sanjay Singh, Rajat Choudhary, Priyansh Mathur.

Teacher Coordinator: Dr. Gaurav Ninawe, Dr. Eswara Krishna Mussada

EV India Expo 2023

14/09/2023: : EV India Expo 2023 is India's largest electric motor vehicle show. It's an international exhibition that covers electric vehicles, hybrid vehicles, and related industries. The 2023 expo was held on September 14 –16 at the India Expo Centre in Greater Noida. The expo was a showcase of the latest electric vehicles, technologies, and infrastructure from India and around the world. The expo was inaugurated by the Minister of Road Transport and Highways of India, Mr. Nitin Gadkari. In his inaugural speech, Mr. Gadkari said that the Indian government is committed to promoting the adoption of electric vehicles in the country. The students explored the latest electric vehicles from a variety of manufacturers, including two-wheelers, three-wheelers, four-wheelers, and buses. They learnt about the latest electric vehicle technologies, such as batteries, charging systems, and motors. They saw the latest electric vehicle infrastructure, such as charging stations, battery swapping stations, and V2G technology. They attended seminars and workshops on the latest trends in the electric vehicle industry. The Team of M.Tech and B.Tech students of Amity Institute of Technology, Noida visited the EV Expo during September 14-16, 2023 @ India Expo Centre & Mart, Greater Noida. The visit was done to experience the India's latest innovation and development showcased and launches of new brands with their vehicles and designs. The EV India Expo 2023 is a great opportunity for Amity University students to learn more about the electric vehicle industry and many exciting developments happening in this space. By visiting the expo, students gained valuable knowledge and insights that will help them prepare for the future of transportation. Interaction and networking was made with the OEMs and Allied Industry Manufacturers, Service Providers for future possibilities of Campus selection of the prospective candidates of our prestigious institute. Also, the AIT student team discussed one to one on OEMs latest Products, Technology, Equipment's, Smart and NextGen transport to meet the future energy demand of the country.

Students visiting the EV India Expo 2023

Motherson Techno Tools Pvt. Ltd Industrial Visit

29/09/2023: Motherson's plant in Noida is a state-of-the-art manufacturing facility that produces a variety of automotive components, including wiring harnesses, plastic components, and rearview mirrors. The plant, spread over 100 acres and employing over 10,000 people, is highly automated and ISO 9001:2015 certified. The plant is responsible for various stages of the manufacturing process, including storage, molding, assembly, and testing. The plant contributes to the Indian economy and exports its products to over 50 countries. The Amity Institute of Technology students arrived at the Motherson plant in Noida at 2:00 PM on September 29, 2023. They were greeted by a representative of Motherson who gave them a brief overview of the company and its operations. The students then took a tour of the plant, where they saw the various stages of manufacturing of Motherson's products. They also learned about the company's quality control and safety procedures.

After the tour, the students had a Q&A session with a panel of Motherson employees. The students asked questions about the company's culture, its values, and its career opportunities.

No. of students visited: 27
Faculty Coordinator: Dr. Eswara Krishna Mussada, Dr Bedatri Moulik
Student Coordinators: Nakul Kaushik, Tanushri Saini, Sukrit Kumar

" The time is right for electric cars– in fact the time is critical. "

Group Photo at Motherson Techno Tools Pvt. Ltd Noida Plant

Song by Anoushka

Dance by Ananya & Gnanvitha

Anchoring by Arshaan & Ananya

Independence day Celebrations

14/08/2023: On the memorable event of Independence Day, a celebration was held at institutional level to celebrate independence. The event was hosted by Ms. Ananya Sadera and Mr. Arshaan. The event started with digital flag hoisting followed by the national anthem which filled our hearts with patriotism. Then, the HOI, Prof Vivek Kumar was invited to speak few words and we, as citizens of India took a pledge. It was followed by a very melodious performance by Ms. Anoushka Verma who sang the mashup of patriotic songs. It was then followed by a special performance by Ms. Ananya Sadera who showcased the journey of independence from the beginning of the revolt of all the struggle Indians faced to make India an independent nation. It showcased the courageous acts and the emotional story of our great freedom fighters. Then a presentation was given by Mr. Sukrit Kumar on the Indian Military Aviation facts which showed how the air forces reinvent themselves to protect our country. Lastly a dance performance by given by Ms. Ananya Sadera and Ms. Gnanvitha Kosaraju to pay tribute to all the soldiers for their dedication towards Mother Nation. The program ended with national anthem and Vote of Thanks given by Mr. Arshaan. At the end, all the teachers and students present for the event were given refreshments. The program overall celebrated the essence of independence and showcased the struggles of achieving this freedom. The cultural performances portrayed patriotism in its best form.

Faculty Coordinator: Dr Bedatri Moulik

Student Coordinators: Ananya Sadera, Anouska Verma, Arshaan, Akshara Bharadwaj, Gnanvitha Kosaraju

Group photo of organizers and audience

Pledge taken as Citizens of India

"The more you praise and celebrate your life, the more there is in life to celebrate."

Teachers Day Celebrations

Teachers' Day was celebrated on September 25 in our department with pomp and grandeur. All the students attended the program. The program was held in Technology Center Lab which was beautifully decorated. Teachers were welcomed with flowers and gifts. The HOI of the department inaugurated the program. The anchor Ananya Sadera gave a brief speech on Sarvepalli Radhakrishnan and explained the significance of Teachers' Day and tried to express gratitude and respect towards the teachers on behalf of the students AIT. The Students performed various cultural activities like dance, song, recitation, drama, etc. A student of sem-3 Anoushka Verma performed Guru Vandana and sang beautiful songs for the teachers. Which was followed by cake cutting. Few games were also organised for the teachers which was won by Dr.S.S.Chauhan. Teachers thoroughly enjoyed the games and it was great fun.

