



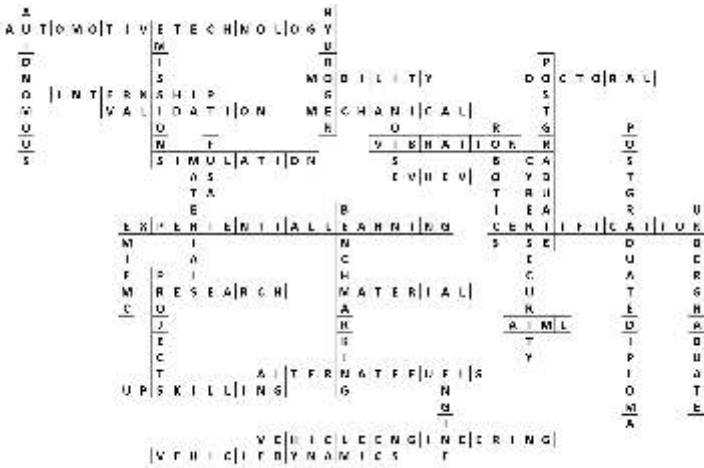
YEARS OF TRUSTED GLOBAL EXCELLENCE
1966-2024

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ARAI
Progress through Research

ARAI ACADEMY

Academic Excellence Since 2004
Learning must go on...

Knowledge Dissemination



THE AUTOMOTIVE RESEARCH ASSOCIATION OF INDIA

ARAI ACADEMY

Since two decades ARAI Academy has been developing a new generation of skilled human resources. ARAI Academy has pivoted three dimensions of skilling, reskilling and upskilling in automotive allied domains.

OBJECTIVES

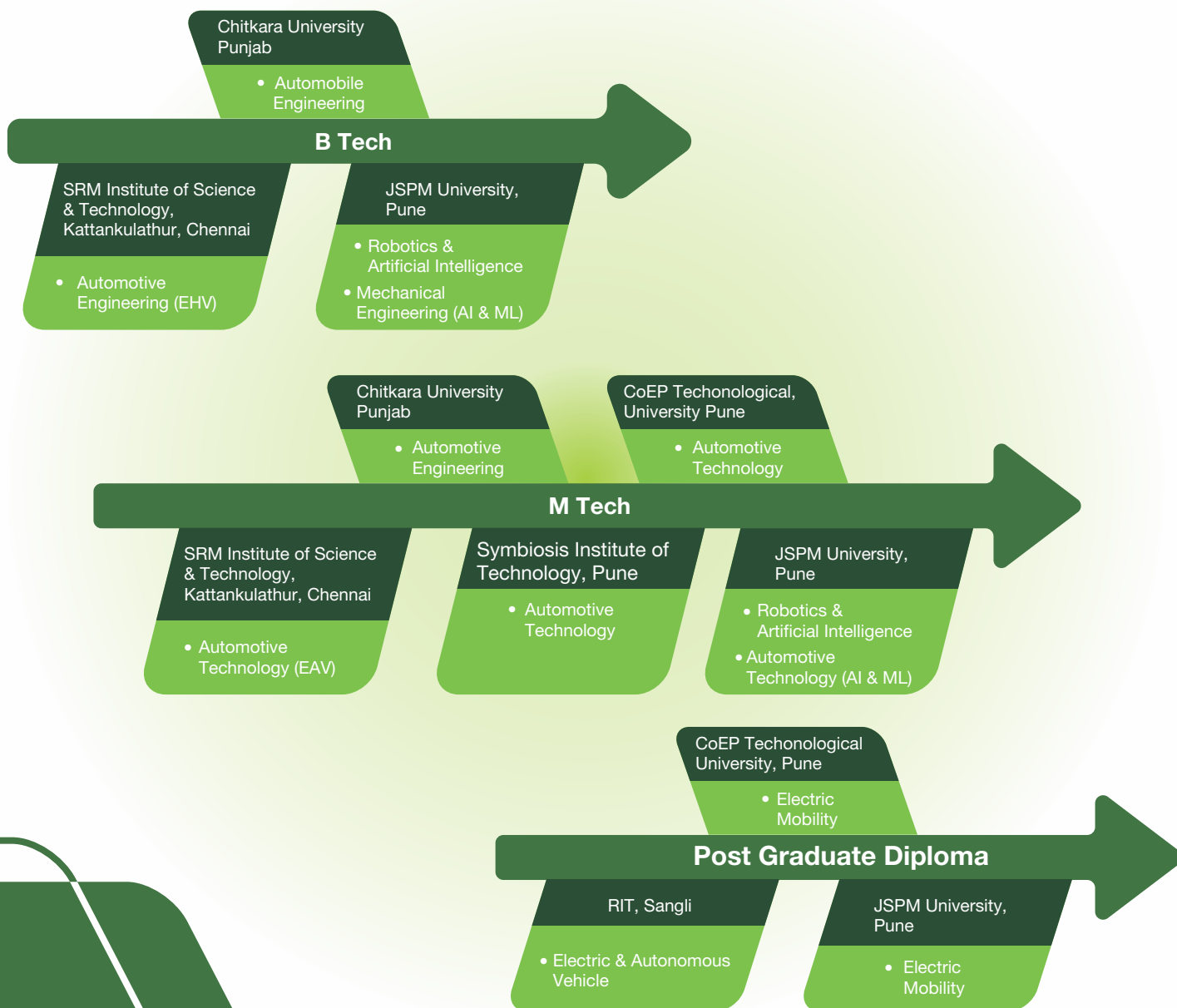
- Prepare industry ready automotive professionals
- Create an experiential learning environment.
- Develop skill transition course

