



**SKY RIDER AUTOMOTIVE**  
**INSTITUTE OF DESIGN & TECHNOLOGY**  
C/O- Gram Tarang, Jatni, Khurdha, PIN- 752050

**SKY RIDER AUTOMOTIVE IN ASSOCIATION WITH MINI TOOL ROOM & TRAINING CENTRE**  
**SET UP BY GOVT. OF ODISHA) PRESENTS**

**POST GRADUATION & DIPLOMA COURSE (3 MONTHS & 6 MONTHS)**  
**ON “AUTOMOTIVE DESIGNING AND MANUFACTURING”**

**About MTRTC:**

Mini Tool Room & Training Centre, Govt. of Odisha; offers excellent opportunities for creating high end Technical Skills which results from rigorous exposures of Trainees to various theoretical aspects and adequate hands on practice to make them employment ready. Trainees from Tool Rooms are in great demand from industries and attract higher salaries; Mini tool room training centre is also proudly producing such trainees from its centres. MTRTC has been empanelled as registered vendor of **HAL, Sunabeda** to manufacture **Sukhoi and MIG engine** components. With ISO certified workshops and world class training facility MTRTC is one of the finest organisations for automotive training. Gram Tarang Employability and training services, partner of NSDC (Govt. Of India); managing body of MTRTC is the leading Skill based training and employment providing company in India. MTRTC in association with Sky Rider Automotive has introduced a six month intensive training on transportation designing to enable students pursuing a career in automotive field.

**About Sky Rider Automotive:**

SKY RIDER AUTOMOTIVE (SRA) was established in the month of September, 2011 as “Sky Riders”. The company is firmly into the training and development on *Aerospace engineering* and *Automobile engineering* along with its peripheral subject matter in the name of “*Institute of Aero Design*” and “*Institute of Auto Design*” respectively. Major functionality of the company is doing thorough research to provide quality workshops and training on Aeromodelling, Automobile and CAD, Manufacturing training in different institutions across country and at our centres. SRA provides the best possible facilities, scope and platform to students to gain, implement and explore. Best trainers who have won several awards in their respective fields are SRA’s major strength. SRA 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 workshops and trainings.

**Prime Motto of SRA: “*Building a golden tomorrow and portraying a definite change*”**

### **About Post Graduation and Diploma Courses:**

We have tonnes of automotive aspirant in India, yet India lacks quality Automobile engineers. Lack of opportunity & high cost of available course across globe has abated young talents to pursue their dream field. Ironically our Automobile industries face scarcity of trained, innovative and passionate engineers. To meet the demand of an affordable quality training with placement assistance, **Sky Rider Automotive- Institute of design and Technology** in association with **Mini Tool Room Training Centre** is introducing **Three Months** and **Six months** of exclusive training on Automobile designing and manufacturing with training partners such as Gram Tarang, Yamaha, Mahindra, Ashok Leyland, Hyundai, BEML, Eicher and CUTM.

### **Programs under Post-Graduation & Diploma courses:**

- a. **Six months** Post Graduation & Diploma course on Automotive Designing & Manufacturing
- b. **Three months** Post Graduation & Diploma course on Automotive Designing & Manufacturing

### **How we are different than other post-graduation and diploma course available in market**

1. **Broad range of opportunities:** We have designed the course with such a pattern that a student can choose his/ her career in the fields of Automobile, manufacturing, designing, CAD-CAM and can start their own firm.
2. **We provide skill for rest of the Life:** In the advanced technological era, traditional teaching and training methods are unable to meet industry requirements. Our courses are designed in complete industrial pattern to provide advanced skill to students, so that a student after pursuing our courses can be industry fit and explore in their career.
3. **100% Placement assistance:** After the completion of course we shall conduct placement drive by various reputed companies in various fields. We will provide a pre-placement training and guidance to perform better in placement drive.
4. **Exposure to industry even before getting job:** We provide one month of **on job training** at various automotive industries to provide exposure to maintenance training and other on job field experience to our students.
5. **Affordable cost:** The courses provided by us are *less than even TEN FOLDS* of available price range for the same courses in market. Due to high cost of the course, many students fail to pursue the course. We have taken care of the price such that, every single student who is interested can avail the training program.

