

**Staff Teaching Plan**

**Date : 01/05/2022**

**Academic Year : 2021-2022**

**Course : BE**

**Branch : MECHANICAL ENGG**

**Year : 3RD YEAR**

**Semester : 6TH SEM**

**Section : A**

**Sub Code : BEME604T**

**Subject Type : THEORY**

**Subject : MECHATRONICS**

**Emp ID : M530**

**Emp Name : ARVIND NARAYAN MADNE**

Sr.No.	Unit	Topic Code	Expected Date	Topic Description
1	1	101	01/02/2022	SCOPE AND ELEMENTS OF MECHATRONICS,MECHATRONICS DESIGN PROCEDURE
2	2	202	16/02/2022	LEVEL AND COMMUTATION, I/O OPERATIONS ,DATA WIDTH, INTERFACING REQUIREMENTS,BUFFERS,HANDSHAKING,POLLING AND INTRRRUPT
3	3	305	08/03/2022	PNEUMATIC AND HYDRAULIC SYSTEMS,DIRECTIONAL CONTROL VALVE
4	6	604	18/04/2022	SENSOR INTERFACING,MOTOR ISOLATION SCHEMES,BUFFER IC BREAKERS
5	2	204	21/02/2022	INTRODUCTION TO DIGITAL SIGNAL PROCESSING (DSP)
6	3	304	07/03/2022	PULSE WIDTH MODULATION (PWM) FREQUENCY DRIVE,VECTOR DRIVE
7	4	402	16/03/2022	KARNAUGH MAP,APPLICATIONS OF GATES, SEQUENTIAL LOGIC
8	6	602	13/04/2022	DEVELOPMENT, EVALUATION AND BENEFITS OF SCADA
9	2	203	18/02/2022	DIGITAL COMMUNICATION, PARELLAL COMMUNICATION,SERIAL COMMUNICATION,PERIPHERAL INTERFACE DEVICE(PIA), ANALOGUE INTERFACING
10	3	306	09/03/2022	PRESSURE CONTROL VALVES ,SERVO AND PROPORTIONAL CONTROL VALVES
11	4	406	23/03/2022	ARCHITECTURE OF THE EXECUTION UNIT, MEMORY SEGMENTATION IN 8085
12	2	205	22/02/2022	DATA FLOW IN DSPS, BLOCK DIAGRAMS AND TYPICAL LAYOUTS
13	3	303	04/03/2022	INDUCTION MOTORS , SPEED CONTROL PULSE FOUR-QUADRANTSERVO DRIVES
14	4	403	18/03/2022	NUMBER SYSTEMS,ARITHMATIC OPERATIONS ON BINARY NUMBERS
15	1	106	09/02/2022	AUTOMATIC CAR PARK SYSTEM, COIN COUNTER, ENGINE MANAGEMENT SYSTEM
16	2	207	25/02/2022	IMPEDANCE MATCHING IN MECHANICAL SYSTEMS, INTERFACING MICROCONTROLLER OUTPUT WITH ACTUATORS
17	3	301	01/03/2022	MECHANICAL SWITCHES AND RELAYS,SOLENOIDS
18	4	405	22/03/2022	PIN CONFIGURATIONS OF 8085
19	5	501	29/03/2022	INTRODUCTION TO PLCS,BASIC STRUCTURE OF PLC,PRINCIPLE OF OPERATION, INPUT AND OUTPUT PROCESSING
20	6	603	15/04/2022	TRANSISTOR-TRANSISTOR LOGIC (TTL), COMPLIMENTORY METAL-OXIDE SEMICONDUCTOR(CMOS) INTERFACING
21	1	102	02/02/2022	MEASUREMENT SYSTEM,
22	1	103	04/02/2022	REQUIREMENTS AND TYPES OF CONTROL SYSTEMS
23	2	201	15/02/2022	DATA ACQUISITION SYSTEM(DAQS), DATA LOGGERS, SUPERVISORY CONTROL AND DATA ACQUISITION (SCADA), COMMUNICATION METHODS
24	3	307	11/03/2022	PROCESS CONTROL VALVES,CYLINDER SEQUENCING AND CASCADE CONTROL,ROTARY ACTUATOR

25	4	407	25/03/2022	ARCHITECTURE OF BUS INTERFACE UNIT OF 8085
26	1	104	07/02/2022	FEEDBACK PRINCIPLE , BASIC ELEMENTS OF FEEDBACK CONTROL SYSTEMS, CLASSIFICATION OF FEEDBACK CONTROL SYSTEM
27	1	108	14/03/2022	WEATHER PREDICTION,AUTOMATIC WASHING MACHINE ETC. GENERAL REMARKS ON APPLICATIONS
28	3	308	14/03/2022	IDENTIFICATION OF GRAPHICAL SYMBOLS FOR PNEUMATIC AND HYDRAULIC CIRCUITS
29	4	408	28/03/2022	BUILDING OF MICROPROCESSOR SUBSYSTEMS
30	6	605	19/04/2022	OVER CURRENT SENSING , RESETTABLE FUSES
31	6	608	25/04/2022	PRESSURE SENSOR AND GYROSCOPE
32	2	206	23/02/2022	IMPEDANCE CHARACTERISTICS, CASCADE CONNECTION OF DEVICES
33	3	302	02/03/2022	STATE SWITCHES –SOLENOIDS,DC SERVOMOTORS,STEPPER MOTOR
34	4	404	21/03/2022	8-BIT,16-BIT, 32-BIT MICROPROCESSORS
35	6	606	20/04/2022	MEMS FABRICATION METHODS
36	6	607	22/04/2022	WORKING AND APPLICATIONS OF MEMS BASED ACCELEROMETER
37	1	105	08/02/2022	EXAMPLES OF MECHATRONICS SYSTEMS SUCH AS BOAT AUTOPILOT,HIGH SPEED TILTING TRAINS
38	1	107	11/02/2022	ANTILOCK BRAKING SYSTEM(ABS) CONTROL, TRAFFIC CONTROLLER,WEIGH-BRIDGE
39	4	401	15/03/2022	NUMBER SYSTEM,LOGIC GATES ,BOOLEAN ALGEBRA
40	2	208	28/02/2022	DRIVES UNITS,DC DRIVES,VARIABLE FREQUENCY DRIVES (VFD), SCALAR AND VECTOR DRIVES,STEPPER MOTOR DRIVER AND CONTROLLER
41	5	502	30/03/2022	PLC PROGRAMMING LANGUAGE, LADDER DIAGRAM,LADDER DIAGRAM CIRCUITS
42	5	507	08/04/2022	CONTROL OF PROCESS MOTOR,CONTROL OF VIBRATING MACHINE
43	5	504	04/04/2022	ANALOGUE INPUT AND OUTPUT,SELECTION OF PLC FOR APPLICATION
44	5	505	05/04/2022	EXTENDING AND RETRACTING A PNEUMATIC PISTON USING LATCHES
45	5	508	11/04/2022	CONTROL OF PROCESS TANK,CONTROL OF CONVEYER MOTOR ETC
46	5	503	01/04/2022	TIMER,COUNTERS,INTERNAL RELAYS,MASTER CONTROL,JUMP CONTROL SHIFT REGISTERS,DATA HANDLING AND MANIPULATIONS
47	5	506	06/04/2022	CONTROL OF TWO PNEUMATIC PISTONS
48	6	601	12/04/2022	INTRODUCTION TO SCADA,FUNCTIONALITY,APPLICATIONS

Total Topics: **48**