At the end the teachers appreciated the performances of the students. After which refreshments were distributed to teachers and students. The program was a grand success.

Student Coordinators: Ananya Sadera, Arshaan, Anoushka Verma, Akshara Bharadwaj, Sukrit Kumar, Tanushri Saini, Nakul Kaushik

Audience enjoying the program

Presenting gits to faculty

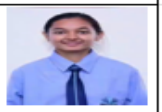
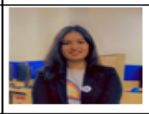
Cultural Performances

Faculty enjoying the program

Games played by faculty

TOPPERS OF EVEN 2nd-4th-6th-8th SEMESTER 2022-23

25-07-2023

S. No.	Programme	Batch	Semester	Enrollment No.	Student's Name	SGPA	CGPA	Photograph
1	B. Tech. (AME)	2022-26	2	A2367822002	Mr SHANTANU RUSIA	6.74	7.20	
2	B. Tech. (AME)	2022-26	2	A2367822001	Mr SANJIT MATHUR	6.52	7.20	
3	B. Tech. (ANE)	2022-26	2	A164104922010	Mr AARYAN BANSAL	9.43	9.46	
4	B. Tech. (ANE)	2022-26	2	A164104922007	Mr VEDANT VIJAY GHANWAT	8.74	8.80	
5	M. Tech. (EVT)	2022-24	2	A164156322002	Mr NOEL ABRAHAM CHERIYAN	7.63	8.54	
6	B. Tech. (AME)	2021-25	4	A2367821001	Mr MOHIT SINGH	7.65	7.71	
7	B. Tech. (AME)	2021-25	4	A2367821011	Mr GURNEET SINGH	7.62	7.29	
8	B. Tech. (ANE)	2021-25	4	A164104921009	Ms GNANVITHA KOSARAJU	9.85	9.16	
9	B. Tech. (ANE)	2021-25	4	A164104921004	Ms SMRITI MATHUR	9.33	9.09	
10	B. Tech. (AME)	2020-24	6	A2367820004	Mr NAKUL KAUSHIK	8.9	9.10	
11	B. Tech. (AME)	2020-24	6	A2367820001	Mr MANAN JAIN	9.1	8.88	
12	B. Tech. (ANE)	2020-24	6	A164104920010	Ms TANUSHRI SAINI	7.52	8.19	
13	B. Tech. (ANE)	2020-24	6	A164104920009	Mr ABHINAV SHARMA	7.42	7.97	
14	B. Tech. (AME)	2019-23	8	A2367819002	Ms GYANVI BHARDWAJ	9.5	9.42	
15	B. Tech. (AME)	2019-23	8	A2367819003	Mr ABBURU SAI SANDEEP	9	8.75	
16	B. Tech. (ANE)	2019-23	8	A164104919004	Ms SHIVI SINGH	9	9.28	
17	B. Tech. (ANE)	2019-23	8	A164104919006	Ms NISHTHA GUPTA	8	8.31	

Achievements

ANOUSHKA VERMA

23rd July 2023 : collaborated with a masters kathak student , produced and choreographed a dance video.

https://youtu.be/6N0JADa918g?si=KY7rpKz2rrw4_D65

25th September 2023: participated in sangathan girls volleyball and secured the captain position.

14th August 2023 and 20th September 2023: performed in Independence day and teachers day celebrations.

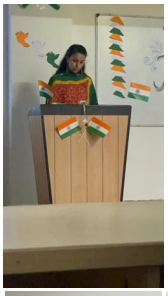
GNANVITHA KOSARAJU

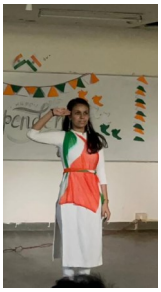
2nd August 2023: participated in the cultural program of G20 (Youth Conclave at Amity University streamed by Akashvani Delhi)

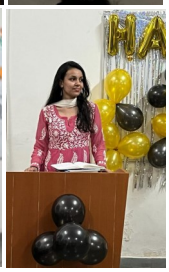
https://www.youtube.com/live/udXHhwC-rXo?feature=share

ANANYA SADERA

14th August 2023 and 20th September 2023: performed in Independence day and teachers day celebrations.







Amity Institute of Technology

AMITY INSTITUTE OF TECHNOLOGY
A JOINT INITIATIVE WITH
TATA TECHNOLOGIES
INDUSTRY PARTNER

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Amity Institute of Technology in collaboration with Tata Technologies aims to become a globally recognized Institute for imparting outstanding education leading to well qualified and industry ready engineers, who are innovative, entrepreneurial and successful in advanced fields of Automobile Engineering, Aeronautical Engineering to cater the ever changing industrial and social needs.

Amity Institute of Technology has the following six Competency Centres for training and inculcation skills for producing industry ready engineers and to enhance their placement potential.

The mission is to provide the students with academic excellence, leadership, ethical values and lifelong learning needed for a long and sustained career path., to educate students about professional & ethical responsibilities and to inculcate leadership qualities for their career growth, to create opportunities and to guide students in acquiring appropriate skills for their ever-ready acceptance by the industry.