

## ARAI Academy Short Term Training Programmes

Automotive Research Association of India (ARAI), established in 1966, is the leading automotive R&D organization of the country set up by the Automotive Industry with the Government of India. ARAI is an autonomous body affiliated to the Ministry of Heavy Industries, Government of India. The Department of Scientific and Industrial Research, Ministry of Science and Technology, Government of India, has recognized ARAI as a Scientific and Industrial Research Organisation (SIRO). Further, ARAI is a prime Testing and Certification Agency notified by Government of India under Rule 126 of Central Motor Vehicle Rules, 1989.

In addition to utilizing state-of-the-art technology, laboratories and highly-trained personnel, ARAI recognizes the need to develop a new generation of engineers to meet the demands of the automotive industry, not just in India but across the globe. ARAI Academy is a Skill Development initiative of ARAI. It is classified into divisions, viz Learning Centre, Training Centre. Learning Centre has embarked upon a programme of building up human resources by commencing educational programme (Graduate, PG Diploma, Post Graduate & Doctoral) with specialization in Automotive Engineering. It has tied up with SRM (Chennai), KARE (Krishnankoil), College of Engineering (Pune), Christ (Bengaluru), Savitribai Phule Pune University (Pune), Chitkara University, (Chandigarh), MIT World Peace University, (Pune), RIT, Sangli, SIT, (Pune) and other Universities.

Training Centre has devised various Proficiency Improvement Programmes (PIPs). It gives engineers, faculty and students knowledge and technical expertise in a wide range of automotive disciplines. It helps in understanding systems view point for automotive design and manufacture, with specific skills in formulating automotive engineering solution in terms of their function and performance. Customized training programmes called Domain Training Programmes (DTPs), where training is imparted at Customer's site / ARAI are also becoming more popular. ARAI Academy has developed high quality e-learning modules called "ePIPs" on various Automobile Engineering subjects. These highly interactive e-Modules hosted on ARAI's own Learning Management System (LMS) <https://elearning.araiindia.com/> help users access these courses anytime & anywhere. With this, ARAI Academy has become global with 360 blended training approach.

### TRAINING PROGRAMMES

TITLE OF THE PROGRAMME	DATE	DURATION	VENUE
Electric Vehicle Technology	21 <sup>st</sup> – 23 <sup>rd</sup> June 2023	3 days	ARAI Academy
Certification of Construction Equipment Vehicles (AIS 160)	13 <sup>th</sup> - 14 <sup>th</sup> July 2023	2 days	ARAI Academy
Battery & BMS of Electric Vehicle	27 <sup>th</sup> – 28 <sup>th</sup> July 2023	2 days	ARAI Academy
Automotive Brakes and Advancement	3 <sup>rd</sup> - 4 <sup>th</sup> August 2023	2 days	ARAI Academy
Automotive Testing & Certification	10 <sup>th</sup> – 11 <sup>th</sup> August 2023	2 days	ARAI Academy
Thermal Runaway for EV Batteries	18 <sup>th</sup> August 2023	1 day	ARAI Academy
Electric Vehicle Development	24 <sup>th</sup> - 25 <sup>th</sup> August 2023	2 days	ARAI Academy
OBD II	31 <sup>st</sup> Aug – 1 <sup>st</sup> Sept 2023	2 days	ARAI Academy
High Voltage Safety System for EVs	7 <sup>th</sup> - 8 <sup>th</sup> September 2023	2 days	ARAI Academy
Vehicle Body Engineering	14 <sup>th</sup> - 15 <sup>th</sup> September 2023	2 days	ARAI Academy

