LESSON PLAN
SUB: APPLIED CHEMISTRY

Name of the Teaching Faculty:
Sushreeta Behera, Lecturer(Grade-II)Chemistry

Semester from date:
09/01/2026 to date:08/05/2026
CLASS ALLOTTED:60
SEM-2ND
SESSION-2025-26

Class	Theory Topics
1	COMPOSITION OF MATTER, INTRODUCTION TO ATOMIC STUCTURE, RUTHERFORD'S ATOMIC MODEL.
2	BOHR'S THEORY
3	HYDROGEN SPECTRUM EXPLANATION BASED ON BOHR'S MODEL OF AN ATOM
4	HEISENBERG'S UNCERTAINTY PRINCIPLE, ORBITAL CONCEPT AND SHAPES OF S,P,D & F ORBITALS.
5	QUANTUM NUMBERS
6	PAULI'S EXCLUSION PRINCIPLE, HUND'S RULE & AUFBAU PRINCIPLE
7	ELECTRONIC CONFIGURATION OF ELEMENTS AND IONS
8	CHEMICAL BONDING: CAUSE OF CHEMICAL BONDING AND TYPES OF BONDS. IONIC BOND (EXAMPLE OF nacl) AND PROPERTIES OF IONIC COMPOUNDS
9	CONDITIONS FOR WRITING LEWIS DOT STRUCTURES, COVALENT BOND (H_2 ,F_2 ,HF, H_2O ,NH_3 ,CH_4 & CO_2) & PROPERTIES OF COOVALENT COMPOUNDS.
10	CONCEPT OF SIGMA & PIE BOND. HYBRIDISATION ($becl_2$, BF_3, CH_4, NH_3, H_2O)
11	CO-ORDINATION BOND (FORMATION OF NH_4^+), CONCEPT OF HYDROGEN BONDING (INTER MOLECULAR AND INTRA MOLECULAR HYDROGEN BONDING)
12	ANOMALOUS PROPERTIES OF WATER AND AMMONIA&METALLIC BONDING
13	SOLUTION: IDEA OF SOLUTE, SOLVENT & SOLUTION. METHODS TO EXPRESS THE CONCENTRATION (MOLARITY & PPM WITH NUMERICALS)
14	MASS PERCENTAGE, VOLUME PERCENTAGE & MOLE FRACTION WITH NUMERICALS.
15	QUIZ & DISCUSSION OF ASSIGNMENT QUESTIONS
16	WATER: GRAPHICAL PRESENTATION OF WATER DISTRIBUTION ON THE EARTH, CLASSIFICATION OF SOFT AND HARD WATER, SALT CAUSING HARDNESS & UNIT OF HARDNESS.
17	NUMERICALS ON HARDNESS, CAUSES OF POOR LATHERING OF SOAP IN HARD WATER. PROBLEMS CAUSED BY THE USE OF HARD WATER IN THE BOILER (SLUDGE & SCALE)
18	PRIMING, FOAMING & CORROSION
19	QUANTITATIVE DETERMINATION OF WATER HARDNESS BY EDTA METHOD, TDS & ALKALINITY ESTIMATION

