



COLLEGE OF ENGINEERING BHUBANESWAR
Plot No.1 (A), CNI Complex, Patia, Bhubaneswar – 751024, Odisha, India.

[AFFILIATED TO BPUT, ODISHA]

www.coeb.ac.in

DEPARTMENT OF AUTOMOBILE ENGINEERING

ADD-ON COURSE

Course Title: **Automotive Testing and Certification**
Programme : **B. Tech.**
Branch : **Automobile Engineering**
Semester : **3rd**

Course Objectives:

- ❖ To provide student with an opportunity to develop technical competency in automobile engineering.
- ❖ To provide students an understanding of static testing of vehicle.
- ❖ To have an understanding about the dynamic testing of vehicles.
- ❖ To provide students a general idea vehicle component and lighting testing.

SYLLABUS

Total Lecture Hours: 40

MODULE 1:

(14 hours)

CMVR physical verification, Tyre Tread Depth Test, Vehicle Weightment, Horn installation, Rear view mirror installation, Tell Tales, External Projection, Wheel Guard, Arrangement Of Foot Controls For M1 Vehicle, Angle & Dimensions Measurement of Vehicle, The Requirement Of Temporary Cabin For Drive – Away – Chassis. Type approval Scheme, Homologation for export, Conformity of Production, various Parameters, Instruments and Types of test tracks.

MODULE 2:

(14 hours)

CMVR physical verification, Tyre Tread Depth Test, Vehicle Weightment, Horn installation, Rear view mirror installation, Tell Tales, External Projection, Wheel Guard, Arrangement Of Foot Controls For M1 Vehicle, Angle & Dimensions Measurement of Vehicle, The Requirement Of Temporary Cabin For Drive – Away – Chassis. Hood Latch, Gradeability, Pass-by Noise, Interior Noise, Maximum Speed, Acceleration Test, Coast-down test, Brakes Performance ABS Test, Broad band / Narrow band EMI Test. Engine power test (petrol & diesel), Indian driving cycle, Vehicle mass emission, Evaporative.

MODULE 3:

(12 hours)

Horn Testing, Safety Glasses Test: Windscreen laminated and toughened safety glass, Rear View Mirror Test, Hydraulic Brakes, Hoses Fuel Tank Test: Metallic & Plastic, Hinges and Latches Test, Tyre & Wheel Rim Test, Bumper Impact Test, Side Door Intrusion, Crash test with dummies, demist test, Defrost Test, Installation requirement for lighting, signalling & reflective devices Installation.

Course Outcomes:

After completion of course the students will be able to:

CO1: Classify the vehicle and identify the regulations governing for each vehicle type.

CO2: Perform and analyze the Static & Dynamic test of any vehicle.

CO3: Perform various test related to vehicle engine emissions.

CO4: Test and analyze the performance of vehicle components.

CO5: Perform the tests to be done on the vehicle lighting system.

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Text Book:

1. Automotive Technician Certification Test Preparation Manual A-Series (DELMAR LEARNING'S ASE TEST PREP SERIES) Automotive Technician Certification Test Preparation Manual A-Series (DELMAR LEARNING'S ASE TEST PREP SERIES).
2. Advanced Automotive Fault Diagnosis, Tom Denton, institute of the motor Industry.

Reference Text Book:

1. Mrs. Rashmi Urdhwaresh, Automotive Industry: Regulations Scenario in India Senior Deputy Director, ARAI, ISA Vision Summit 2013
2. Robert Bosch GmbH, Bosch Automotive Handbook

Online resources:

1. A Review on Hybrid Electric Vehicle Yasmeen Malik, Vikas Kumar, International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering.
2. Hybrid Electric Vehicle Rushikesh Trushar Soni, Journal of Mechanical and Civil Engineering.

Evaluation Criteria:

- Mandatory attendance of 75% for each student.
- Conduction of two internal assessments and students have to secure 50% marks in each assessment.
- Certificates will be awarded to each student fulfilling the above criteria.

Designed & developed by: Dr. Krishna & Prof. Asis Kumar Nayak

Principal
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College of Engineering Bhubaneswar

HOD, Automobile Engg.

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COLLEGE OF ENGINEERING BHUBANESWAR

Plot No.1 (A), CNI Complex, Patia, Bhubaneswar – 751024, Odisha, India.

