# SKYY RIDER INSTITUTIONS FOR ADVAN (An ISO-9001:2015, ISO-29990:2000 certified company)

Gram Tarang, CIT Campus, Ramachandrapur, Jatani, +91-9078205008



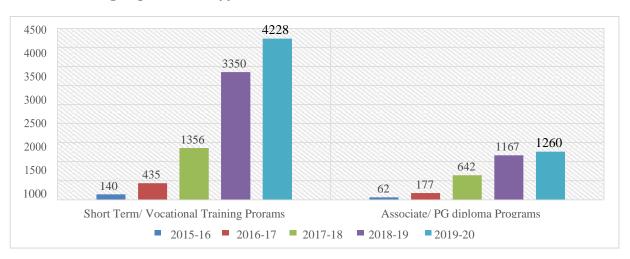
# VIRTUAL TRAINING ON Electric Vehicle Technology

#### **About Skyv Rider Institutions:**

SKYY RIDER INSTITUTIONS (Formerly Sky Rider Automotive) was established in the month of September 2011 as "Sky Riders". The company is firmly into training, development and creating employment in the various fields of Engineering and technology. SRI has been leading in providing advanced training in the field of Automobile in complete industrial pattern and helping many students starting their career in core fields. In addition to that, training provided by SRI in the fields of Aerospace Engineering, Renewable energy, Power sector, advanced IT and CS courses, advanced robotics, CAD/CAM are best in class. SRI has been setting up new milestones in quality of training and changing many lives and making India a hub of skilled manpower. Best trainers who have endemic experience and achievements in their respective fields are SRI's major strength. SRI are working in a partnership with "Gram Tarang Employability Training Service- The preeminent player in Skill-based education providing sector", "NSDC- Govt. of India", and "Mini tool room and training centre, Set up by Govt. of Odisha" to enhance their quality of training. Besides that Skyy Rider is one of the few such institutions who is certified with ISO 9001:2015, ISO 29990:2010.

Our Prime Motto: "Dedicated in Up-Skilling & Empowering Nation"

#### Portfolio of training imparted at Skyy Rider Institutions, Odisha:



Student enrolment in our various programs

### **Virtual Industrial courses by Skyy Rider:**

Skyy Rider has introduced several virtual programs in association with different industries and experts in

the domain for the students to learn virtually and learn directly from experts and industries. The programs designed by Skyy Rider are industry complying and are best in class. The virtual training programs not only consist of virtual class rooms also virtual practical experience (First time in India). The first ever



virtual practical sessions are so well designed that it gives a great learning experience to participants.







# About the Electric Vehicle program by Skyy Rider:

The future of automobile is going to be completely electric or hybrid. India being one of the biggest business centers for any automakers, going to be one of the world leaders in EV revolution. Future needs thousands of skilled engineers to take the revolution ahead and meet the future demand.



Understanding the requirement of Skyy Rider has developed electric vehicle program (2 weeks) in association with several industry partners and out of our huge experience in electric vehicle manufacturing. The EV program designed by us will give a student a clear basic understanding the concept of EV and knowledge which can help him to work in company directly.

Guest sessions will be taken by experts of Electric

Vehicles and industry persons. This course is going to give a great experience of learning to all the students.



## Why Skyy Rider is market leader in Electric Vehicle Program?

- 1. Inhouse production of Electric Rickshaws under a Skyy Rider Electric Brand
- 2. Manufacturer of E-Golf carts, Solar vehicles
- 3. Partnership with several Electric vehicle manufacturer and diligently working with them.
- 4. Inhouse Electric vehicle research team and development of sustainable Electric vehicles.





# SKYY RIDER INSTITUTIONS FOR ADVANCED SKILL & RESEARCH

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## **Available EV Courses:**

## We are offering 3 types of EV program basically.

- 1. Basics EV- Electric Vehicle Technology (2 Weeks)
- 2. Advanced EV- Advanced Electric Vehicle Technology (2 Weeks)
- 3. Complete Program- Electric Vehicle Technology & advanced systems