20	WATER SOFTENING TECHNIQUES: SODA LIME PROCESS- COLD SODA LIME AND HOT SODA LIME PROCESS.
21	ZEOLITE PROCESS
22	ION EXCHANGE METHOD
23	MUNICIPAL WATER TREATMENT:SEDIMENTATION, COAGULATION, FILTRATION, STERILIZATION.
24	WATER FOR HUMAN CONSUMPTION FOR DRINKING AND COOKING PURPOSES FROM ANY WATER SOURCES AND INDIAN STANDARD SPECIFICATION OF DRINKING WATER.
25	QUIZ & DISCUSSION OF ASSIGNMENT QUESTIONS
26	NATURAL OCCURRENCE OF METALS – MINERALS, ORES OF IRON, ALUMINIUM AND COPPER, GANGUE (MATRIX), FLUX, SLAG & METALLURGY (DIFFERENT METHODS): PULVERISATION OF ORE
27	CONCENTRATION OF ORES (GRAVITY SEPARATION, MAGNETIC SEPARATION, FROTH FLOATATION METHOD)
28	LEACHING, CALCINATION & ROASTING
29	REDUCTION& REFINING (DISTILLATION, ELECTROREFINING & LIQUATION)
30	EXTRACTION OF IRON FROM HAEMATITE ORE USING BLAST FURNACE
31	EXTRACTION OF ALUMINIUM FROM BAUXITE ALONG WITH REACTIONS
32	ALLOYS – DEFINITION, PURPOSES OF ALLOYING, FERROUS ALLOYS AND NON-FERROUS ALLOYS WITH SUITABLE EXAMPLES, PROPERTIES AND APPLICATIONS
33	GENERAL CHEMICAL COMPOSITION & COMPOSITION BASED APPLICATIONS OF PORTLAND CEMENT AND HARDENING OF PORTLAND CEMENT.
34	COMPOSITION OF GLASS & APPLICATION OF DIFFERENT TYPES OF GLASSES. COMPOSITION & APPLICATION OF REFRACTORIES & COMPOSITE MATERIALS.
35	POLYMERS: MONOMER, HOMO AND CO POLYMERS, DEGREE OF POLYMERIZATION. CLASSIFICATION OF POLYMERS. DIFFERENCE BETWEEN THERMOPLASTIC & THERMOSETTING POLYMER.
36	METHOD OF PREPARATION& APPLICATION OF PVC, PS, PTFE, NYLON – 6 & NYLON-6,6 .
37	METHOD OF PREPARATION & APPLICATION OF BAKELITE. RUBBER & VULCANIZATION OF RUBBER.
38	QUIZ & DISCUSSION OF ASSIGNMENT QUESTIONS
39	FUEL: DEFINITION OF FUEL AND COMBUSTION OF FUEL, CLASSIFICATION OF FUELS, CALORIFIC VALUES (HCV AND LCV)
40	CALCULATION OF HCV AND LCV USING DULONG'S FORMULA
41	PROXIMATE ANALYSIS OF COAL SOLID FUEL
42	PETROL AND DIESEL - FUEL RATING (OCTANE AND CETANE NUMBERS)
43	CHEMICAL COMPOSITION, CALORIFIC VALUES AND APPLICATIONS OF LPG, CNG, WATER GAS, COAL GAS, PRODUCER GAS AND BIOGAS.
44	LUBRICATION: FUNCTION AND CHARACTERISTIC PROPERTIES OF GOOD LUBRICANT, CLASSIFICATION OF LUBRICANTS
45	LIQUID LUBRICANTS & SEMI SOLID LUBRICANTS (CLASSIFICATION & PROPERTIES)
46	SOLID LUBRICANTS (GRAPHITE & mos_2):CLASSIFICATION & PROPERTIES
47	LUBRICATION MECHANISM – HYDRODYNAMIC AND BOUNDARY LUBRICATION, PHYSICAL PROPERTIES (VISCOSITY AND VISCOSITY INDEX)
48	PHYSICAL PROPERTIES (OILINESS, FLASH AND FIRE POINT, COULD AND POUR POINT)

49	CHEMICAL PROPERTIES (COKE NUMBER, TOTAL ACID NUMBER SAPONIFICATION VALUE) OF LUBRICANTS.
50	QUIZ & DISCUSSION OF ASSIGNMENT QUESTIONS
51	ELECTRONIC CONCEPT OF OXIDATION, REDUCTION AND REDOX REACTIONS. DEFINITION OF TERMS: ELECTROLYTES, NON-ELECTROLYTES WITH SUITABLE EXAMPLES
52	FARADAYS LAWS OF ELECTROLYSIS AND SIMPLE NUMERICAL PROBLEMS
53	INDUSTRIAL APPLICATION OF ELECTROLYSIS – ELECTROMETALLURGY,ELECTROPLATING & ELECTROLYTIC REFINING
54	APPLICATION OF REDOX REACTIONS IN ELECTROCHEMICAL CELLS: PRIMARY CELLS OR DRY CELL & SECONDARY CELL - COMMERCIALLY USED LEAD STORAGE BATTERY
55	FUEL CELL & SOLAR CELL
56	CORROSION: DEFINITION, CAUSES & TYPES OF CORROSION (DRY CORROSION)
57	ELECTROCHEMICAL CORROSION: H_2 LIBERATION AND O_2 ABSORPTION MECHANISM OF ELECTROCHEMICAL CORROSION.DIFFERENCE BETWEEN CHEMICAL &ELECTROCHEMICAL CORROSION.
58	FACTORS AFFECTING RATE OF CORROSION.
59	INTERNAL CORROSION PREVENTIVE MEASURES: PURIFICATION, ALLOYING AND HEAT TREATMENT AND EXTERNAL CORROSION PREVENTIVE MEASURES: A) METAL (ANODIC, CATHODIC) COATINGS, B) ORGANIC INHIBITORS.
60	QUIZ & DISCUSSION OF ASSIGNMENT QUESTIONS

