



## COLLEGE OF ENGINEERING BHUBANESWAR

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

[AFFILIATED TO BPUT, ODISHA]

[www.coeb.ac.in](http://www.coeb.ac.in)

### DEPARTMENT OF AUTOMOBILE ENGINEERING

### ADD-ON COURSE

Course Title: **Structural System Fundamentals**  
Programme : **B. Tech.**  
Branch : **Automobile Engineering**  
Semester : **3<sup>rd</sup>**

#### **Learning Objective:**

- ❖ To provide student with an opportunity to develop technical competency in automobile engineering.
- ❖ To provide students an understanding of vehicle design.
- ❖ To have an understanding about the transmission system in vehicles.
- ❖ To provide students a general idea about safety consideration in automobiles.

#### .SYLLABUS

**Total Lecture Hours: 40**

#### **MODULE 1:**

**(14 hours)**

Chassis, Body Pattern, Aerodynamics, Safety considerations in automobiles. Structural components and materials, Engine mounting- Front, Rear, Centre, Engine types- C.I, S.I, two stroke, four stroke, Vertical inline, V-type, Transmission- Necessity of transmission, principles  
Clutch - Necessity, requirements of a clutch system, types of Clutches, Types of transmission- Manual, Automatic, DCT, CVT, AMT, IVT

#### **MODULE 2:**

**(14 hours)**

Types of transmission- Sliding mesh, constant mesh, synchromesh, Transfer gear box, Gear Selector mechanism, Types of suspension- Swing axle, sliding pillar, Macpherson strut, Double wishbone, multi-link suspension, Semi-trailing arm suspension, Swinging arm, Principle of steering, Center point steering, Steering linkages, Steering geometry and Wheel alignment, Construction, operation and maintenance of Lead acid batteries.

#### **MODULE 3:**

**(12 hours)**

Battery charging system, Principles and Operation of cutout and regulators, Starter motor, Battery Ignition and magneto ignition systems ignition timing, alternators, Fuel tank , Fuel pump, Fuel injection, Exhaust, Catalytic converter, Engine cooling systems, Muffler/Silencers, Power steering, Special steering systems

#### **Course Outcome:**

After completion of course the students will be able to:

- CO1: Understand the fundamentals and importance of engines, engine components, fuel parameters and advancement in technology.
- CO2: Examine the aspects of vehicle design, engine construction and system components
- CO3: Understanding about the transmission system in vehicles.
- CO4: They will able to understand the fundamental of vehicle design

#### **Text Book:**

1. Book on Automotive Systems: Principles and Practices, First Edition, G.K.Awari, V.S.Kumbhar, R.B.Tirpude, CRC press, Taylor and Francis Group.

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2. Book on Modern Electric, Hybrid Electric and Fuel Cell Vehicles, Mehrdad Ehsani, Eimin Gao, Sebastien E. Gay, Ali Emadi. Power electronics and applications series, University of West Florida.
3. Book on Environmental Effects and Consumer Habits, Michael Beliveau, James Rehberger, Jonathan Rowell, Alyssa Xarras. Worcester Polytechnic Institute

**Reference Text Book:**

1. Bosch Automotive Handbook, Robert Bosch, 10th Edition
2. Automotive service: Inspection, Service and Repair. Tim Gilles. 6th Edition.

**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 students fulfilling the above criteria.

Designed & developed by: Dr. Krishna & Prof. Pusparanjan Swain

Principal

Principal  
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 2019-2020

Ref No: COEB/AE/2019/16

Date: 03.07.2019

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 2019-2020. All the students are instructed to enroll their names for the following courses on or before 23.07.2019. The classes will be commenced from **13/08/2019** from 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	Structural System Fundamentals	3 <sup>rd</sup>	40	Prof. Asis Kumar Nayak
2	Fuels and Combustion	5 <sup>th</sup>	40	Pusparanjan Swain
3	Modern Fuels and Alternatives to IC Engines	7 <sup>th</sup>	40	Dr. Krishna

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 : 2019-20

Semester: 3rd

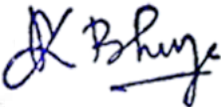
Course Code (if any):

Course Duration: 40 hours

Name of the Course: Structural System Fundamentals

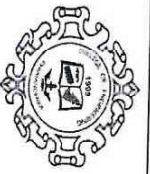
I do hereby undertake to participate in the above mentioned add on course.