NOTICE

Department of Automobile Engineering Add On Course 2021-2022

Ref No: COEB/AE/2021/08

Date: 22.11.2021

It is hereby informed to all the students that the Department of Automobile Engineering is going to start the following Add-on courses for Academic year 2021-2022. All the students are instructed to enroll their names for the following courses on or before **30.11.2021**. The classes will be commenced from **06/12/2021** during 5.30pm to 7.30pm. You can contact the following course co-ordinators for enrolment and any queries.

Sl No.	Name of Add-on Course	Sem	Duration in hours	Name of the course co-ordinators
1.	Automotive Testing and Certification	3 rd	40	Prof. <i>ABIS. Kumar Nayak</i>
2.	Electric and hybrid vehicles	5 th	40	Prof. Jagannath Mohapatra
3.	CATIA V5	7 th	40	Dr. Sujit Kumar Khuntia

HOD

Automobile Engineering Department

Copy to:

1. Vice Chairman
2. Executive Director
3. Principal
4. All Notice Board.
5. A.O(Admin)
6. All HODs
7. Hostel, Security

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COLLEGE OF ENGINEERING BHUBANESWAR (COEB)

DEPARTMENT OF AUTOMOBILE ENGINEERING
ADD ON/CERTIFICATE COURSE
STUDENT ENROLLMENT SHEET

Programme: B Tech in AUTOMOBILE ENGINEERING	Academic Year : 2021-22	
Semester: 3rd	Course Code (if any):	Course Duration: 40 hours
Name of the Course: Automotive Testing and Certification		

I do hereby undertake to participate in the above mentioned add on course.

Sl No.	Reg. No.	Name of the Students	Signature
1	2001219018	AMIR BIN NASIR	Amir Bin Nasir
2	2001219019	ANURAG PRADHAN	Anurag Pradhan
3	2001219090	MILI PADHAN	Mili Padhan
4	2001219091	SK NADEEM SARWAR	Sk Nadeem Sarwar
5	2001219092	ALOK DASH	Alok Dash
6	2001219093	BADAL KUMAR NAIK	B.K. Naik
7	2001219094	BIPIN BIHARI BISWAL	Bipin Bihari Biswal
8	2001219095	NIKHIL PATEL	Nikhil Patel
9	2001219096	PRADATTA PRAHARAJ	Pradatta Praharaj
10	2001219097	SAMBIT PATRA	Sambit Patra




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DEPARTMENT OF AUTOMOBILE ENGINEERING
ADD ON/CERTIFICATE COURSE
STUDENT ATTENDANCE SHEET

Programme: B Tech in AUTOMOBILE ENGINEERING		Semester: 3rd	Academic Year : 2021-22	Sheet No:
Name of the Course: Automotive Testing and Certification		Course Code (if any):		
Sl No.	Reg. No.	Name of the Students	Date	Date
1	2001219018	AMIR BIN NASIR	6/12/21	8/12/21
2	2001219019	ANURAG PRADHAN	Amir bin Nasir	Amir bin Nasir
3	2001219090	MILI PADHAN	Anurag Pradhan	Anurag Pradhan
4	2001219091	SK NADEEM SARWAR	Mili Padhan	Mili Padhan
5	2001219092	ALOK DASH	SK NADEEM SARWAR	SK NADEEM SARWAR
6	2001219093	BADAL KUMAR NAIK	Alok Dash	Alok Dash
7	2001219094	BIPIN BIHARI BISWAL	B.K NAIK	B.K NAIK
8	2001219095	NIKHIL PATEL	Bipin Bihari Biswal	Bipin Biswal Biswal
9	2001219096	PRADATTA PRAHARAJ	Nikhil Patel	Nikhil Patel
10	2001219097	SAMBIT PATRA	Pradatta Praharaj	Pradatta Praharaj
			Sambit Patra	Sambit Patra



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DEPARTMENT OF AUTOMOBILE ENGINEERING
ADD ON/CERTIFICATE COURSE
STUDENT ATTENDANCE SHEET

