

PADMASHREE KRUTARTHA ACHARYA INSTITUTE OF ENGINEERING & TECHNOLOGY, BARGARH



LESSON PLAN Session-2023-2024

Discipline: Mechanical Engg. Semester: 5th

Subject: Mechatronics

Name of the Teaching Faculty: Subhasis Nanda

Subject: Mechatronics No. of Days/per week class allotted 2

Semester From Date: 01/08/2023 To Date: 30/11/2023 No. of Weeks: 15

Week	Class Day	Theory / Practical Topics
1	1	Introduction to transducer.
	2	Classification of transducer.
2	3	Electromechanical transducer
	4	Transducer Actuating Mechanism.
3	5	Sensors.
	6	Position sensors, Potentiometer
4	7	Temperature sensor
	8	Displacement sensor
5	9	Force sensor.
	10	Light sensor
6	11	Actuators / switches.
	12	Relay


Signature of the Faculty

Subject: Mechatronics No. of Days/per week class allotted 02

Semester From Date : 01/08/2023 To Date : 30/11/2023 No. of Weeks : 15

Week	Class Day	Theory /Practical Topics
7	13	Solenoid
	14	DC/AC Motor.
8	15	Introduction to PLC
	16	Examples of PLC
9	17	Stepper /servo motor.
	18	Selection of a PLC
10	19	Advantage of PLC
	20	uses of PLC
11	21	Architecture of PLC
	22	Internal Structure of PLC
12	23	Input and output Processing
	24	Programming (I/O)


Signature of the Faculty

Subject: Mechatronics No. of Days/per week class allotted 02

Semester From Date: 01/03/2023 To Date: 30/11/2023 No. of Weeks: 15

Week	Class Day	Theory / Practical Topics
13	25	Terms of PLC
	26	Basic PLC Programming.
14	27	Different Controls of PLC
	28	Master Controller.
15	29	Pump Controller.
	30	Disadvantage of PLC

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Signature of the Faculty

PADMASHREE KRUTARTHA ACHARYA INSTITUTE OF ENGINEERING & TECHNOLOGY, BARGARH



LESSON PLAN Session-2023-2024

Discipline: Mechanical Engg. Semester: 5th

Subject: Mechatronics

Name of the Teaching Faculty: Shashanka Sekhar Bhoi

Subject: Mechatronics No. of Days/per week class allotted 02

Semester From Date : 01/08/2023 To Date : 30/11/2023 No. of Weeks : 15

Week	Class Day	Theory / Practical Topics
01	01	Introduction to mechatronics, Advantages, disadvantages.
	02	Application of mechatronics.
02	01	Scope of mechatronics in Industrial Sector
	02	Components of a mechatronics system.
03	01	Importance of mechatronics in automation.
	02	Mechanical Actuators : machine, kinematic link, kinematic pairs.
04	01	Mechanism, slider crank mechanism.
	02	Gear drive, Spur gear, Bevel gear, Helical gear worm gear.
05	01	Belt and Belt drive.
	02	Bearings.
06	01	Introduction to NC machine
	02	CNC machine

Shashank Sagar Bhoi

Signature of the Faculty

Subject: Mechatronics No. of Days/per week class allotted 02

Semester From Date: 01/08/2023 To Date: 30/11/2023 No. of Weeks: 15

Week	Class Day	Theory /Practical Topics
07	01	CAD
	02	CAM
08	01	Software and Hardware for CAD/CAM .
	02	Functioning of CAD/CAM system .
09	01	Features and characteristics of CAD/CAM system
	02	Application areas for CAD/CAM
10	01	Elements of CNC machines
	02	Machine structure
11	01	Guideways/ slideways. Types of guideways .
	02	Factors of design of guideways
12	01	Spindle drives
	02	Feed drives

Shashanka Sarker Bhui
Signature of the Faculty

Subject: Mechatronics No. of Days/per week class allotted 02

Semester From Date: 01/08/2023 To Date: 30/11/2023 No. of Weeks: 15

Week	Class Day	Theory /Practical Topics
13	01	Spindle and spindle Bearings
	02	Introduction to Robotics Defination, Functions and laws of Robotics
14	01	Types of industrial Robots
	02	Robotie system
15	01	Advantages and disadvantages of Robotics
	02	Overall chapter discussion.

Shashanka Sagar Bhoi

Signature of the Faculty