Sl No.	Reg. No.	Name of the Students	Signature
1	1801219010	ANMOL KULLU	Anmol Kullu
2	1801219030	BIJAYA KUMAR MAJHI	Bijaya Ku Majhi
3	1801219048	DIBYA RANJAN MOHARANA	D. R. Moharana
4	1801219053	GAUTAM MOHANTY	Gautam Mohanty
5	1801219060	JAGANNATH MUNDA	Jagannath Munda
6	1801219072	LOKESH KUMAR PANDA	Lokesh Ku. Panda
7	1801219090	NIHAR RANJAN JENA	Nihar Ranjan Jena
8	1801219115	RAJKUMAR TARAI	Rajkumar tarai
9	1801219135	SATYAM SRINIBAS MANIA	Satyam S. Mania
10	1801219174	YASABANTA DAS	Yasabanta Das
11	1801219175	ADITYA NARAYAN SAHOO	Aditya Narayan Sahoo
12	1801219176	BACHAN BHOI	Bachan Bhoi
13	1801219177	DEVENDER KUMAR KISHAN	D. K. Kishan
14	1801219178	PRIYANKA CHATURVEDI	Priyanka Chaturvedi
15	1801219179	RAJAT RANJAN PANDA	Rajat Ranjan Panda
16	1801219180	SIDHARTH SANKAR SAHU	Sidharth Sankar Sahu
17	1801219181	SOUMYA RANJAN NATH	Soumya Ranjan Nath
18	1801219182	SUBHANKAR MOHANTY	Subhankar Mohanty
19	1801219183	UTKAL KESHARI JENA	Utkal Jena

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

(1)

Programme: B Tech in AUTOMOBILE ENGINEERING

Semester: 3rd

Academic Year: 2019-20

Name of the Course: Structural System Fundamentals

Course Code (if any):

Sheet No:

Sl.No.	Reg. No.	Name of the Students	Date	Date	Date	Date
1	1801219010	ANMOL KULLU	13/8/19	14/8/19	16/8/19	19/8/19
2	1801219030	BIJAYA KUMAR MAJHI	Anmol Kullu	Anmol Kullu	Anmol Kullu	Anmol Kullu
3	1801219048	DIBYA RANJAN MOHARANA	Bijaya Ku Majhi	Bijaya Ku Majhi	Bijaya Ku Majhi	Bijaya Ku Majhi
4	1801219053	GAUTAM MOHANTY	ABS	Dibyanranjan Moharana	Dibyanranjan Moharana	Dibyanranjan Moharana
5	1801219060	JAGANNATH MUNDA	G. Mohanty	G. Mohanty	G. Mohanty	G. Mohanty
6	1801219072	LOKESH KUMAR PANDA	Jaganath Munda	Jaganath Munda	Jaganath Munda	Jaganath Munda
7	1801219090	NIHAR RANJAN JENA	Lokesh Panda	Lokesh Panda	Lokesh Panda	Lokesh Panda
8	1801219115	RAJKUMAR TARAI	N.R. Jena	ABC	N.R. Jena	N.R. Jena
9	1801219135	SATYAM SRINIBAS MANIA	Rajkumar tarai	Rajkumar tarai	Rajkumar tarai	Rajkumar tarai
10	1801219174	YASABANTA DAS	Satyam S. Mania	Satyam S. Mania	Satyam S. Mania	Satyam S. Mania
11	1801219175	ADITYA NARAYAN SAHOO	Y. Das	Y. Das	Y. Das	Y. Das
12	1801219176	BACHAN BHOI	Aditya Narayan Sahoo	Aditya Narayan Sahoo	Aditya Narayan Sahoo	Aditya Narayan Sahoo
13	1801219177	DEVENDER KUMAR KISHAN	ABC	Bachan Bhoi	Bachan Bhoi	Bachan Bhoi
14	1801219178	PRIYANKA CHATURVEDI	Devender Ku Kishan	Devenderku kishan	Devender ku kishan	Devenderku kishan
15	1801219179	RAJAT RANJAN PANDA	P. Chaturvedi	P. Chaturvedi	P. Chaturvedi	P. Chaturvedi
16	1801219180	SIDHARTH SANKAR SAHU	Rajat Ranjan Panda	Rajat Ranjan Panda	Rajat Ranjan Panda	Rajat Ranjan Panda
17	1801219181	SOURMYA RANJAN NATH	S. Sanjyam Sahu	S. Sanjyam Sahu	S. Sanjyam Sahu	S. Sanjyam Sahu
18	1801219182	SUBHANIKAR MOHANTY	S.R. Nath	S.R. Nath	S.R. Nath	S.R. Nath
19	1801219183	UTKAL KESHARI JENA	Subhanikar Mohanty	ABC	Subhanikar Mohanty	Subhanikar Mohanty