Programme: B Tech in AUTOMOBILE ENGINEERING		Semester: 3rd	Academic Year : 2021-22		Sheet No:	
		Course Code (if any):				
Name of the Course: Automotive Testing and Certification						
Sl No.	Reg. No.	Name of the Students	Date	Date	Date	
1	2001219018	AMIR BIN NASIR	10/12/21	12/12/21	15/12/21	
2	2001219019	ANURAG PRADHAN	Amir Bin Nasir	Anurag Pradhan	Anurag Pradhan	
3	2001219090	MILI PADHAN	Mili Padhan	Mili Padhan	Mili Padhan	
4	2001219091	SK NADEEM SARWAR	ABS	SK NADEEM SARWAR	SK NADEEM SARWAR	
5	2001219092	ALOK DASH	Alok Dash	Alok Dash	Alok Dash	
6	2001219093	BADAL KUMAR NAIK	B.K. NAIK	B.K. NAIK	B.K. NAIK	
7	2001219094	BIPIN BIHARI BISWAL	Bipin Bihari Biswal	Bipin Bihari Biswal	Bipin Bihari Biswal	
8	2001219095	NIKHIL PATEL	Nikhil Patel	Nikhil Patel	Nikhil Patel	
9	2001219096	PRADATTA PRAHARAJ	Pradatta Praharaj	Pradatta Praharaj	Pradatta Praharaj	
10	2001219097	SAMBIT PATRA	Sambit Patra	Sambit Patra	Sambit Patra	



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DEPARTMENT OF AUTOMOBILE ENGINEERING
ADD ON/CERTIFICATE-COURSE
STUDENT ATTENDANCE SHEET

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Programme: B Tech in AUTOMOBILE ENGINEERING		Semester: 3rd		Academic Year : 2021-22		Course Code (if any):		Sheet No:	
Name of the Course: Automotive Testing and Certification									
Sl No.	Reg. No.	Name of the Students	Date	Date	Date	Date	Date	Date	Date
1	2001219018	AMIR BIN NASIR	16/12/21	17/12/21	20/12/21	21/12/21	Amir bin Nasir	Amir bin Nasir	Amir bin Nasir
2	2001219019	ANURAG PRADHAN	Amir bin Nasir	Amir bin Nasir	Amir bin Nasir	Amir bin Nasir	Amir bin Nasir	Amir bin Nasir	Amir bin Nasir
3	2001219090	MILI PADHAN	Anurag Pradhan	Anurag Pradhan	Anurag Pradhan	Anurag Pradhan	Anurag Pradhan	Anurag Pradhan	Anurag Pradhan
4	2001219091	SK NADEEM SARWAR	ABS	M.V. Padhan	M.V. Padhan	M.V. Padhan	M.V. Padhan	M.V. Padhan	M.V. Padhan
5	2001219092	ALOK DASH	SK NADEEM SARWAR	SK NADEEM SARWAR	SK NADEEM SARWAR	SK NADEEM SARWAR	SK NADEEM SARWAR	SK NADEEM SARWAR	SK NADEEM SARWAR
6	2001219093	BADAL KUMAR NAIK	Alok Dash	Alok Dash	Alok Dash	Alok Dash	Alok Dash	Alok Dash	Alok Dash
7	2001219094	BIPIN BIHARI BISWAL	B.K. Naik	B.K. Naik	B.K. Naik	B.K. Naik	B.K. Naik	B.K. Naik	B.K. Naik
8	2001219095	NIKHIL PATEL	Bipin Bihari Biswal	Bipin Bihari Biswal	Bipin Bihari Biswal	Bipin Bihari Biswal	Bipin Bihari Biswal	Bipin Bihari Biswal	Bipin Bihari Biswal
9	2001219096	PRADATTA PRAHARAJ	Nikhil Patel	Nikhil Patel	Nikhil Patel	Nikhil Patel	Nikhil Patel	Nikhil Patel	Nikhil Patel
10	2001219097	SAMBIT PATRA	Pradatta Praharaj	Pradatta Praharaj	Pradatta Praharaj	Pradatta Praharaj	Pradatta Praharaj	Pradatta Praharaj	Pradatta Praharaj



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DEPARTMENT OF AUTOMOBILE ENGINEERING
ADD ON/CERTIFICATE COURSE
STUDENT ATTENDANCE SHEET

Programme: B. Tech in AUTOMOBILE ENGINEERING

Semester: 3rd

Academic Year : 2021-22

Course Code (if any):

Sheet No:

Name of the Course: Automotive Testing and Certification

Sl No.	Reg. No.	Name of the Students	Date	Date	Date
1	2001219018	AMIR BIN NASIR	28/12/21	07/01/22	10/1/22
2	2001219019	ANURAG PRADHAN	ABS	Amit bin Nasir	Amit bin Nasir
3	2001219090	MILI PADHAN	Anurag Pradhan	Anurag Pradhan	Anurag Pradhan
4	2001219091	SK NADEEM SARWAR	Mili Padhan	Mili Padhan	ABS
5	2001219092	ALOK DASH	SK NADEEM SARWAR	SK NADEEM SARWAR	SK NADEEM SARWAR
6	2001219093	BADAL KUMAR NAIK	Alok Dash	Alok Dash	Alok Dash
7	2001219094	BIPIN BIHARI BISWAL	B.K NAIK	B.K NAIK	B.K NAIK
8	2001219095	NIKHIL PATEL	Bipin Bihari Biswal	Bipin Bihari Biswal	Bipin Bihari Biswal
9	2001219096	PRADATTA PRAHARAJ	Nikhil Patel	Nikhil Patel	Nikhil Patel
10	2001219097	SAMBIT PATRA	ABS	Pradatta Praharaj	Pradatta Praharaj
			Sambit Patra	Sambit Patra	Sambit Patra