### Highlights of the Program:

- Seventh institute in India to introduce transportation design course. Cost wise we are least and quality and facility wise we are equally competent with existing premier institutions. First time In India, all Automobile related courses in a single training program.
- Free training in industry partners like Ashok Leyland, Hyundai, Mahindra, Yamaha, BEML during the training program.
- Guest lectures by Auto designers, leaders, entrepreneurs.
- Placement opportunity at end of the training.
- Certificate of completion of “Post-Graduation & Diploma in Automotive Designing & Manufacturing” from NSDC, MTRTC (Set up by Govt. of Odisha).

### Career Opportunities:

- Students get ample opportunity to get selected in a company during the placement drive.
- As a student can master in field of CAD design, automobile manufacturing and assembly, CNC, on job maintenance and troubleshooting of vehicle so broad field of opportunity opens for a student. He can join a company with hand on experience in that field, which will help him to explore
- By joining such course student gets a chance to pursue master’s degree in top Universities of world.
- A student will learn basic engineering and learn using all basic tools that are required in industrial machineries which will help him in every step of his career. We will start from basic and take a student to a level from where he can explore of his own. Many doors to success and better career opportunity will open.
- A valuable “skill training certificate” from NSDC and certification of completion from MTRTC (Govt. of Odisha set up) will help students finding better opportunities in future.

### Partners of the training program:



### Training Institute Partners:



## COURSE CONTENTS

### **1. THREE MONTHS POST GRADUATION & DIPLOMA COURSE ON AUTOMOTIVE DESIGNING AND MANUFACTURING**

#### **MODULE-1: CONCEPT OF DRAWING AND AUTOMOTIVE DESIGNING**

##### **1.1: ENGINEERING DRAWING-**

Introduction to ED, types of lines and paper sizes, scaling, dimensioning, isometric/diametric/trimetric views, Surface texture, Symbolic representation.

##### **1.2: HAND SKETCHING-**

Elements of Art: Line, Form, Balance, Texture, Rhythm in Indian Sculpture, three dimensional practices, Basic drawing, Tool of sketching, Free Hand Drawing, Ideation, Shaping and Communication, Object to sketching conversion, Car drawing, Final touch and finishing.

#### **MODULE-2: DIGITAL MODELLING**

##### **2.1: 2D DRAFTING:**

Introduction to CAD, Scaling, Rotating, Hatching/gradient, Array, Dimensioning, Layer concepts and keyboard commands.

##### **2.2: 3D MODELLING:**

**CATIA:** Introduction to 3d Modelling and various CAD software, Introduction to CATIA, part designing, tools in part designing, assembly workbench, DMU mechanics, 2D drafting in CATIA, Surface Modelling, Creating complex surfaces, understanding other workbenches, Complex surfaces practice.

#### **MODULE-3: AUTOMOTIVE THEORY AND COMPONENT TRAINING**

##### **3.1 AUTOMOBILE ENGINEERING/TRANSPORTATION ENGINEERING THEORY:**

Introduction To Automobiles, History And Classification Of Automobiles, Different Parts Of An Automobile, Engines, Fuel Supply Systems, Lubrication System, Cooling Systems, Chassis And Transmission, Transmission System, Steering And Axles, Braking System, Electrical Systems, Maintenance And Troubleshooting, Driving, Automotive Pollution And Control, Safety Measures While Driving.

##### **3.2 VEHICLE COMPONENT TRAINING IN AUTOMOTIVE LAB:**

Component training- Engine, Transmission, Suspension, Chassis, Breaking system, Automation system, Tire, Electrical system by dismantling and assembly of models. Hands on Practice of dismantling and assembly of automotive components.

## **MODULE-4: MANUFACTURING PROCESS- CONVENTIONAL & CNC**

### **4.1: CONVENTIONAL MACHINING PROCESS:**

Types of conventional machines, concepts of axes, Lathe machine and operations, milling machine and operations, grinding machine and operations, specialized machines.