## 1. Detailed Curriculum- 2 Weeks Basics EV

Sl.	Modules	Description
1	Introduction to EV	History of Automobile, History of EV, What is an EV?
		Major EV Components, How EV works?, Types of EV.
2	Indian EV Market	History, Current EV Market, Problems faced
3	EV Battery	Battery Definition, Types of battery, Internals of battery
		Working principle, EV Battery, Types of EVB, Lead-acid battery
		Working, Advantage/Disadvantage, Li-ion Battery
		Types of Li-ion battery, Working principle, Internals of Li-ion
		battery, Advantage/Disadvantage
4	Motors	Definition, Components of motors, Classification, AC Motor
		types, AC motor working, DC Motor types, DC motor working
		Definition, Working, Function, Controller as an
5	Controllers	inverter/converter, Types of controllers
6	Battery Management System	Definition, Types of BMS, Working of BMS
		Functions of BMS (elaborative study), Battery Cooling system
	EV Chargers	What are EV charger? Classification of EV chargers
7		Methods of charging EVB, EVB Current Ratings
		Modern technologies for charging.
	Introduction to Hybrid Electric Vehicles	History of HEV, Modern day HEV, what are HEV?
8		Working of HEV, Brief Description of Major components in an
		HEV, Degree of Hybridization in HEV
		Advantages/Disadvantages, HEV Powertrain
9	Hybrid Electric Power train	Elecrtro-mechanical Powertrain in HEV
		Types of HEV powertrain (elaborative study)
10	Technologies used for Increasing	Regenerative braking system/KERS (elaborative study)
	Energy Efficiency in HEV	Start-Stop system (elaborative study)
	Introduction to Fuel Cell EV	What are Fuel Cell EV's? History of FCEV
11		Modern day FCEV, Major components of FCEV
		Working of FCEV, Advantages/disadvantages
12	Types of Fuel Cells	Classification of fuel cells, Chemical reaction in fuel cells.
		Hydrogen charging infrastructure.

## SKYY RIDER INSTITUTIONS FOR ADVANCED SKILL & RESEARCH







## 2. Detailed Curriculum- 2 Weeks Advanced EV

Sl.	Modules	Description
1	Energy Storage & BMS	<ol> <li>Cell chemistery</li> <li>Cell combination/prismatic &amp; cylindrical cell</li> <li>BMS &amp; battery test parameters</li> <li>BMS design in MATLAB</li> <li>Cell holders, Cooling jackets, &amp; balancing</li> <li>Develop Battery cooling system in CATIA</li> <li>CFD for Battery cooling system using Ansys Fluent</li> </ol>
2	Power Train Development	<ol> <li>Different powertrain combination</li> <li>Selection of transmission</li> <li>Motor selection</li> <li>Automated Gearbox</li> <li>Motor design using ANSYS, RMxprt</li> </ol>
3	Vehicle Dynamics	<ol> <li>Vehicle geometry</li> <li>Vehicle packing</li> <li>Calculate required Chassis stiffness</li> <li>Suspension system selection using MSC ADAMS</li> <li>Simulate full vehicle model</li> </ol>
4	Motors	<ol> <li>Suspension optimization using ADAMS and MATLAB</li> <li>Structural optimization using Ansys Mechanical &amp; MATLAB</li> <li>Introduction to single objective optimizers (MATLAB or Python)</li> </ol>
5	Career Guidance Session	One to one career guidance and mentorship sessions with experts

## 3. Detailed Curriculum- 4 Weeks Complete Program- Basics EV+ Advanced EV

All the contents from 2 Weeks Basics & All the contents from 2 Weeks advanced.

#### Take away:

- Learn from fundamentals till advanced EV tools and techniques used in Industry.
- Interact with working professionals from industry.
- Complete live classes & doubt clearings with our EV expert.
- Certificate of completion from Gram Tarang (NSDC) & Skyy Rider
- Lifetime technical assistance from Skyy Rider Institution.

### **Price:**

Please check the price details of individual courses in the website.

#### Note:

- All the classes will be conducted online and the sessions will be taken live by experienced trainers.
- Every student will get need based one to one interaction with instructors to clarify their doubts.



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• Students must pay the full amount to get admission for any of the programs.

## **Certificate:**

Certificate of completion from Gram Tarang (Partner of NSDC- Govt. of India)

Digital certificates will be sent to students after completion of the online training and assessment test. On demand hardcopy of the certificate will be courier to students address with additional courier charges.

#### **Admission Process:**

- Visit the website and complete your enrolment process.
- After completion of the process our team will get in touch with you for details of batch.
- For any further queries you can contact Miss Madhu at 8800889353.

Thank You