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DEPARTMENT OF AUTOMOBILE ENGINEERING
ADD ON/CERTIFICATE COURSE
STUDENT ATTENDANCE SHEET

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Programme: B Tech In AUTOMOBILE ENGINEERING

Semester: 3rd

Academic Year : 2021-22


Course Code (if any):

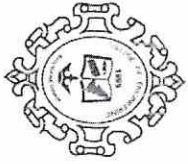
Sheet No:

Name of the Course: Automotive Testing and Certification

Sl.No.	Reg. No.	Name of the Students	Date	Date	Date	Date
1	2001219018	AMIR BIN NASIR	11/11/22	12/01/22	13/01/22	18/01/22
2	2001219019	ANURAG PRADHAN	Amir bin Nasir	Amir bin Nasir	Amir bin Nasir	Amir bin Nasir
3	2001219090	MILI PADHAN	Anurag Pradhan	Anurag Pradhan	Anurag Pradhan	Anurag Pradhan
4	2001219091	SK NADEEM SARWAR	Mili Padhan	Mili Padhan	Mili Padhan	Mili Padhan
5	2001219092	ALOK DASH	Sk Nadeem Sarwar	Sk Nadeem Sarwar	Sk Nadeem Sarwar	Sk Nadeem Sarwar
6	2001219093	BADAL KUMAR NAIK	Alok Dash	ABS	Alok Dash	Alok Dash
7	2001219094	BIPIN BHARI BISWAL	ABS	B.K. Naik	B.K. Naik	B.K. Naik
8	2001219095	NIKHIL PATEL	Bipin Bihari Biswal	Bipin Bihari Biswal	Bipin Bihari Biswal	Bipin Bihari Biswal
9	2001219096	PRADATTA PRAHARAJ	Nikhil Patel	Nikhil Patel	Nikhil Patel	Nikhil Patel
10	2001219097	SAMBIT PATRA	Pradatta Praharaj	Pradatta Praharaj	Pradatta Praharaj	Pradatta Praharaj




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PLOT NO-1(A), CNI COMPLEX, PATIA, BHUBANESWAR, KHORDHA, ODISHA-751024



Certificate of Completion

This is to certify that Mr./Ms. AMIR BIN NASIR, student of the Department

of Automobile Engg. semester Third bearing registration number 2001219018

has successfully completed the ADD-ON Course titled Automotive Testing and Certification

conducted at College of Engineering Bhubaneswar in the academic year 2021-22.

Course-Coordinator

Principal

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Certificate of Completion

This is to certify that Mr./Ms. ANURAG PRADHAN, student of the Department

of Automobile Engg. semester Third bearing registration number 2001219019

has successfully completed the ADD-ON Course titled Automotive Testing and Certification

conducted at College of Engineering Bhubaneswar in the academic year 2021-22.

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Course-Coordinator

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Certificate of Completion

This is to certify that Mr./Ms. MILIPADHAN, student of the Department

of Automobile Engg. semester Third bearing registration number 2001219090

has successfully completed the ADD-ON Course titled Automotive Testing and Certification

conducted at College of Engineering Bhubaneswar in the academic year 2021-22.

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Course-Coordinator

Principal

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Certificate of Completion


This is to certify that Mr./Ms. SK NADEEM SARWAR, student of the Department


of Automobile Engg. semester Third bearing registration number 2001219091


has successfully completed the ADD-ON Course titled Automotive Testing and Certification

conducted at College of Engineering Bhubaneswar in the academic year 2021-22.

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Course-Coordinator


Principal


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Certificate of Completion

This is to certify that Mr./Ms. ALOK DASH, student of the Department

of Automobile Engg. semester Third bearing registration number 2001219092

has successfully completed the ADD-ON Course titled Automotive Testing and Certification

conducted at College of Engineering Bhubaneswar in the academic year 2021-22.

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Course-Coordinator

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