



CSMSS CHH. SHAHU COLLEGE OF ENGINEERING

KANCHANWADI, AURANGABAD - 431002

DEPARTMENT OF FIRST YEAR ENGINEERING (SEM- I&II) 2023-24

SEMESTER	SUBJECT CODE	NAME OF THE SUBJECT	CO	COURSE OUTCOMES
I	BTBS101	ENGINEERING MATHEMATICS – I	CO-1	STUDENT WILL BE ABLE TO APPLY THE MATRIX TECHNIQUE (LINEAR ALGEBRA) TO FIND SOLUTIONS OF SYSTEM OF LINEAR EQUATIONS ARISING IN MANY ENGINEERING PROBLEM.
			CO-2	STUDENT WILL BE ABLE TO DEMONSTRATE THE CONCEPT PARTIAL DERIVATIVES AND THEIR APPLICATIONS TO MAXIMA/ MINIMA, SERIES EXPANSION OF MULTI VALUED FUNCTIONS.
			CO-3	STUDENT WILL BE ABLE TO COMPUTE JACOBIAN OF FUNCTIONS OF SEVERAL VARIABLES AND THEIR APPLICATIONS TO ENGINEERING PROBLEMS.
			CO-4	STUDENT WILL BE ABLE TO IDENTIFY AND SKETCH OF CURVES IN VARIOUS COORDINATE SYSTEM.
			CO-5	STUDENT WILL BE ABLE TO EVALUATE MULTIPLE INTEGRALS AND THEIR APPLICATIONS TO AREA AND VOLUME.
I	BTBS102	ENGINEERING CHEMISTRY	CO-1	STUDENT WILL BE ABLE TO EXPLAIN DIFFERENT TYPES OF SOFTENING WATER TECHNIQUES AND ANALYZE HARDNESS AND DISSOLVED OXYGEN.
			CO-2	STUDENT WILL BE ABLE TO DEFINE THE TERMS AND ELUCIDATION OF WATER, SULPHUR AND SILVER -LEAD PHASE SYSTEMS.
			CO-3	STUDENT WILL BE ABLE TO RECOGNIZE THE DIFFERENT TYPES OF CORROSION METHODS AND EFFECT OF VARIOUS PARAMETERS ON CORROSION.
			CO-4	STUDENT WILL BE ABLE TO DEFINE CHEMICAL FUELS, REFINING OF PETROLEUM, IDENTIFY DIFFERENT TYPES OF LUBRICANTS AND ANALYSE THEM.
			CO-5	STUDENT WILL BE ABLE TO DEFINE BASIC CONCEPTS OF ELECTROCHEMISTRY AND EXPLAIN CONDUCTOMETRIC TITRATIONS AND VARIOUS THEORY.
I	BTBS102P	ENGINEERING PHYSICS	CO-1	STUDENTS WILL BE ABLE TO IDENTIFY THE CONCEPTS OF TYPES OF OSCILLATION AND ULTRASONIC.
			CO-2	STUDENT WILL BE ABLE TO INFER BETWEEN INTERFERENCE AND POLARIZATION OF LIGHT, WORKING PRINCIPLE OF LASERS AND FIBER OPTICS.
			CO-3	STUDENT WILL BE ABLE TO MEMORIZE THE PRINCIPLE OF MOTION OF CHARGED PARTICLES IN ELECTRIC AND MAGNETIC FIELD, WORKING PRINCIPLE OF BAINBRIDGE MASS SPECTROGRAPH AND G.M. COUNTER.