Engine Testing & Certification	5 <sup>th</sup> - 6 <sup>th</sup> October 2023	2 days	ARAI Academy
Machine Learning for Engineering Applications	12 <sup>th</sup> – 13 <sup>th</sup> October 2023	2 days	ARAI Academy
Battery & BMS of Electric Vehicle	2 <sup>nd</sup> - 3 <sup>rd</sup> November 2023	2 days	ARAI Academy
Benchmarking – An engineered Approach	27 <sup>th</sup> November 2023	1 day	ARAI Academy
Emission Control & Aftertreatment Devices	4 <sup>th</sup> - 5 <sup>th</sup> December 2023	2 days	ARAI Academy
Advanced Powertrain Technology	13 <sup>th</sup> – 15 <sup>th</sup> December 2023	3 days	ARAI Academy
Fuel Cell	8 <sup>th</sup> January 2024	1 day	ARAI Academy
Electric Vehicle - NVH	8 <sup>th</sup> - 9 <sup>th</sup> February 2024	2 days	ARAI Academy
IC Engine Combustion Technologies	15 <sup>th</sup> – 16 <sup>th</sup> February 2024	2 days	ARAI Academy
Innovation Techniques & Inventive Methodologies	23 <sup>rd</sup> February 2024	2 days	ARAI Academy
Battery & BMS of Electric Vehicle	7 <sup>th</sup> – 8 <sup>th</sup> March 2024	2 days	ARAI Academy
<b>PROFICIENCY IMPROVEMENT PROGRAMMES (PIPs) TO BE PLANNED</b>			
Electric Vehicles Batteries and Energy Storage Systems	To be decided	09 hrs	Online
Tyres	To be decided	1 day	ARAI Academy
Automotive Lighting	To be decided	2 days	ARAI Academy
Latest Trends in After Treatment Systems	To be decided	1 day	ARAI Academy
Failure Analysis (including Auto & Engine components)	To be decided	2 days	ARAI Academy
Advanced Material Characterization and Component Testing	To be decided	1 day	ARAI Academy
Metallurgy for Non-metallurgist	To be decided	2 days	ARAI Academy
Testing of Seating System	To be decided	1 day	ARAI Academy
Engine Design & Development	To be decided	2 days	ARAI Academy
Hybrid Electric Vehicles	To be decided	2 days	ARAI Academy
Automotive Embedded System	To be decided	3 days	ARAI Academy
Engine Anatomy	To be decided	2 days	ARAI Academy
Crash Safety	To be decided	2 days	ARAI Academy
Alcohol Mobility	To be decided	1 day	ARAI Academy

Automotive Aerodynamics and Styling	To be decided	2 days	ARAI Academy
Automotive Research & Development	To be decided	2 days	ARAI Academy
Automotive Sensors & Actuators	To be decided	2 days	ARAI Academy
ECU & Diagnostics	To be decided	2 days	ARAI Academy
Flex Fuel Vehicle	To be decided	1 day	ARAI Academy
Vehicle Dynamics	To be decided	2 days	ARAI Academy
BS VI Stage II Regulation & Implementation for Automotive Applications	To be decided	2 days	ARAI Academy
Success Quotient For Future '10X' Leaders	To be decided	1 day	ARAI Academy
'3Q' Success Mindset for '10X' Leadership	To be decided	2 days	ARAI Academy
Fundamental of Automotive Electricals & Electronics	To be decided	2 days	ARAI Academy
Modeling & Simulation of EV by using MATLAB-Simulink	To be decided	3 days	ARAI Academy
Real Driving Emissions	To be decided	1 day	ARAI Academy
Noise & Vibration Applications in Automotive Engineering	To be decided	2 days	ARAI Academy
Automotive Product Design and Development	To be decided	2 days	ARAI Academy
Fundamentals of Automotive Transmission Design	To be decided	2 days	ARAI Academy
<b>CERTIFICATE PROGRAMMES</b>			
Automotive Engineering	To be decided	One month	Online
Hybrid Electric Vehicle (xEV)	To be decided	One month	Online
<b>DOMAIN TRAINING PROGRAMMES (DTPs)</b>			
Engine Design & Development	BSVI Regulations		
Engine Testing & Certification	Automotive NVH		
Automotive / Vehicle Testing & Certification	Automotive Engineering		
Fundamentals of Automotive Electricals and Electronics	Testing of Seating Systems		
Engine Performance & Troubleshooting	Automotive Transmission		
Electric Vehicle	EV / HEV Technology		
New Automotive Technology	Engine Technology		
EV Products and Technologies	Vehicle & Engine Testing		