ARAI ACADEMY @ GLANCE					
2004	28	2570+	400+	21,000+	35,000+
Started in	Till Date Collaboration	Alumni	Trainings	Delegates Trained	Man-days Trained

Academic Program	Upskilling Program	E-Learning Program
• Collaboration with various Global Universities to provide educational programme • Graduate, Post Graduate & Doctoral programs	Industry driven Proficiency Improvement Programmes on new technologies.	• Anytime, anywhere at own pace • Real Case studies • Basic to advance courses on latest topics

Academic Program

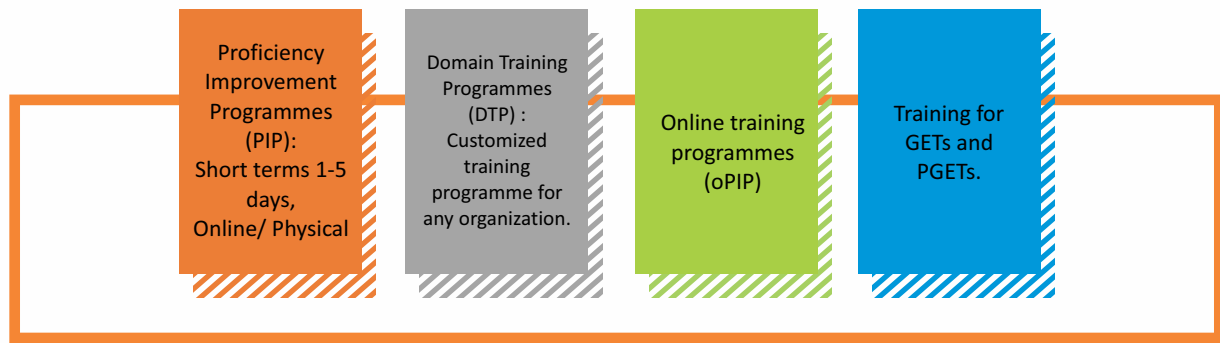
The programs are available in different domains such as Mechanical Engineering, Automotive Technology, Electric Mobility, AI-ML, Robotics, Electric and Hybrid Vehicle, Electric and Autonomous Vehicle, Robotics and Artificial Intelligence. Aspiring students take admissions for these courses, where for last one to one and half years of the program are taught at ARAI Academy. In these years, along with curriculum students are given exposure to practicals, internships and projects relevant on industry.