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SEMESTER	SUBJECT CODE	NAME OF THE SUBJECT	CO	COURSE OUTCOMES
			CO-4	STUDENTS WILL BE ABLE TO IDENTIFY THE TYPES OF CRYSTAL AND CRYSTAL PLANES USING MILLER INDICES, EXPERIMENTAL APPROACH ALONG WITH X-RAYS.
			CO-5	STUDENTS WILL BE ABLE TO COMPARE THE FUNDAMENTAL OF SEMI CONDUCTOR, MAGNETIC AND SUPERCONDUCTING MATERIALS WHICH FORMS THE BASE OF MANY MODERN DEVICES AND TECHNOLOGIES.
I	BTES103	ENGINEERING MECHANICS	CO-1	STUDENT WILL BE ABLE TO APPLY FUNDAMENTAL LAWS OF ENGINEERING MECHANICS.
			CO-2	STUDENT WILL BE ABLE TO APPLY CONDITIONS OF STATIC EQUILIBRIUM TO ANALYZE GIVEN FORCE SYSTEM.
			CO-3	STUDENT WILL BE ABLE TO COMPUTE CENTRE OF GRAVITY AND MOMENT OF INERTIA OF PLANE SURFACES.
			CO-4	STUDENT WILL BE ABLE TO COMPUTE THE MOTION CHARACTERISTICS OF A BODY/PARTICLE FOR A RECTILINEAR AND CURVILINEAR MOTION.
			CO-5	STUDENT WILL BE ABLE TO KNOW AND DISCUSS RELATION BETWEEN FORCE AND MOTION CHARACTERISTICS.
I	BTES103G	ENGINEERING GRAPHICS	CO-1	STUDENTS WILL BE ABLE TO USE DRAWING INSTRUMENTS EFFECTIVELY FOR DRAWING VARIOUS BASIC CONSTRUCTIONS AND DIMENSIONING OF PARTS.
			CO-2	STUDENTS WILL BE ABLE TO DRAW 2D VIEWS OF GIVEN 3D OBJECTS AND DRAW PROJECTIONS OF POINTS WITH RESPECT TO REFERENCE PLANES.
			CO-3	STUDENTS WILL BE ABLE TO APPLY CONCEPT OF PROJECTIONS OF LINES AND PLANES AND LOCATE TRACES OF LINES.
			CO-4	STUDENTS WILL BE ABLE TO DRAW PROJECTIONS OF SOLIDS ALONG WITH GIVEN SECTIONS.
			CO-5	STUDENTS WILL BE ABLE TO CONSTRUCT ISOMETRIC VIEWS OF GIVEN OBJECTS.
			CO-1	STUDENT WILL BE ABLE TO APPLY SPEAKING AND WRITING IN PROFESSIONAL AS WELL AS SOCIAL SITUATIONS.



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I	BTHM104	COMMUNICATION SKILL	CO-2	STUDENT WILL BE ABLE TO OVERCOME MOTHER TONGUE INFLUENCE AND DEMONSTRATE NEUTRAL ACCENT WHILE EXERCISING ENGLISH.
			CO-3	STUDENT WILL BE ABLE TO APPLY COMMUNICATION SKILLS FOR PRESENTATIONS GROUP DISCUSSION AND INTERPERSONAL INTERACTIONS.
			CO-4	STUDENT WILL BE ABLE TO APPLY GRAMMAR CORRECTLY DURING SPEAKING AND WRITING SITUATIONS ESPECIALLY IN CONTEXT WITH PRESENTATIONS, PUBLIC SPEAKING.
			CO-5	STUDENT WILL BE ABLE TO REPORT WRITING AND BUSINESS CORRESPONDENCE.
I	BTES105	ENERGY AND ENVIRONMENT ENGINEERING	CO-1	STUDENTS WILL BE ABLE TO DESCRIBE CONVENTIONAL, NON-CONVENTIONAL ENERGY SOURCES.
			CO-2	STUDENTS WILL BE ABLE TO DISCUSS THE POWER CONSUMING AND POWER DEVELOPING DEVICES FOR EFFECTIVE UTILIZATION AND POWER CONSUMPTION.
			CO-3	STUDENTS WILL BE ABLE TO IDENTIFY VARIOUS SOURCES OF AIR, WATER POLLUTION AND DISCUSS THEIR EFFECTS.
			CO-4	STUDENTS WILL BE ABLE TO DESCRIBE THE NOISE, SOIL, AND THERMAL POLLUTION AND IDENTIFY SOLID, BIOMEDICAL AND HAZARDOUS WASTE.
I	BTES104	COMPUTER PROGRAMMING IN C	CO-1	STUDENT WILL BE ABLE TO KNOW PROCESS OF PROGRAMMING.
			CO-2	STUDENT WILL BE ABLE TO DEVELOP A C PROGRAM BY USING VARIOUS OPERATORS AND EXPRESSION
			CO-3	STUDENT WILL BE ABLE TO DEVELOP A C PROGRAM BY USING CONTROL FLOW STATEMENTS AND FUNCTIONS.
			CO-4	STUDENT WILL BE ABLE TO DEVELOP A C PROGRAM BY USING ARRAYS.
			CO-5	STUDENT WILL BE ABLE TO DEVELOP A C PROGRAM BY USING STRUCTURES.
			CO-1	STUDENT WILL BE ABLE TO DISCUSS THE NEED AND USE OF COMPLEX VARIABLES TO FIND ROOTS, TO SEPARATE COMPLEX QUANTITIES AND TO ESTABLISH RELATION BETWEEN CIRCULAR AND HYPERBOLIC FUNCTIONS.