08/01/26
Signature of the faculty

08/01/2026
Signature of the H.O.D

LESSON PLAN

SUB: APPLIED CHEMISTRY LAB

Name of the Teaching Faculty:
Sushreeta Behera, Lecturer(Grade-II) Chemistry

Semester from date:
09/01/2026 to date:08/05/2026
CLASS ALLOTTED:30
SEM-2ND
SESSION-2025-26

Class	Practical Topics
1	Introduction to chemicals and apparatus in chemistry lab. Solution, standard solution, normality, molarity & strength of solution.
2	EXP-1: Preparation of standard solution of oxalic acid and potassium permanganate.
3	Concept of Quantitative analysis, type of titration & indicator. Preparation of sodium hydroxide solution and oxalic acid solution.
4	EXP-2: To determine strength of given sodium hydroxide solution by titrating against standard oxalic acid solution using phenolphthalein indicator.
5	EXP-3: Determination of total hardness of given water sample using standard EDTA solution.
6	Concept of alkalinity, preparation of solution
7	EXP-4: To determine the alkalinity of given water sample using 0.01 M sulphuric acid.
8	EXP-5: Standardization of $KMnO_4$ solution using standard oxalic acid and Determine the percentage of iron present in given Hematite ore by $KMnO_4$ solution.
9	Concept of iodometric estimation and preparation of solution.
10	EXP-6: Iodometric estimation of copper in the copper pyrite ore.
11	Concept of TAN. EXP-7: Volumetric estimation of total acid number (TAN) of given oil.
12	EXP-8: Determine the conductivity of given water sample.
13	EXP-9: To verify the first law of electrolysis of copper sulphate using copper electrode.
14	EXP-10:14. Construction and measurement of emf of electrochemical cell (Daniel cell).
15	EXP-11: To study the effect of dissimilar metal combination.

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Signature of the faculty

08/01/2026
Signature of the H.O.D

GOVERNMENT POLYTECHNIC - KALAHANDI , BHAWANIPATNA

Lesson Plan

Discipline: Civil, Electrical, Mechanical Engg.		Semester: 2nd Name of Faculty : Bikash Kumar Naik
Subject: Applied Physics - II	No. of days per week Class allotted: 4	Semester From Date: 09-02-2025 To date : 08-05-2025
Week	Class Day	Theory
1st	1st	Introduction to the Subject, Syllabus and Course Outcomes
	2nd	**UNIT - 1: Wave motion and its applications** Wave motion, transverse and longitudinal waves with examples Definitions of wave velocity, frequency and wave length and their
	3rd	Sound and light waves and their properties, wave equation ($y = r \sin t$) amplitude, phase, phase difference
	4th	Principle of superposition of waves and beat formation.
2nd	1st	Simple Harmonic Motion (SHM): definition, expression for displacement, velocity, acceleration, time period, frequency
	2nd	Simple harmonic progressive wave and energy transfer
	3rd	Study of vibration of cantilever and determination of its time period, Free, forced and resonant vibrations with examples.
	4th	Acoustics of buildings – reverberation, reverberation time, echo, noise, coefficient of absorption of sound, methods to control reverberation time and their applications,
3rd	1st	Ultrasonic waves – Introduction and properties, engineering and medical applications of ultrasonic.
	2nd	**UNIT - 2: Optics** Basic optical laws; Reflection and Refraction
	3rd	Refractive index, Images and image formation by mirrors
	4th	Images and image formation by lens and thin lenses
	1st	lens formula, power of lens

