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POLYTECHNIC



Vision, Mission and Objectives of AISSMS Polytechnic.

VISION:

Achieve excellence in quality technical education by imparting knowledge, skills and abilities to build a better technocrat.

MISSION:

- Empower the students by inculcating various technical and soft skills.
- Upgrade teaching-learning process and industry-institute interaction continuously.

OBJECTIVES:

- To inculcate learning habits in students by project based learning.
- To strengthen all the departments by encouraging faculty development.
- To motivate students for personality development, career guidance and encourage the spirit of team work.
- To strengthen industry – institute interaction and develop entrepreneurship skills.

AY 2021-22 Issue II
Staff Editors: Mr. G.M.
Nagane, and Mr. M. S.
Bhave
Student Editor: Ansh
Kore (TYAE Student)
Published by:
Automobile
Engineering
Department
AISSMS's Polytechnic,

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of Academic**



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Vision, Mission and Objectives of Automobile

Engineering Department

VISION:

“To achieve excellence in technological and social aspects of automobile engineering.”

MISSION:

- Comprehensive development of student by using state of art infrastructural facilities.
- Development of engineering mind-set within the students.
- Continuous enhancement of skill sets of student and faculty through industry-institute interaction.
- Imparting social and ethical values among the students.

PEO:

- Provide socially responsible, environment friendly solutions to Automobile engineering related broad-based problems adapting professional ethics.
- Adapt state-of-the-art Automobile engineering broad-based technologies to work multi-disciplinary work environments.
- Solve broad-based problems individually and as a team member communicating effectively in the world of work.

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AUTOMOBILE
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**EXPECTATIONS
THIS YEAR :
COVER STORY**

- **Expectations this year: What we can expect from year 2022**
- **There are few visible trends in auto industry in this year**
- **Inside Pages:**
Activities of Department such as Industrial Visit, cultural programmes, etc.

Expectations this year from Auto Industry....!



As we enter the third straight year of the pandemic, and still in the midst of another wave of COVID19, the Indian auto industry has proved itself to be exceptionally resilient again. Considering the industry was already in its worst slump in decades when the pandemic first hit in 2020, carmakers have been able to use this sudden demand for personal transport to their advantage very well. This despite the waves of lockdowns and a serious semiconductor crunch that has led to production schedules and launch timelines going haywire. Despite these challenges, car sales grew by 27 per cent in India in 2021. This was only the third time that sales had crossed the 30 lakh mark in a year, the last time this happened was in the boom period of 2018.

SUVs to remain dominant :

What can be expected from the Indian auto industry in 2022? The Omicron variant and with the semiconductor shortage showing no signs of abating, it's going to be another year of automakers rising to the challenge. Maruti Suzuki echoes a similar sentiment, the country's largest carmaker has bled market share as rivals like Tata Motors and new entrants like Kia, MG and a resurgent VW Group have lured buyers away from the brand. In FY 20-21, the emerging trend of increased interest in SUVs and hatchbacks. The SUV segment grew to 32% and is doing remarkably well. Whereas hatchbacks remain the more favourable segment with nearly 47% of the market. The indication is that SUV trend will continue in 2022, while hatchbacks maintain their dominance."

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Expectations this year from Auto Industry!



Inside Story Headline

CNG resurgence
Another growing trend to look out for in 2022 will be the resurgent CNG car market, in the Indian context only 5 per cent of car buyers think their next car will be an EV as per a Deloitte report. This means that CNG continues as a cost-effective and widely accepted measure to ease the burden of high fuel costs. Tata Motors has entered this segment just this month, so far largely dominated by Maruti Suzuki and Hyundai, and if the rush of launches here in January are any indication, expect to see carmakers bolster their CNG range significantly over the next year.

Year of EV consolidation

That's not to say electrification is set to take a back seat in India. In fact, 2022 could be a year of consolidation before a big boom 2023 onwards when Maruti Suzuki, Hyundai, MG Motor and Mahindra are set to enter this segment in earnest with sub-15 lakh options. Until

then, Tata Motors will be the dominant player. The company is set to roll out 10 new EVs in the next five years and expects to sell 50,000 of these cars a year by 2023. In fact, this push towards electrification has played a significant role in the homegrown brand's recent success.

Launches galore

Since the slump of 2019, carmakers have been quick to realize that if buyers aren't ready to buy cars, a good idea is to draw them into showrooms with shiny new metal. Consequently, both mainstream and luxury brands have made it a habit of a steady stream launches to keep interests high. This strategy has worked as the sales numbers suggest, and there's more of it in 2022. Skoda India has already promised six new models and Mercedes-Benz 10 new cars for 2022 and more carmakers will definitely follow suit.