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II	BTBS201	ENGINEERING MATHEMATICS – II	CO-2	STUDENT WILL BE ABLE TO SOLVE FIRST AND HIGHER ORDER DIFFERENTIAL EQUATIONS AND APPLY THEM AS A MATHEMATICAL MODELING IN ELECTRIC AND MECHANICAL SYSTEMS.
			CO-3	STUDENT WILL BE ABLE TO DETERMINE FOURIER SERIES REPRESENTATION OF PERIODIC FUNCTIONS OVER DIFFERENT INTERVALS.
			CO-4	STUDENT WILL BE ABLE TO DEMONSTRATE THE CONCEPT OF VECTOR DIFFERENTIATION AND INTERPRET THE PHYSICAL AND GEOMETRICAL MEANING OF GRADIENT, DIVERGENCE & CURL IN VARIOUS ENGINEERING STREAMS.
			CO-5	STUDENT WILL BE ABLE TO APPLY THE PRINCIPLES OF VECTOR INTEGRATION TO TRANSFORM LINE INTEGRAL TO SURFACE INTEGRAL, SURFACE TO VOLUME INTEGRAL & VICE VERSA USING GREEN'S, STOKE'S AND GAUSS DIVERGENCE THEOREMS.
II	BTBS202	ENGINEERING CHEMISTRY	CO-1	STUDENT WILL BE ABLE TO EXPLAIN DIFFERENT TYPES OF SOFTENING WATER TECHNIQUES AND ANALYZE HARDNESS AND DISSOLVED OXYGEN.
			CO-2	STUDENT WILL BE ABLE TO DEFINE THE TERMS AND ELUCIDATION OF WATER, SULPHUR AND SILVER-LEAD PHASE SYSTEMS.
			CO-3	STUDENT WILL BE ABLE TO RECOGNIZE THE DIFFERENT TYPES OF CORROSION METHODS AND EFFECT OF VARIOUS PARAMETERS ON CORROSION.
			CO-4	STUDENT WILL BE ABLE TO DEFINE CHEMICAL FUELS, REFINING OF PETROLEUM, IDENTIFY DIFFERENT TYPES OF LUBRICANTS AND ANALYSE THEM.
			CO-5	STUDENT WILL BE ABLE TO DEFINE BASIC CONCEPTS OF ELECTROCHEMISTRY AND EXPLAIN CONDUCTOMETRIC TITRATIONS AND VARIOUS THEORY.
II	BTBS202P	ENGINEERING PHYSICS	CO-1	STUDENT WILL BE ABLE TO EXPLAIN AND APPLY THE CONCEPT OF TYPES OF OSCILLATION AND ULTRASONICS.
			CO-2	STUDENT WILL BE ABLE TO EXPLAIN AND COMPARE BETWEEN INTERFERENCE AND POLARIZATION OF LIGHT, WORKING PRINCIPLE OF LASERS AND FIBER OPTICS.
			CO-3	STUDENT WILL BE ABLE TO INTERPRET, APPLY AND DEMONSTRATE PRINCIPLE OF MOTION OF CHARGED PARTICLES IN ELECTRIC AND MAGNETIC FIELD, WORKING PRINCIPLE OF BAINBRIDGE MASS SPECTROGRAPH AND G.M. COUNTER.



