## 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), COEP Technological University (Pune), Christ (Bengaluru), Chitkara University, (Chandigarh), MIT World Peace University, (Pune), RIT, Sangli, SIT, (Pune), JSPM University (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 |
|---|---|---|---|
| Concept in Advanced Driver Assistance System (ADAS) | 30th - 31st October 2023 | 2 days | ARAI Academy |
| Automotive EMI/ EMC | 6th - 7th November 2023 | 2 days | ARAI Academy |
| Engine Testing & Certification | 23rd - 24th November 2023 | 2 days | ARAI Academy |
| Real Driving Emissions (RDE) | 28th November 2023 | 1 day | ARAI Academy |
| High Voltage Safety for Electric Vehicles | 28th - 30th November 2023 | 3 days | ARAI Academy |
| Automotive NVH | 29th - 30th November 2023 | 2 days | ARAI Academy |
| Benchmarking – An engineered Approach | 4th December 2023 | 1 day | ARAI Academy |
| Advanced Powertrain Technology | 14th – 15th December 2023 | 2 days | ARAI Academy |
| Fuel Cell | 8th January 2024 | 1 day | ARAI Academy |
| Electric Vehicle - NVH | 8th - 9th February 2024 | 2 days | ARAI Academy |

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| IC Engine Combustion Technologies | 15th – 16th February 2024 | 2 days | ARAI Academy |
| Innovation Techniques & Inventive Methodologies | 22nd - 23rd February 2024 | 2 days | ARAI Academy |
| Battery & BMS of Electric Vehicle | 7th – 8th March 2024 | 2 days | ARAI Academy |
| **PROFICIENCY IMPROVEMENT PROGRAMMES (PIPs) TO BE PLANNED** | | | |
| Latest Trends in After Treatment Systems | To be decided | 1 day | ARAI Academy |
| Tyres | To be decided | 1 day | ARAI Academy |
| Automotive Lighting | To be decided | 2 days | ARAI Academy |
| Electric Vehicles Batteries and Energy Storage Systems | To be decided | 1 day | ARAI Academy |
| Failure Analysis (including Auto & Engine components) | 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 |
| '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 | 2 days | ARAI Academy |

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| Automotive Product Design and Development | To be decided | 2 days | ARAI Academy |
| Electric Vehicle Technology | To be decided | 2 days | ARAI Academy |
| Emission Control & Aftertreatment Devices | To be decided | 2 days | ARAI Academy |
| Automotive Testing & Certification | To be decided | 2 days | ARAI Academy |
| Advance Automotive Technology | To be decided | 2 days | ARAI Academy |
| Fundamentals of Automotive Transmission Design | To be decided | 2 days | ARAI Academy |
| Vehicle Body Engineering | To be decided | 2 days | ARAI Academy |
| Thermal Runaway for EV Batteries | To be decided | 1 day | ARAI Academy |
| Dual Fuel Technology for Automotive and Genset Applications | To be decided | 1 day | ARAI Academy |
| BNCAP | To be decided | 1 day | ARAI Academy |
| **ONLINE PROGRAMMES** | | | |
| Automotive Engineering | To be decided | One month | Online |
| Hybrid Electric Vehicle (xEV) | To be decided | One month | Online |
| **DOMAIN TRAINING PROGRAMMES (DTPs)** | | | |
| 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 | | |

| e-PROFICIENCY IMPROVEMENT PROGRAMMES (ePIPs) *(Internet based - Anytime, anywhere)* | | | |
|---|---|---|---|
| **Title of ePIP** | **Duration** | **Fees (Rs)** Corporate (Individual) *GST Extra* | **Fees (Rs)** Corporate - Bulk Licenses (minimum 15 per corporate) *GST Extra* |
| 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 |
| $NO_X$ 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
at +91 2135-630790 /91/ 95 or +91 2135-396690/91/95 or
email: patil.pga@araiindia.com; 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** & **https://academy.araiindia.com**

# E-LEARNING ONLINE COURSES (e-PIPs)

**LEARN YOUR WAY, GO ONLINE**

**ARAI** — *Progress through Research*

## 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

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**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

**$NO_x$ 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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**ARAI ACADEMY**
*Excellence in Education*