4th	2nd	magnification and defects
	3rd	Total internal reflection, Critical angle and conditions for total internal reflection, applications of total internal reflection in optical fiber
	4th	Optical Instruments; simple microscope
5th	1st	compound microscope
	2nd	astronomical telescope in normal adjustment, magnifying power, resolving power, uses of microscope and telescope,
	3rd	optical projection systems.
	4th	**UNIT - 3: Electrostatics** Coulombs law, unit of charge, Electric field, Electric lines of force and their properties
6th	1st	Electric flux, Electric potential and potential difference
	2nd	Gauss law: Application of Gauss law to find electric field intensity of straight charged conductor
	3rd	plane charged sheet and charged sphere.
	4th	Capacitor and its working, Types of capacitors, Capacitance and its units.
7th	1st	Capacitance of a parallel plate capacitor, Series and parallel combination of capacitors (related numerical),
	2nd	dielectric and its effect on capacitance, dielectric break down.
	3rd	**UNIT - 4: Current Electricity** Electric Current and its units, Direct and alternating current
	4th	Resistance and its units, Specific resistance, Conductance, Specific conductance, Series and parallel combination of resistances.
8th	1st	Factors affecting resistance of a wire, carbon resistances and colour coding
	2nd	Ohm's law and its verification, Kirchhoff's laws

	3rd	Wheatstone bridge and its applications (slide wire bridge only)
	4th	Concept of terminal potential difference and Electromotive force (EMF)
9th	1st	Heating effect of current, Electric power, Electric energy and its units (related numerical problems), Advantages of Electric Energy over other forms of energy
	2nd	**UNIT - 5: Electromagnetism** Types of magnetic materials; dia, para and ferromagnetic with their properties
	3rd	Magnetic field and its units, magnetic intensity, magnetic lines of force,
	4th	magnetic flux and units, magnetization
10th	1st	Concept of electromagnetic induction, Faraday's Laws
	2nd	Lorentz force (force on moving charge in magnetic field). Force on current carrying conductor
	3rd	force on rectangular coil placed in magnetic field
	4th	Moving coil galvanometer; principle, construction and working
11th	1st	Conversion of a galvanometer into ammeter and voltmeter.
	2nd	**UNIT - 6: Semiconductor Physics** Energy bands in solids, Types of materials (insulator, semi-conductor, conductor)
	3rd	intrinsic and extrinsic semiconductors, p-n junction
	4th	junction diode and V-I characteristics, types of junction diodes
12th	1st	Diode as rectifier – half wave and full wave rectifier (centre taped).
	2nd	Transistor; description and three terminals, Types- pnp and npn, some electronic applications (list only).
	3rd	Photocells, Solar cells; working principle and engineering applications

	4th	**UNIT - 7: Modern Physics** Lasers: Energy levels, ionization and excitation potentials; spontaneous and stimulated emission
13th	1st	population inversion, pumping methods, optical feedback
	2nd	Types of lasers; Ruby Laser
	3rd	He-Ne Laser
	4th	semiconductor Laser
14th	1st	Laser characteristics, engineering and medical applications of lasers.
	2nd	Fiber Optics: Introduction to optical fibers
	3rd	light propagation, acceptance angle and numerical aperture
	4th	fiber types, applications in; telecommunication, medical and sensors
15th	1st	Nanoscience and Nanotechnology: Introduction, nanoparticles and nanomaterials
	2nd	properties at nanoscale, nanotechnology, nanotechnology based devices and applications.
	3rd	Revision
	4th	Revision

BOOK REFERNCE:

1 Applied Physics-II by Prof. Hussain Jeevakhan

2 Text Book of Physics for Class XII(Part-I, Part-II); N.C.E.R.T., Delhi

3 Concepts in Physics by HC Verma, Vol. I & II, Bharti Bhawan Ltd. New Delhi

Concerned faculty:
Bikash Kumar Naik
Sri Bikash Kumar Naik
8/1/26

HOD ,Dept. of Humanities & Sc
08/01/26
G.P KALAHANDI

GOVT. POLYTECHNIC KALAHANDI		
DEPARTMENT OF HUMANITIES & SCIENCES		
LESSON PLAN (ACADEMIC SESSION 25-26)		
Discipline: Physics	**Semester: 2nd**	**Name of the teaching faculty: Bikash Kumar Naik**
Subject: Applied Physics II Lab	**No of Days/Week class allotted: 1**	**Semester from Date: 09/01/2026 to 08/05/2026 No of weeks: 17**
Week	**Class Day**	**Practical Topics**
1st	1st	Discussion of relevant theory and demonstration of experiment 1 to experiment 4.
2nd	2nd	Conduction of the experiment to determine and verify the time period of a cantilever.
3rd	3rd	Conduction of the experiment to verify laws of reflection from a plane mirror/ interface.
4th	4th	Conduction of the experiment to verify laws of refraction (Snell's law) using a glass slab.
5th	5th	Conduction of the experiment to determine focal length and magnifying power of a convex lens.
6th	6th	Discussion of relevant theory and demonstration of experiment 5 to experiment 8.
7th	7th	Conduction of the experiment to verify Ohm's law by plotting graph between current and potential difference.
8th	8th	Conduction of the experiment to verify laws of resistances in series and parallel combination.
9th	9th	Conduction of the experiment to verify Kirchhoff's law using electric circuits.
10th	10th	Conduction of the experiment to find resistance of a galvanometer by half deflection method.
11th	11th	Discussion of relevant theory and demonstration of experiment 9 to experiment 10.
12th	12th	Conduction of the experiment to convert a galvanometer into a voltmeter or ammeter
13th	13th	Conduction of the experiment to draw V-I characteristics of a semiconductor diode (Ge, Si) and determine its knee voltage.
14th	14th	Conduction of make up lab.
15th	15th	Conduction of make up lab.
16th	16th	Conduction of make up lab.
17th	17th	Conduction of make up lab.

Bikash Kumar Naik
9.1.26

Signature of the Teaching Faculty

09/01/26.

Signature of HOD, Humanities & Sciences

	GOVERNMENT POLYTECIINIC, KALAHANDI DEPARTMENT OF HUMANITIES & SCIENCE	
Discipline: Electrical Engineering	Semester: 2nd	Name of the Teaching Faculty: BANDANA PATTNAIK
Subject: Communication skills English Th-1.a	No. Of day/per week class allotted:03	Semester Date From: 09.01.2026 To date: 08.05.2026 No. of Weeks:15
PRE- REQUISITES	Basic knowledge of English grammar and vocabulary	
COURSE OUTCOMES	CO1: Understand the meaning, process of communication, types of communication and barrier in communication and manner to communicate effectively. CO2: Comprehend soft skill and hard skill and to apply it in day to day life. CO3: Comprehend the seen passages and develop basic speaking and writing skills including proper usage of language and vocabulary so that they can become highly confident and skilled speakers and writers. CO4: Write personnel & business letter and drafting of notice and minutes of a meeting. CO5: Apply Enhancement of vocabulary and apply English grammar rules correctly while framing a sentence, and writing letter, application etc.	

Week	Class Day	Theory/Practical Topics
1ST	1ST	Introduction to theory 1A (syllabus, objectives, patterns of questions and evaluation)
	2ND	Unit I: Basics of Communication: Introduction, Meaning & Definition, Process of Communication
	3RD	Unit I: Types of Communication: Formal & Informal; Advantages and Disadvantages
2ND	1ST	Unit I:Areas of Verbal and Non-verbal Communication; Advantages and Disadvantages
	2ND	Unit 2: Introduction to Soft Skills and Hard Skills
	3RD	Unit 2: Importance of Soft Skills
3RD	1ST	Unit5: Vocabulary of Commonly Used Words;Commonly used administrative terms(English only),One word substation,Parts of speech,Active and Passive voice,Tenses,

		Punctuation.
	2ND	Unit 3: Malgudi Days- An Astrologer's Day
	3RD	Unit3: Malgudi Days- An Astrologer's Day
4TH	1ST	Unit I: 7Cs of Effective Communication
	2ND	Unit4: Writing Skill: The Art of Summary Writing
	3RD	Unit4: Writing Skill: The Art of Report Writing
5TH	1ST	Unit 3: Stopping By Woods on a Snowy Evening(Poem)
	2ND	Unit 3: Stopping By Woods on a Snowy Evening(Poem)
	3RD	Unit5: Application of English Grammar: Parts of Speech
6TH	1ST	Unit3: The Gift of the Magi
	2ND	Unit3: The Gift of the Magi
	3RD	Unit3: The Gift of the Magi
7TH	1ST	Unit2: Applying Soft Skills across Cultures
	2ND	Unit4: Writing Skill: Filling Up Different Forms (0filine and Online)
	3RD	Unit4: Writing Skill: Filling Up Different Forms (0filine and Online)
8TH	1ST	Unit5: Commonly Used Administrative Terms
	2ND	Unit5: Punctuation
	3RD	Unit3: Malgudi Days- 1The Missing Mail
9TH	1ST	Unit3: Malgudi Days- 1The Missing Mail
	2ND	Unit4: Writing Skill: Business Letter Writing
	3RD	Unit4: Writing Skill: Business Letter Writing