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			CO-4	STUDENT WILL BE ABLE TO IDENTIFY TYPES OF CRYSTALS AND CRYSTAL PLANES USING MILLER INDICES, EXPERIMENTAL APPROACH ALONG WITH X-RAYS.
			CO-5	STUDENT WILL BE ABLE TO UNDERSTAND FUNDAMENTAL OF SEMICONDUCTOR, MAGNETIC AND SUPERCONDUCTING MATERIALS WHICH FORMS THE BASE OF MANY MODERN DEVICES AND TECHNOLOGIES.
II	BTES203	ENGINEERING MECHANICS	CO-1	STUDENT WILL BE ABLE TO APPLY FUNDAMENTAL LAWS OF ENGINEERING MECHANICS.
			CO-2	STUDENT WILL BE ABLE TO APPLY CONDITIONS OF STATIC EQUILIBRIUM TO ANALYZE GIVEN FORCE SYSTEM.
			CO-3	STUDENT WILL BE ABLE TO COMPUTE CENTRE OF GRAVITY AND MOMENT OF INERTIA OF PLANE SURFACES.
			CO-4	STUDENT WILL BE ABLE TO COMPUTE THE MOTION CHARACTERISTICS OF A BODY/PARTICLE FOR A RECTILINEAR AND CURVILINEAR MOTION.
			CO-5	STUDENT WILL BE ABLE TO KNOW AND DISCUSS RELATION BETWEEN FORCE AND MOTION CHARACTERISTICS.
II	BTES203G	ENGINEERING GRAPHICS	CO-1	STUDENTS WILL BE ABLE TO USE DRAWING INSTRUMENTS EFFECTIVELY FOR DRAWING VARIOUS BASIC CONSTRUCTIONS AND DIMENSIONING OF PARTS.
			CO-2	STUDENTS WILL BE ABLE TO DRAW 2D VIEWS OF GIVEN 3D OBJECTS AND DRAW PROJECTIONS OF POINTS WITH RESPECT TO REFERENCE PLANES.
			CO-3	STUDENTS WILL BE ABLE TO APPLY CONCEPT OF PROJECTIONS OF LINES AND PLANES AND LOCATE TRACES OF LINES.
			CO-4	STUDENTS WILL BE ABLE TO DRAW PROJECTIONS OF SOLIDS ALONG WITH GIVEN SECTIONS.
			CO-5	STUDENTS WILL BE ABLE TO CONSTRUCT ISOMETRIC VIEWS OF GIVEN OBJECTS.
II	BTHM204	COMMUNICATION SKILL	CO-1	STUDENT WILL BE ABLE TO APPLY SPEAKING AND WRITING IN PROFESSIONAL AS WELL AS SOCIAL SITUATIONS.
			CO-2	STUDENT WILL BE ABLE TO OVERCOME MOTHER TONGUE INFLUENCE AND DEMONSTRATE NEUTRAL ACCENT WHILE EXERCISING ENGLISH.
			CO-3	STUDENT WILL BE ABLE TO APPLY COMMUNICATION SKILLS FOR PRESENTATIONS GROUP DISCUSSION AND INTERPERSONAL INTERACTIONS.