*[Signature]*

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**COLLEGE OF ENGINEERING BHUBANESWAR (COEB)**

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

2

Programme: B Tech in AUTOMOBILE ENGINEERING

Semester: 3rd

Academic Year: 2019-20

Name of the Course: Structural System Fundamentals

Course Code (if any):

Sheet No:

Sl No.	Reg. No.	Name of the Students	Date	Date	Date	Date
1	1801219010	ANMOL KULLU	28/8/19	21/8/19	28/8/19	26/8/19
2	1801219030	BIJAYA KUMAR MAJHI	Absent till date	Absent till date	Absent till date	Absent till date
3	1801219048	DIBYA RANJAN MOHARANA	AB S	AB S	AB S	AB S
4	1801219053	GAUTAMI MOHANTY	Dr. Jayaraman Moharana	Dr. Jayaraman Moharana	Dr. Jayaraman Moharana	Dr. Jayaraman Moharana
5	1801219060	JAGANNATH MUNDA	G. Mohanty	G. Mohanty	AB S	G. Mohanty
6	1801219072	LOKESH KUMAR PANDA	Tapanath Munda	Tapanath Munda	Tapanath Munda	Tapanath Munda
7	1801219090	NIHAR RANJAN JENA	Lokesh Panda	Lokesh Panda	Lokesh Panda	Lokesh Panda
8	1801219115	RAJKUMAR TARAI	N.R. Jena	N.R. Jena	N.R. Jena	N.R. Jena
9	1801219135	SATYAM SRINIBAS MANIA	Dr. Jayaram & Mania	Dr. Jayaram & Mania	Dr. Jayaram & Mania	Dr. Jayaram & Mania
10	1801219174	VASABANTA DAS	V. Das	AB S	V. Das	AB S
11	1801219175	ADITYA NARAYAN SAHOO	Aditya Narayan Sahoo	Aditya Narayan Sahoo	Aditya Narayan Sahoo	V. Das
12	1801219176	BACHAN BHOI	Bachan Bhoi	Bachan Bhoi	Bachan Bhoi	Aditya Narayan Sahoo
13	1801219177	DEVENDER KUMAR KISHAN	Devender Kumar Kishan	Devender Kumar Kishan	Devender Kumar Kishan	AB S
14	1801219178	PRIYANKA CHATURVEDI	P. Chaturvedi	P. Chaturvedi	P. Chaturvedi	P. Chaturvedi
15	1801219179	RAJAT RANJAN PANDA	Rajat Ranjan Panda	Rajat Ranjan Panda	Rajat Ranjan Panda	Rajat Ranjan Panda
16	1801219180	SIDHARTH SANKAR SAHU	S. Sankar Sahu	S. Sankar Sahu	S. Sankar Sahu	S. Sankar Sahu
17	1801219181	SOUMYA RANJAN NATH	A B S	S. R. Nath	S. R. Nath	S. Sankar Sahu
18	1801219182	SUBHANKAR MOHANTY	Subhankar Mohanty	Subhankar Mohanty	Subhankar Mohanty	S. R. Nath
19	1801219183	UTKAL KESHARI JENA	Utkal K. Jena	Utkal K. Jena	AB S	Utkal K. Jena



*[Signature]*

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COLLEGE OF ENGINEERING BHUBANESWAR (COEB)