### **4.2: CNC MACHINING AND MASTERCAM**

4.3.1: CNC Machining: Advantages and disadvantages of CNC over Conventional, CNC Controllers, Co-ordinate geometry, FANUC and SEIMENS controller basics, CNC turning: Operations in CNC Lathe, CNC Milling: Operations in CNC milling, Specialized robotic CNC machines, machining practices

4.3.2: MASTERCAM: Introduction to MASTERCAM, generating surfaces, importing CAD files to MASTERCAM, generating tool path, choosing tools and machining factors, generating CNC codes, transferring CNC programs to CNC machines.

## **MODULE-5: VEHICLE COMPONENT MANUFACTURING**

### **5.1: FABRICATION THEORY AND PRACTICAL**

Health and safety, Measurement and instrumentation, Theory and practical of Fabrication tools, cutting, welding and grinding.

### **5.2: AUTO PARTS MANUFACTURING IN CONVENTIONAL MACHINING**

Auto part manufacturing by lathe, milling and other special machines and assembly of manufactured components.

### **5.3: AUTO PARTS MANUFACTURING IN CNC**

Auto part manufacturing by CNC lathe, CNC milling and assembly of manufactured components.

## **2. SIX MONTH POST GRADUATION & DIPLOMA COURSE ON AUTOMOTIVE DESIGNING AND MANUFACTURING**

### **MODULE-1: CONCEPT OF DRAWING AND AUTOMOTIVE DESIGNING**

#### **1.1: ENGINEERING DRAWING-**

Introduction to ED, types of lines and paper sizes, scaling, dimensioning, isometric/diametric/trimetric views, Surface texture, Symbolic representation.

#### **1.2: HAND SKETCHING-**

Elements of Art: Line, Form, Balance, Texture, Rhythm in Indian Sculpture, three dimensional practices, Basic drawing, Tool of sketching, Free Hand Drawing, Ideation, Shaping and Communication, Object to sketching conversion, Car drawing, Final touch and finishing.

#### **1.3 DESIGNING AND CLAY MODELLING-**

Design Context: Design Overview, Automotive sketching and rendering, Making simple parts with clay, Making Automotive parts with clay, Scale down complete model making with Industrial clay.

#### **1.4: RENDERING BY PHOTOSHOP:**

Use of Photoshop in designing, sketching and Rendering, Photoshop in Automotive designing.

### **MODULE-2: DIGITAL MODELLING**

#### **2.1: 2D DRAFTING:**

Introduction to CAD, Scaling, Rotating, Hatching/gradient, Array, Dimensioning, Layer concepts and keyboard commands.

#### **2.2: 3D MODELLING:**

**CATIA:** Introduction to 3d Modelling and various CAD software, Introduction to CATIA, part designing, tools in part designing, assembly workbench, DMU mechanics, 2D drafting in CATIA, Surface Modelling, Creating complex surfaces, understanding other workbenches, Complex surfaces practice.

**SOLID WORKS:** Feature of Solid works, Solid work graphical user interface, Sketch entities, Sketch tools, Part modelling, Assembly modelling, Surface modelling, Drafting, Sheet metal, Product data management, Design and assembly of complete vehicle using solid works



### **2.3: ANALYSIS SYSTEM:**

Need for Mechanical factor analysis, Introduction to ANSYS, Tools used for analysis, importing and exporting a CAD file, File format conversion (CAD to IGES), Stress and other factors analysis, Troubleshooting.

## **MODULE-3: AUTOMOTIVE THEORY AND COMPONENT TRAINING**

### **3.1 AUTOMOBILE ENGINEERING/TRANSPORTATION ENGINEERING THEORY:**

Introduction To Automobiles, History And Classification Of Automobiles, Different Parts Of An Automobile, Engines, Fuel Supply Systems, Lubrication System, Cooling Systems, Chassis And Transmission, Transmission System, Steering And Axles, Braking System, Electrical Systems, Maintenance And Troubleshooting, Driving, Automotive Pollution And Control, Safety Measures While Driving.

### **3.2 VEHICLE COMPONENT TRAINING IN AUTOMOTIVE LAB:**

Component training- Engine, Transmission, Suspension, Chassis, Braking system, Automation system, Tire, Electrical system by dismantling and assembly of models. Hands on Practice of dismantling and assembly of automotive components.