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			CO-4	STUDENT WILL BE ABLE TO APPLY GRAMMAR CORRECTLY DURING SPEAKING AND WRITING SITUATIONS ESPECIALLY IN CONTEXT WITH PRESENTATIONS, PUBLIC SPEAKING
			CO-5	STUDENT WILL BE ABLE TO REPORT WRITING AND BUSINESS CORRESPONDENCE.
II	BTES205	ENERGY AND ENVIRONMENT ENGINEERING	CO-1	STUDENTS WILL BE ABLE TO DESCRIBE CONVENTIONAL, NON-CONVENTIONAL ENERGY SOURCES.
			CO-2	STUDENTS WILL BE ABLE TO DISCUSS THE POWER CONSUMING AND POWER DEVELOPING DEVICES FOR EFFECTIVE UTILIZATION AND POWER CONSUMPTION
			CO-3	STUDENTS WILL BE ABLE TO IDENTIFY VARIOUS SOURCES OF AIR, WATER POLLUTION AND DISCUSS THEIR EFFECTS.
			CO-4	STUDENTS WILL BE ABLE TO DESCRIBE THE NOISE, SOIL, AND THERMAL POLLUTION AND IDENTIFY SOLID, BIOMEDICAL AND HAZARDOUS WASTE.
II	BTES204	COMPUTER PROGRAMMING IN C	CO-1	STUDENT WILL BE ABLE TO KNOW PROCESS OF PROGRAMMING.
			CO-2	STUDENT WILL BE ABLE TO DEVELOP A C PROGRAM BY USING VARIOUS OPERATORS AND EXPRESSION.
			CO-3	STUDENT WILL BE ABLE TO DEVELOP A C PROGRAM BY USING CONTROL FLOW STATEMENTS AND FUNCTIONS.
			CO-4	STUDENT WILL BE ABLE TO DEVELOP A C PROGRAM BY USING ARRAYS.
			CO-5	STUDENT WILL BE ABLE TO DEVELOP A C PROGRAM BY USING STRUCTURES.
I	BTBS107PL	ENGINEERING PHYSICS LAB	CO-1	STUDENT WILL BE ABLE TO EXPLAIN AND APPLY THE CONCEPT OF TYPES OF OSCILLATION AND ULTRASONICS.
			CO2	STUDENT WILL BE ABLE TO EXPLAIN AND COMPARE BETWEEN INTERFERENCE AND POLARIZATION OF LIGHT, WORKING PRINCIPLE OF LASERS AND FIBER OPTICS
			CO-3	STUDENT WILL BE ABLE TO INTERPRET, APPLY AND DEMONSTRATE PRINCIPLE OF MOTION OF CHARGED PARTICLES IN ELECTRIC AND MAGNETIC FIELD, WORKING PRINCIPLE OF BAINBRIDGE MASS SPECTROGRAPH AND G.M. COUNTER.



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			CO-4	STUDENT WILL BE ABLE TO IDENTIFY TYPES OF CRYSTALS AND CRYSTAL PLANES USING MILLER INDICES, EXPERIMENTAL APPROACH ALONG WITH X-RAYS.
			CO-5	STUDENT WILL BE ABLE TO UNDERSTAND FUNDAMENTAL OF SEMICONDUCTOR, MAGNETIC AND SUPERCONDUCTING MATERIALS WHICH FORMS THE BASE OF MANY MODERN DEVICES AND TECHNOLOGIES.
I	BTES108GL	ENGINEERING GRAPHICS LAB	CO-1	STUDENT WILL BE ABLE TO CREATE GEOMETRIC CONSTRUCTIONS, DRAWING PERPENDICULAR & PARALLEL LINES, CONSTRUCT CIRCLES, ARCS & IRREGULAR CURVES.
			CO-2	STUDENT WILL BE ABLE TO APPLY ORTHOGRAPHIC PROJECTION METHOD TO OBTAIN FRONT VIEW, TOP VIEW, SIDE VIEW IN 1ST AND 3RD ANGLE PROJECTION METHODS.
			CO-3	STUDENT WILL BE ABLE TO CREATE 2-D DRAWING OF PROJECTION OF PLANES INCLINED TO BOTH THE REFERENCE PLANES.
			CO-4	STUDENT WILL BE ABLE TO CREATE 3-D DRAWING OF VARIOUS TYPES OF SOLIDS WHEN THEY ARE INCLINED TO BOTH THE REFERENCE PLANES.
			CO-5	STUDENTS WILL BE ABLE TO VISUALIZE AND IMAGINE 3-D SHAPES WHEN THEIR SECTIONS ARE TAKEN AND HOW ISOMETRIC PROJECTIONS ARE BUILT.
I	BTES108	ENGINEERING MECHANICS LAB	CO-1	STUDENT WILL BE ABLE TO STUDY OF SIMPLE MACHINE -SIMPLE SCREW JACK, DIFFERENTIAL AXEL AND WHEEL, WORM AND WORM WHEEL.
			CO-2	STUDENT WILL BE ABLE TO STUDY OF BEAM REACTION - APPLICATION OF SPREAD SHEET ,GRAPHICAL METHOD OF BEAM REACTION.
			CO-3	STUDENT WILL BE ABLE TO CALCULATION OF COEFFICIENT OF FRICTION BETWEEN TWO SURFACE.
			CO-4	STUDENT WILL BE ABLE TO POLYGON LAW OF FORCES AND CALCULATION OF RESULTANT BY GRAPHICAL METHOD.
			CO-1	STUDENT WILL BE ABLE TO APPLY SPEAKING AND WRITING SKILLS IN PROFESSIONAL AS WELL AS SOCIAL SITUATIONS.
			CO-2	STUDENT WILL BE ABLE TO OVERCOME MOTHER TONGUE INFLUENCE AND DOMONSTRATE NEUTRAL ACCENT WHILE EXERCISING ENGLISH.