<b>e-PROFICIENCY IMPROVEMENT PROGRAMMES (ePIPs)</b> <i>(Internet based - Anytime, anywhere)</i>			
<b>Title of ePIP</b>	<b>Duration</b>	<b>Fees (Rs) Corporate (Individual) GST Extra</b>	<b>Fees (Rs) Corporate - Bulk Licenses (minimum 15 per corporate) GST Extra</b>
Reliability Engineering	Course access- 60 days Course time – 5 hrs.	7000	50000
Engine Electronics and Management System (EEMS) Jointly with RBEI	Course access–60 days Course time – 15 hrs.	20000	150000
Fuel Cell Technology	Course access- 60 days Course time – 2 hrs.	3000	20000
Real Driving Emission	Course access- 60 days Course time – 5 hrs.	7000	50000
Emission Type Approval (BS-VI): 2 Wheeled Vehicles	Course access- 60 days Course time – 2 hrs.	4000	30000
Emission Type Approval (BS-VI): 3 Wheeled Vehicles	Course access- 60 days Course time – 2 hrs.	4000	30000
Emission Type Approval (BS-VI): Light Duty Vehicles	Course access- 60 days Course time – 2 hrs.	4000	30000
Selective Catalytic Reduction (SCR)	Course access- 60 days Course time – 2 hrs.	4000	30000
Combustion in IC Engines	Course access- 60 days Course time – 1.5 hrs.	3000	22500
Emission Measurement Techniques	Course access- 60 days Course time – 1 hr.	2000	15000
HC/CO Emission Formation	Course access- 60 days Course time – 1.5 hrs.	3000	22500
NO <sub>x</sub> Emission Formation	Course access- 60 days Course time – 1 hr.	2000	15000
PM Emission Formation	Course access- 60 days Course time – 2 hrs.	4000	30000
Diesel Particulate Filter	Course access- 60 days Course time – 2 hrs.	4000	30000
Hybrid Electric Vehicles Architecture	Course access- 60 days Course time – 2.5 hrs.	5000	50000

Note: ARAI reserves the rights to change the dates, schedule, contents, speakers, venue, etc. for the programme without any notice.

**For further information & registration of Training Programmes,  
please contact Mr. Rajesh Patil, Dy. General Manager, ARAI Academy  
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email: [patil.pga@araiindia.com](mailto:patil.pga@araiindia.com); [training.pga@araiindia.com](mailto:training.pga@araiindia.com);**

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**ARAI Academy:** ARAI Forging Industry Division, Plot No. B-16/1, MIDC, Chakan, Taluka Khed, Pune-410 501.

**Websites:** [www.araiindia.com](http://www.araiindia.com) & <https://academy.araiindia.com>

# E-LEARNING ONLINE COURSES (e-PIPs)



## Highlight

- ✓ Latest and up-to-date content
- ✓ Highly interactive, engaging and effective
- ✓ Real-life industry examples
- ✓ Hands-on practice in virtual environment
- ✓ Pre and Post assessments to assess learner's knowledge
- ✓ Certificate on passing the Final Assessment

## Benefits:

- ✓ All online courses are flexible in nature i.e. 24 x 7 operational
- ✓ Easy to monitor learner's activity to know their course current status
- ✓ Very engaging which improves learner's knowledge absorption and retention
- ✓ Revisit topics instantly and at your own pace
- ✓ Certificate which help learner's for their career advancement

**Reliability Engineering**  
Course Seat Time: 5 Hours

**Combustion in IC Engines**  
Course Seat Time: 1.5 Hours

**Engine Electronics & Management Systems (EEMS)**  
Course Seat Time: 15 Hours

**BOSCH**  
Invented for life

**Emission Measurement Techniques**  
Course Seat Time: 1 Hour

**Fuel Cell Technology**  
Course Seat Time: 2 Hours

**HC/CO Emission Formation**  
Course Seat Time: 1.5 Hours

**Real Driving Emissions (RDE)**  
Course Seat Time: 5 Hours

**NO<sub>x</sub> Emission Formation**  
Course Seat Time: 1 Hour

**Emission Type Approval (incl. BS-VI):**  
2, 3, 4 Wheeled Vehicles  
Course Seat Time: 2 Hours each

**PM Emission Formation**  
Course Seat Time: 2 Hours

**Selective Catalytic Reduction (SCR)**  
Course Seat Time: 2 Hours

**Diesel Particulate Filter**  
Course Seat Time: 2 Hours

**Hybrid Electric Vehicles Architecture**  
Course Seat Time: 2.5 Hours

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