## **MODULE-4: MANUFACTURING PROCESS- CONVENTIONAL & CNC**

### **4.1: CONVENTIONAL MACHINING PROCESS:**

Types of conventional machines, concepts of axes, Lathe machine and operations, milling machine and operations, grinding machine and operations, specialized machines.

### **4.2: CNC MACHINING AND MASTERCAM:**

**4.2.1: CNC Machining:** Advantages and disadvantages of CNC over Conventional, CNC Controllers, Co-ordinate geometry, FANUC and SEIMENS controller basics, CNC turning: Operations in CNC Lathe, CNC Milling: Operations in CNC milling, Specialized robotic CNC machines, machining practices

**4.2.2: MASTERCAM:** Introduction to MASTERCAM, generating surfaces, importing CAD files to MASTERCAM, generating tool path, choosing tools and machining factors, generating CNC codes, transferring CNC programs to CNC machines.

## **MODULE-5: VEHICLE MANUFACTURING & TESTING**

### **5.1: FABRICATION THEORY AND PRACTICAL:**

5.1.1 Health and safety, Measurement and instrumentation, Theory and practical of Fabrication tools- Cutting, Welding, Grinding, Sawing & filing Etc.

5.1.2 Conventional machine operation to manufacture components, sheet metal work, shaping of metal sheet Etc.

### **5.2: FABRICATION OF CAR:**

Frame Fabrication, Engine Mounting, Suspension and Wheel Assembly, Transmission and Gear Assembly and Fabrication, Wire Frame Design, Body Making Using Sheet Metal and Fibre, Finishing, Denting and Accessories Fitment, Wiring and Pre- Final Testing, Colouring.

### **5.3: TESTING AND DRIVING:**

5.3.1 Road and safety, Traffic rules and signals, Short driving training.

5.3.2 Driving and High speed run test of manufactured car, Vehicle Troubleshooting and maintenance techniques.

## **MODULE: 6- MAINTENANCE AND TROUBLESHOOTING TECHNIQUES**

6.1 Maintenance and troubleshooting of vehicles.

6.2 On job training and practice at partner automotive on site.



## ADMISSION 2017-18

Admission to programs conducted by Sky Rider Automotive is a matter of privilege not a right. The medium of instruction for all our courses is English. We seek to attract enthusiastic, passionate yet academically sound students to enrol in our program. Success in our program is purely based on the dedication, hard work, sincerity towards learning and skill practice. We admit applicants whose ability, training, motivation and interest indicate academic success.

Sky Rider Automotive is committed to equality of educational opportunity and does not discriminate against applicants based on caste, race, colour, national origin, gender, age or disability.

### **Who Can Apply?**

- B- Tech or BE Graduates Automobile, Mechanical or Related branches.
- Diploma degree holders Automobile, Mechanical or Related branches.
- Working professionals in related field.

(If a person is not meeting any of the above criteria and is interested to participate the program may contact us. His/ Her application may be considered as a special case after a round of interview to know his/ her subject knowledge, motivation and interest towards the field. )

### **Application Process:**

1. Visit our Website and download the Admission form. (Link: <http://skyriderautomotive.com/Postgraduate.aspx> or go to [www.skyriderautomotive.com](http://www.skyriderautomotive.com) then go to Post Graduation and Diploma Courses under Our Programs)
2. Fill the Admission form duly and send the form along with a DD of 300/- (Application fee) to following address.

#### **Address:**

Sky Rider Automotive  
C/O- Gram Tarang Employability and  
Training Services  
At- CIT Campus, Ramachandrapur,  
Jatni, Khurdha, Odisha, Pin- 752050

*(Mention your Application number, name, contact number on the back side of DD)*

#### **DD Details:**

Send a DD from any nationalised bank with following details:

**In Favour of Sky Rider Automotive**  
**Payable at- Jatni**

3. After receiving the application we shall shortlist the applications **on the basis of academic scores and contents of “motivation of joining the course”**. The selected and waitlisted students shall be informed by mail and telephone.

4. Selected students have to register by paying a non-refundable fee before due date to confirm their admission.

- Registration fee for 3 months course- 3000/-
- Registration fee for 6 months course- 5000/-

5. If any of the selected students fails in paying the registration fee on or before due date, we shall give the opportunity to waitlisted students.