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I	BTHM109L	COMMUNICATION SKILLS LAB	CO-3	STUDENT WILL BE ABLE TO APPLY COMMUNICATION SKILLS FOR PRESENTATIONS, GROUP DISCUSSION AND INTERPERSONAL INTERACTION.
			CO-4	STUDENT WILL BE ABLE TO APPLY GRAMMAR CORRECTLY DURING SPEAKING AND WRITING SITUATIONS ESPECIALLY IN CONTEXT WITH PRESENTATIONS.
			CO-5	STUDENT WILL BE ABLE TO PUBLIC SPEAKING, REPORT WRITING AND BUSINESS CORRESPONDENCE.
I	BTBS107L	ENGINEERING CHEMISTRY LAB	CO-1	STUDENT WILL BE ABLE TO EXPLAIN DIFFERENT TYPES OF SOFTENING WATER TECHNIQUES AND ANALYZE HARDNESS AND DISSOLVED OXYGEN.
			CO-2	STUDENT WILL BE ABLE TO DEFINE THE TERMS AND ELUCIDATION OF WATER, SULPHUR AND SILVER -LEAD PHASE SYSTEMS.
			CO-3	STUDENT WILL BE ABLE TO RECOGNIZE THE DIFFERENT TYPES OF CORROSION METHODS AND EFFECT OF VARIOUS PARAMETERS ON CORROSION.
			CO-4	STUDENT WILL BE ABLE TO DEFINE CHEMICAL FUELS, REFINING OF PETROLUUM, IDENTIFY DIFFERENT TYPES OF LUBRICANTS AND ANALYSE THEM.
			CO-5	STUDENT WILL BE ABLE TO DEFINE BASIC CONCEPTS OF ELECTROCHEMISTRY AND EXPLAIN CONDUCTOMETRIC TITRATIONS AND VARIOUS THEORY.
II	BTBS207P	ENGINEERING PHYSICS LAB	CO-1	STUDENT WILL BE ABLE TO EXPLAIN AND APPLY THE CONCEPT OF TYPES OF OSCILLATION AND ULTRASONICS.
			CO-2	STUDENT WILL BE ABLE TO EXPLAIN AND COMPARE BETWEEN INTERFERENCE AND POLARIZATION OF LIGHT, WORKING PRINCIPLE OF LASERS AND FIBER OPTICS.
			CO-3	STUDENT WILL BE ABLE TO INTERPRET, APPLY AND DEMONSTRATE PRINCIPLE OF MOTION OF CHARGED PARTICLES IN ELECTRIC AND MAGNETIC FIELD, WORKING PRINCIPLE OF BAINBRIDGE MASS SPECTROGRAPH AND G.M. COUNTER.
			CO-4	STUDENT WILL BE ABLE TO IDENTIFY TYPES OF CRYSTALS AND CRYSTAL PLANES USING MILLER INDICES, EXPERIMENTAL APPROACH ALONG WITH X-RAYS.
			CO-5	STUDENT WILL BE ABLE TO UNDERSTAND FUNDAMENTAL OF SEMICONDUCTOR, MAGNETIC AND SUPERCONDUCTING MATERIALS WHICH FORMS THE BASE OF MANY MODERN DEVICES AND TECHNOLOGIES.