Chip crisis 2.0

And this is a commendable achievement in the face of the semiconductor crisis, which isn't expected to die down well into 2022. Tata Motors, with its largely localized and relatively small-scale supply chains is a good example of how carmakers have streamlined production and focused on popular models to tide over this shortage, some better than others. The industry is taking definitive actions in the near term to mitigate the effects of the said supply chain impediments through an agile, multi-pronged approach to address supply bottlenecks and drive our savings program that much more efficiently."

As it stands, unless a crippling new wave of the pandemic brings forth a repeat of 2020, the auto industry in India seems set for another good showing in 2022.

(An article by Mr. G.M.Nagane ,H.O.D. Automobile Engg. Department)

Engineering Mindset

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An engineering mindset is a set of beliefs that affects how you think, feel and behave. It is a way of thinking that helps you define problems and provide proper solutions, design and develop innovative products, seek, think and always being curious. According to Psychology Today, “A mindset is a belief that orients the way we handle situations, the way we sort out what is going on and what we should do. Our mindsets help us spot opportunities, but they can also trap us in self-defeating cycles”

In order to develop an engineering mindset, it is essential to be optimistic and think positively. Engineers solve complex problems and deal with challenging events in their daily work, so staying optimistic is important to cope with difficult situations. An engineer must also develop curiosity and interest in every aspect of life. They must think out of the box and see the world differently, looking at the details and facts of everything in which they are involved

Here are some examples of an engineering mindset that can help you develop your problem-solving skills and creativity:
Spotting patterns and trends: Engineers must be able to identify patterns and trends in data to solve complex problems. For example, SpaceX engineers analyze data from

previous launches to predict future snags and improve the reusable Falcon 9 first-stage booster.

Attention to detail: Engineers must be detail-oriented and pay attention to the unusual stuff. They must be on the lookout for any anomalies in designs or finished products. For instance, when testing a hydroelectric plant, engineers must be vigilant and watch out for hidden issues that could cause damage or injury.

Make the most of existing work and designs: Engineers often remix what’s been done before. They reuse old material and adapt it to new projects while meeting the latest standards. For example, NASA’s McDonnell-Douglas DC-X proved that reusable rocket technology existed nearly 25 years ago, long before SpaceX launched and landed a reusable rocket.

Curiosity: Engineers must be curious and interested in every aspect of life. They must think out of the box and see the world differently, looking at the details and facts of everything in which they are involved. Curiosity is at the heart of engineering.

(An article by M.S. Bhavé, Senior Lecturer)

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Alternative Fuels



Alternative fuels are fuels derived from sources other than petroleum. They include gaseous fossil fuels like propane, natural gas, methane, and ammonia; biofuels like biodiesel, bio alcohol, and refuse-derived fuel; and other renewable fuels like hydrogen and electricity. These fuels serve as a substitute for more carbon-intensive energy sources like gasoline and diesel in transportation and can help to contribute to decarbonizations and reductions in pollution. Alternative fuel is also shown to reduce non-carbon emissions such as the release of nitric oxide and nitrogen dioxide, as well as sulfur dioxide and other harmful gases in the exhaust .

The use of alternative fuels has been increasing in recent years, and it is expected to continue to grow in the future. The benefits of alternative fuels include reduced greenhouse gas emissions, improved air quality, and reduced dependence on foreign oil .

However, there are also some challenges associated with the use of alternative fuels, such as the need for new infrastructure and the higher cost of some fuels.

Overall, alternative fuels are an important part of the effort to reduce greenhouse gas emissions and improve air quality. They offer a range of benefits, and their use is expected to continue to grow in the coming years

Alternative fuels include gaseous fuels such as hydrogen, natural gas, and propane; alcohols such as ethanol, methanol, and butanol; vegetable and waste-derived oils; and electricity. These fuels may be used in a dedicated system that burns a single fuel, or in a mixed system with other fuels including traditional gasoline or diesel, such as in hybrid-electric or flexible fuel vehicles.

(An article by Miss Isha Bhilare, SYAE student)

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Expert Talks List

YEAR	ACTIVITY	Month and year
2021-22	Expert Talk On Electrical and Hydrogen vehicle	28/2/2022

Industrial Visits List

YEAR	ACTIVITY	Month and year
2021-22	Visit To AISSMS Private Industrial Training Institute Boribhadak, Pune	07/01/2022
	Visit To Vigyan Ashram, Pabal	15/02/2022