Upskilling Program

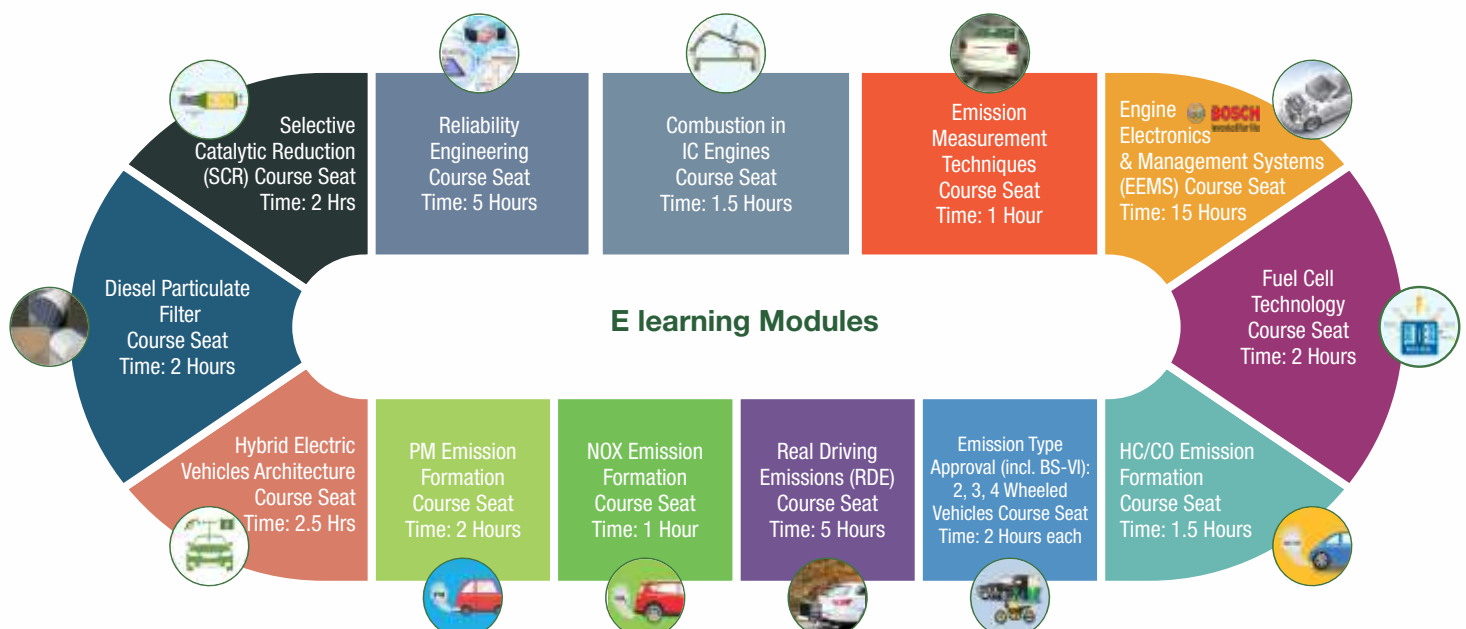
For enhancing ones automotive proficiency ARAI Academy developed sleeve of courses in several domains

- 30+ training programmes
- 1400+ Delegates trained per year



E learning Program

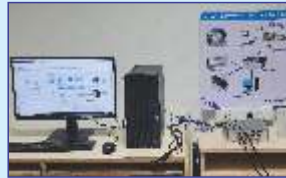
- Interactive, engaging and effective
- Real case studies
- 24 x 7 Course access





EV-HEV Laboratory

- EV Trainer Setup
- IM Drive & Controller
- Cell & Module Level Battery Cyclers.
- High Voltage Tools & Equipments.
- Mock Layout of Vehicle Electrical System



HIL Laboratory

- Speedgoat Baseline Real Time Machine
- Robo Trainer Kit
- TI Controller for HIL
- PMSM Motor & Drive for HIL
- Single Channel Cell Analyser



AI-ML Laboratory

- MATLAB Simulink
- Deep Learning Network Toolbox
- Pretrained Networks
- ANACONDA Platform
- Audio Classification tools
- Google Colab
- Python Tools



Noise & Vibration Laboratory

- Silent room facility for NVH
- Modal Test Setup
- Impedance tube for STL & Absorption coefficient
- Noise & Vibration instruments & DAQ System
- Cymatics Tools



AES Laboratory

- Wind Tunnel setup for Aerodynamics Analysis.
- Cut-section working model of Passenger Car & Tractor
- Drivetrain System
- Vehicle Dynamics System
- Automotive Safety Components & System (Seat Belt, Air Bag)



Engine Laboratory

- Heat Balancing of Engine
- Engine Performance Evaluation (Power, Torque, Fuel Consumption, etc.)
- Friction Power Measurement

With above labs many more simulation softwares available

Glimpses of latest student projects

- Machine Fault Diagnosis using Machine Learning Techniques
- Aerodynamic Analysis of Automotive Vehicles
- Sensor Fusion Algorithm for Obstacle Detection and Path Planning
- Numerical solution of Flex fuel vehicles considering Indian Scenarios
- Control Strategy for Hybrid Energy Storage Systems
- Semi Active Suspension System - Design and Development
- Development of AMT System for 2Wheeler
- Waste Heat Recovery from Internal Combustion Engine
- Development of Electric Mini Tractor



The Automotive Research Association of India
(Affiliated to Ministry of Heavy Industries, Govt. of India)

Regd. Office :

B-16/1, MIDC Chakan, Tal. Khed,

Dist. Pune - 410 501 Maharashtra, INDIA.

Tel. : +91-2135 396 660/2, Fax : +91-20-6762 1104

E-mail : jambhale.sdl@araiindia.com | dhande.dts@araiindia.com

Website : www.araiindia.com