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			CO-1	STUDENT WILL BE ABLE TO CREATE GEOMETRIC CONSTRUCTIONS, DRAWING PERPENDICULAR & PARALLEL LINES, CONSTRUCT CIRCLES, ARCS & IRREGULAR CURVES.
II	BTES208GL	ENGINEERING GRAPHICS LAB	CO-2	STUDENT WILL BE ABLE TO APPLY ORTHOGRAPHIC PROJECTION METHOD TO OBTAIN FRONT VIEW, TOP VIEW, SIDE VIEW IN 1ST AND 3RD ANGLE PROJECTION METHODS.
			CO-3	STUDENT WILL BE ABLE TO CREATE 2-D DRAWING OF PROJECTION OF PLANES INCLINED TO BOTH THE REFERENCE PLANES.
			CO-4	STUDENT WILL BE ABLE TO CREATE 3-D DRAWING OF VARIOUS TYPES OF SOLIDS WHEN THEY ARE INCLINED TO BOTH THE REFERENCE PLANES.
			CO5	STUDENTS WILL BE ABLE TO VISUALIZE AND IMAGINE 3-D SHAPES WHEN THEIR SECTIONS ARE TAKEN AND HOW ISOMETRIC PROJECTIONS ARE BUILT.
			CO-1	STUDENT WILL BE ABLE TO STUDY OF SIMPLE MACHINE - SIMPLE SCREW JACK, DIFFERENTIAL AXEL AND WHEEL, WORM AND WORM WHEEL.
II	BTES208L	ENGINEERING MECHANICS LAB	CO-2	STUDENT WILL BE ABLE TO STUDY OF BEAM REACTION - APPLICATION OF SPREAD SHEET, GRAPHICAL METHOD OF BEAM REACTION.
			CO-3	STUDENT WILL BE ABLE TO CALCULATION OF COEFFICIENT OF FRICTION BETWEEN TWO SURFACE.
			CO-4	STUDENT WILL BE ABLE TO POLYGON LAW OF FORCES AND CALCULATION OF RESULTANT BY GRAPHICAL METHOD.
			CO-1	STUDENT WILL BE ABLE TO APPLY SPEAKING AND WRITING SKILLS IN PROFESSIONAL AS WELL AS SOCIAL SITUATIONS.
II	BTHM209L	COMMUNICATI ON SKILLS LAB	CO-2	STUDENT WILL BE ABLE TO OVERCOME MOTHER TONGUE INFLUENCE AND DOMONSTRATE NEUTRAL ACCENT WHILE EXERCISING ENGLISH.
			CO-3	STUDENT WILL BE ABLE TO APPLY COMMUNICATION SKILLS FOR PRESENTATIONS, GROUP DISCUSSION AND INTERPERSONAL INTERACTION.
			CO-4	STUDENT WILL BE ABLE TO APPLY GRAMMAR CORRECTLY DURING SPEAKING AND WRITING SITUATIONS ESPECIALY IN CONTEXT WITH PRESENTATIONS.



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			CO5	STUDENT WILL BE ABLE TO PUBLIC SPEAKING, REPORT WRITING AND BUSINESS CORRESPONDENCE.
			CO-1	STUDENT WILL BE ABLE TO EXPLAIN DIFFERENT TYPES OF SOFTENING WATER TECHNIQUES AND ANALYZE HARDNESS AND DISSOLVED OXYGEN .
II	BTBS207L	ENGINEERING CHEMISTRY LAB	CO-2	STUDENT WILL BE ABLE TO DEFINE THE TERMS AMD ELUCIDATION OF WATER, SULPHUR AND SILVER -LEAD PHASE SYSTEMS .
			CO-3	STUDENT WILL BE ABLE TO RECOGNIZE THE DIFFERENT TYPES OF CORROSION METHODS AND EFFECT OF VARIOUS PARAMETERS ON CORROSION.
			CO-4	STUDENT WILL BE ABLE TO DEFINE CHEMICAL FUELS, REFINING OF PETROLUEM , IDENTIFY DIFFERENT TYPES OF LUBRICANTS AND ANALYSE THEM.
			CO-5	STUDENT WILL BE ABLE TO DEFINE BASIC CONCEPTS OF ELECTROCHEMISTRY AND EXPLAIN CONDUCTOMETRIC TITRATIONS AND VARIOUS THEORY .

PROF.B.S. DESHMUKH

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