6. Registered students have to be present on the day of admission and orientation. During Admission, rest of the fees will be collected (Registration fee will be deducted from total course fee)

*(N:B- There is no instalment payment for 3 months course, a student have to pay 100% course fee during admission only. Students of 6 months can pay the course fee in maximum 2 instalments (60%-40%). Second instalment has to be paid within 2 months of joining.)*

### **Important Dates:**

| SL No | Process   | 3 Months PGDC              |                           | 6 Months PGDC             |                                  |
|-------|---|----------------------------|---------------------------|---------------------------|----------------------------------|
|       |   | 1 <sup>st</sup> Batch      | 2 <sup>nd</sup> Batch     | 1 <sup>st</sup> batch     | 2 <sup>nd</sup> batch            |
| 1     | <b>Application Process and Registration Starting date</b> | 1 <sup>st</sup> July 2017  | 1 <sup>st</sup> Nov 2017  | 1 <sup>st</sup> Aug 2017  | 1 <sup>st</sup> April 2018       |
| 2     | <b>Application and DD receiving last date</b>             | 31 <sup>st</sup> July 2017 | 25 <sup>th</sup> Nov 2017 | 25 <sup>th</sup> Aug 2017 | 18 <sup>th</sup> April 2018      |
| 3     | <b>Registration fee submission last date</b>              | 5 <sup>th</sup> Aug 2017   | 30 <sup>th</sup> Nov 2017 | 5 <sup>th</sup> Sep 2017  | 23 <sup>th</sup> April 2018      |
| 4     | <b>Admission and Orientation Program</b>                  | 14 <sup>th</sup> Aug 2017  | 08 <sup>th</sup> Dec 2017 | 16 <sup>th</sup> Sep 2017 | 30 <sup>th</sup> April 2018      |
| 5     | <b>Classes Commencement</b>                               | 16 <sup>th</sup> Aug 2017  | 11 <sup>th</sup> Dec 2017 | 18 <sup>th</sup> Sep 2017 | 1 <sup>st</sup> May 2018         |
| 6     | <b>Batch Ending tentative dates</b>                       | Last Week of Nov 2017      | Last Week of March 2018   | Last Week of March 2018   | 1 <sup>st</sup> Week of Nov 2018 |

## **FEE STRUCTURE:**

### **Course:**

| <b>3 Months Post Graduation &amp; Diploma Program</b> |  |
|---|--|
| Application fee                                       | 300/- (Non Refundable)   |
| Course Fee  | 14900/- Including 3000/- registration fee.<br>(Refundable deducting registration fee)* |
| Placement fee   | 4000/- (Refundable)  |
| <b>Total</b>  | <b>18900.00+300.00</b>   |

| <b>6 Months Post Graduation &amp; Diploma Program</b> |   |
|---|---|
| Application fee                                       | 300/- (Non Refundable)  |
| Course Fee  | 29,900/- Including 5000/- registration fee.<br>(Refundable deducting registration fee)* |
| Placement fee   | 5000/- (Refundable)   |
| <b>Total</b>  | <b>34900.00+300.00</b>  |

(\* Course fee other than registration fee is refundable subjected to very special and unavoidable case only. If institution finds the cause of appeal for refund of course fee is not acceptable, request will not be considered and no refund will be done)

### **Accommodation and Transportation:**

|                          |  |
|--------------------------|--|
| Hostel and Accommodation | 2000/- Per month (Food not included)<br>Student can pay it on monthly basis or all at a time                                       |
| Local transport Facility | 2000/- Per month (Available from Bhubaneswar and few part of Cuttack only)<br>Student can pay it on monthly basis or all at a time |

## **CONTACT DETAILS**

### **For Admission and Placement Related information**

Mr. Rakesh-9078205008,

Mr. Sanjay- 8249000594

### **For Course Details Related Information**

Mr. Nihar- 8908079328

[info@skyriderautomotive.com](mailto:info@skyriderautomotive.com)

[www.skyriderautomotive.com](http://www.skyriderautomotive.com)

(For any further discussion beyond the above subject matters contact our Chief Operating Officer

**Mr. Himansu- 7978540445)**