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

3

Programme: B Tech in AUTOMOBILE ENGINEERING

Semester: 3rd

Academic Year: 2019-20

Name of the Course: Structural System Fundamentals

Course Code (if any):

Sheet No:

Sl No.	Reg. No.	Name of the Students	Date	Date	Date	Date
1	1801219010	ANMOL KULLU	27/8/19	28/8/19	29/8/19	30/8/19
2	1801219030	BIJAYA KUMAR MAJHI	ABC	Arund Katta	Arund Mallik	Arund Katta
3	1801219048	DIBYA RANJAN MOHARANA	Pritya K. Mohan	Pritya K. Mohan	Pritya K. Mohan	Pritya K. Mohan
4	1801219053	GAUTAM MOHANTY	Bibhansu Mohanty	Bibhansu Mohanty	Bibhansu Mohanty	Bibhansu Mohanty
5	1801219060	JAGANNATH MUNDA	G. Mohanty	G. Mohanty	G. Mohanty	G. Mohanty
6	1801219072	LOKESH KUMAR PANDA	Taganath Munda	Taganath Munda	Taganath Munda	Taganath Munda
7	1801219090	NIHAR RANJAN JENA	Lokesh Panda	Lokesh Panda	Lokesh Panda	Lokesh Panda
8	1801219115	RAJKUMAR TARAI	N.R. Jena	N.R. Jena	N.R. Jena	N.R. Jena
9	1801219135	SATYAM SRINIBAS MANIA	Rajkumar Tarai	Rajkumar Tarai	Rajkumar Tarai	Rajkumar Tarai
10	1801219174	VASABANTA DAS	Satyam S. Mania	Satyam S. Mania	Satyam S. Mania	Satyam S. Mania
11	1801219175	ADITYA NARAYAN SAHOO	ABC	Y. Das	Y. Das	Y. Das
12	1801219176	BACHAN BHOI	Aditya Narayan Sahoo	Aditya Narayan Sahoo	Aditya Narayan Sahoo	Aditya Narayan Sahoo
13	1801219177	DEVENDER KUMAR KISHAN	Pradon Bhoi	Pradon Bhoi	Pradon Bhoi	Pradon Bhoi
14	1801219178	PRIYANKA CHATURVEDI	Devender K. Kishan	Devender K. Kishan	Devender K. Kishan	Devender K. Kishan
15	1801219179	RAJAT RANJAN PANDA	P. Chaturvedi	P. Chaturvedi	P. Chaturvedi	P. Chaturvedi
16	1801219180	SIDHARTH SANKAR SAHU	Rajat Ranjan Panda	Rajat Ranjan Panda	Rajat Ranjan Panda	Rajat Ranjan Panda
17	1801219181	SOURMYA RANJAN NATH	S. Sankar Sahu	S. Sankar Sahu	S. Sankar Sahu	S. Sankar Sahu
18	1801219182	SUBHANKAR MOHANTY	S.P. Nath	S.P. Nath	S.P. Nath	S.P. Nath
19	1801219183	UTKAL KESHARI JENA	Subhankar Mohanty	Subhankar Mohanty	Subhankar Mohanty	Subhankar Mohanty



*[Signature]*

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**COLLEGE OF ENGINEERING BHUBANESWAR (COEB)**

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

4

Programme: B Tech in AUTOMOBILE ENGINEERING

Semester: 3rd

Academic Year : 2019-20

Name of the Course: Structural System Fundamentals

Course Code (if any):

Sheet No:

Sl No.	Reg. No.	Name of the Students	Date	Date	Date	Date
1	1801219010	ANMOL KULLU	4/9/19	5/9/19	6/9/19	18/9/19
2	1801219030	BIJAYA KUMAR MAJHI	Amal Killa	Amal Killa	Amal Killa	Amal Killa
3	1801219048	DIBYA RANJAN MOHARANA	ABS	D. Pranjali-Madhvi	Pr. S. S. Pr. S. S. Pr. S. S.	Pr. S. S. Pr. S. S. Pr. S. S.
4	1801219053	GAUTAM MOHANTY	Dibyenarayan Moharana	Dibyenarayan Moharana	ABS	Dibyenarayan Moharana
5	1801219060	JAGANNATH MUNDA	G. Mohanty	G. Mohanty	G. Mohanty	ABS
6	1801219072	LOKESH KUMAR PANDA	Jaganath Munda	Jaganath Munda	Jaganath Munda	Jaganath Munda
7	1801219090	NIHAR RANJAN JENA	Lokesh Panda	Lokesh Panda	Lokesh Panda	Lokesh Panda
8	1801219115	RAJKUMAR TARAI	N.R. Jena	N.R. Jena	N.R. Jena	N.R. Jena
9	1801219135	SATYAM SRINIBAS MANIA	Rajkumar tarai	Rajkumar tarai	Rajkumar tarai	Rajkumar tarai
10	1801219174	VASABANTA DAS	Satyam S. Mania	Satyam S. Mania	Satyam S. Mania	Satyam S. Mania
11	1801219175	ADITYA NARAYAN SAHOO	V. Das	V. Das	V. Das	V. Das
12	1801219176	BACHAN BHOI	Aditya Narayan Sahoo	Aditya Narayan Sahoo	Aditya Narayan Sahoo	Aditya Narayan Sahoo
13	1801219177	DEVENDER KUMAR KISHAN	Bachan Bhoi	ABS	Bachan Bhoi	Bachan Bhoi
14	1801219178	PRIVANKA CHATURVEDI	Devender k. Kishan	Devender k. Kishan	Devender k. Kishan	Devender k. Kishan
15	1801219179	RAJAT RANJAN PANDA	ABS	P. Chaturvedi	P. Chaturvedi	P. Chaturvedi
16	1801219180	SIDHARTH SANKAR SAHU	ABS	Rajat Ranjan Panda	Rajat Ranjan Panda	Rajat Ranjan Panda
17	1801219181	SOUMYA RANJAN NATH	S. Sankar Sahu	S. Sankar Sahu	S. Sankar Sahu	S. Sankar Sahu
18	1801219182	SUBHANKAR MOHANTY	S.R. Nath	S.R. Nath	S. Sankar Sahu	S. Sankar Sahu
19	1801219183	UTKAL KESHARI JENA	Subhankar Mohanty	Subhankar Mohanty	Subhankar Mohanty	Subhankar Mohanty



*[Signature]*

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COLLEGE OF ENGINEERING BHUBANESWAR (COEB)

DEPARTMENT OF AUTOMOBILE ENGINEERING

ADD ON/CERTIFICATE COURSE

STUDENT ATTENDANCE SHEET

5

Programme: B Tech in AUTOMOBILE ENGINEERING

Semester: 3rd

Academic Year : 2019-20

Name of the Course: Structural System Fundamentals

Course Code (if any):

Sheet No:

Sl No.	Reg. No.	Name of the Students	Date	Date	Date	Date
1	1801219010	ANMOL KULLU	13/9/19	16/9/19	17/9/19	18/9/19
2	1801219030	BIJAYA KUMAR MAJHI	ABR	ABR	ABR	ABR
3	1801219048	DIBYA RANJAN MOHARANA	Bejaya Ku Majhi	Bejaya Ku Majhi	Bejaya Ku Majhi	Bejaya Ku Majhi
4	1801219053	GAUTAM MOHANTY	Dhagarajyan Mohan	Dhagarajyan Mohan	Dhagarajyan Mohan	Dhagarajyan Mohan
5	1801219060	JAGANNATH MUNDA	ABR	Gr. Mohanty	Gr. Mohanty	Gr. Mohanty
6	1801219072	LOKESH KUMAR PANDA	Jaganath Munda	Jaganath Munda	Jaganath Munda	Jaganath Munda
7	1801219090	NIHAR RANJAN JENA	Lokesh Panda	Lokesh Panda	Lokesh Panda	Lokesh Panda
8	1801219115	RAJKUMAR TARAI	N.R. Jena	N.R. Jena	N.R. Jena	N.R. Jena
9	1801219135	SATYAM SRINIBAS MANIA	Rajkumar tarai	Rajkumar tarai	Rajkumar tarai	Rajkumar tarai
10	1801219174	YASABANTA DAS	Satyam S. Mania	Satyam S. Mania	ABR	Satyam S. Mania
11	1801219175	ADITYA NARAYAN SAHOO	Y. Das	Y. Das	Y. Das	Y. Das
12	1801219176	BACHAN BHOI	Aditya Narayan Sahoo	Aditya Narayan Sahoo	Aditya Narayan Sahoo	Aditya Narayan Sahoo
13	1801219177	DEVENDER KUMAR KISHAN	Bachan Bhoi	Bachan Bhoi	Bachan Bhoi	Bachan Bhoi
14	1801219178	PRITYANKA CHATURVEDI	Devender Kumar Kishan	Devender Kumar Kishan	Devender Kumar Kishan	Devender Kumar Kishan
15	1801219179	RAJAT RANJAN PANDA	P. Chaturvedi	P. Chaturvedi	P. Chaturvedi	P. Chaturvedi
16	1801219180	SIDHARTH SANKAR SAHU	Rajat Ranjan Panda	Rajat Ranjan Panda	Rajat Ranjan Panda	Rajat Ranjan Panda
17	1801219181	SOUMYA RANJAN NATH	S. Sankar Sahu	S. Sankar Sahu	S. Sankar Sahu	S. Sankar Sahu
18	1801219182	SUBHANKAR MOHANTY	S. R. Nath	S. R. Nath	S. R. Nath	S. R. Nath
19	1801219183	UTKAL KESHARI JENA	Subhakar Mohanty	Subhakar Mohanty	Subhakar Mohanty	Subhakar Mohanty



Principal's Signature

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College of Engineering Bhubaneswar



**COLLEGE OF ENGINEERING BHUBANESWAR**  
PLOT NO-1(A), CNI COMPLEX, PATIA, BHUBANESWAR, KHORDHA, ODISHA-751024



# Certificate of Completion

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

of Automobile Engg. semester Third bearing registration number 1801219010

has successfully completed the ADD-ON Course titled Structural System Fundamentals

conducted at College of Engineering Bhubaneswar in the academic year 2019-20.

**TRUE COPY**

Course-Coordinator

Principal

Principal  
College of Engineering, Bhubaneswar





**COLLEGE OF ENGINEERING BHUBANESWAR**  
PLOT NO-1(A), CNI COMPLEX, PATIA, BHUBANESWAR, KHORDHA, ODISHA-751024



# *Certificate of Completion*

This is to certify that Mr./Ms. BIJAYA KUMAR MAJHI, student of the Department

of Automobile Engg. semester Third bearing registration number 1801219030

has successfully completed the ADD-ON Course titled Structural System Fundamentals

conducted at College of Engineering Bhubaneswar in the academic year 2019-20.

**TRUE COPY**

Course-Coordinator

Principal

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**COLLEGE OF ENGINEERING BHUBANESWAR**  
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# Certificate of Completion

This is to certify that Mr./Ms. DIBYA RANJAN MOHARANA, student of the Department

of Automobile Engg. semester Third bearing registration number 1801219048

has successfully completed the ADD-ON Course titled Structural System Fundamentals

conducted at College of Engineering Bhubaneswar in the academic year 2019-20.

**TRUE COPY**

  
Course-Cordinator

  
Principal

  
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**COLLEGE OF ENGINEERING BHUBANESWAR**  
 PLOT NO-1(A), CNI COMPLEX, PATIA, BHUBANESWAR, KHORDHA, ODISHA-751024



# Certificate of Completion

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

of Automobile Engg. semester Third bearing registration number 1801219053

has successfully completed the ADD-ON Course titled Structural System Fundamentals

conducted at College of Engineering Bhubaneswar in the academic year 2019-20

**TRUE COPY**

Course-Coordinator

Principal

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**COLLEGE OF ENGINEERING BHUBANESWAR**  
 PLOT NO-1(A), CNI COMPLEX, PATIA, BHUBANESWAR, KHORDHA, ODISHA-751024



# Certificate of Completion

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

of Automobile Engg. semester Third bearing registration number 1801219060

has successfully completed the ADD-ON Course titled Structural System Fundamentals

conducted at College of Engineering Bhubaneswar in the academic year 2019-20

**TRUE COPY**

Course-Coordinator

Principal

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