10th 10TH	1ST	Unit5:Application or English Grammar: Time, Tense and Aspects
	2ND	Unit5:Application or English Grammar: Time, Tense and Aspects
	3RD	Unit5:Application or English Grammar: Time, Tense and Aspects
11TH	1ST	Unit3: Where the Mind is Without Fear(Poem)
	2ND	Unit3: Where the Mind is Without Fear(Poem)
	3RD	Unit I: Barriers to Effective Communication and Ways to overcome them
12TH	1ST	Unit I: Art of Effective Communication
	2ND	Unit I: Technical Communication
	3RD	Unit4: Writing Skill: Personal Letter Writing
13TH	1ST	Unit4: Writing Skill: Personal Letter Writing
	2ND	Unit3: Malgudi Days- Doctor's Word
	3RD	Unit3: Malgudi Days- Doctor's Word
14TH	1ST	Unit5: One Word Substitution
	2ND	Unit4: Writing Skill: Drafting Emails, Notices and Preparing Minutes of Meetings
	3RD	Unit4: Drafting Emails, Notices and Preparing Minutes of Meetings
15TH	1ST	Unit5: Application of English Grammar: Voice Change
	2ND	Unit5: Application of English Grammar: Voice Change
	3RD	Unit5: Application of English Grammar: Voice Change

LEARNING RESOURCES:

1. M. Ashraf Rizvi. Effective Technical Communication. Mc-Graw Hill, 2002.
2. John Nielson. Effective Communication Skills. Xlibris, 2008.
3. Roget's Thesaurus of English Words and Phrases S.CHANDPUBLICATION.
4. Wren & Martin. High School English Grammar and Composition. S Chand,2024.
5. J. Thomson & A. V. Martinet. Practical English Grammar. Oxford University Press,1997.

Signature of faculty

08/01/2026

Signature of HOD

	GOVERNMENT POLYTECHNIC, KALAHANDI DEPARTMENT OF HUMANITIES & SCIENCE	
Discipline: **Electrical Engineering**	Semester: **2ND**	**Name of the Teaching Faculty: BANDANA PATTNAIK** **GUEST FACULTY IN ENGLISH**
Subject: **COMMUNICATION SKILLS IN ENGLISH Pr-1 (a)**	No. of classes per week :04	Semester From date: **09.01.2026** To Date:**08.05.2026** No. of Weeks:15
PRE-REQUISITES	**Basic knowledge of English grammar and vocabulary**	
COURSE OUTCOMES	**CO1: Apply four S i.e Listening, Speaking, Reading and Writing effectively in day to day life.** **CO2: Use of correct pronunciation, intonation,, stress, rhythm, speed, and pause while communicating with others.** **CO3:Comprehend the basic etiquette of interview, GD, conversation and presentation.**	

Week	Class Day	Theory/Practical Topics
1ST	1ST	Unit1:ListeningSkills(Meaning, Process, Types and Effective Tips)
	2ND	Unit1:ListeningSkills:Introduction to Recorded Lectures, Poems, Audio Content
2ND	1ST	Unit1:ListeningSkills:Introduction to Recorded Lectures, Poems, Audio Content
	2ND	Unit1:ListeningSkills:IntroductiontoRecordedLectures,Poems,AudioContent
3RD	1ST	Unit1:ListeningSkills:AssessmentActivity
	2ND	Unit2:Phonetics(Meaning, Importance of Phonetics & Introduction to IPA)
4TH	1ST	Unit2:Phonetics(Introduction to Consonant Sounds)
	2ND	Unit2:Phonetics(Introduction to Consonant Sounds)
5TH	1ST	Unit2:Phonetics(Introduction to Vowel Sounds)
	2ND	Unit2:Phonetics(Introduction to Vowel Sounds)
6TH	1ST	Unit2:Phonetics (Introduction to Diphthongs)
	2ND	Unit2:Phonetics(Transcription of Words as per IPA)
7TH	1ST	Unit2:Phonetics(Transcription of Words as per IPA)
	2ND	Unit2:Phonetics(Syllables, Stress and Pitch)
8TH	1ST	Unit2:Phonetics(Tone and Intonation)
	2ND	Unit2:Assessment
9TH	1ST	Unit3:SpeakingSkills(Activity-Group Discussion)
	2ND	Unit3:SpeakingSkills(Activity-Group Discussion)

10TH	1ST	Unit3:SpeakingSkills(Activity –Public Speaking and Presentation)
	2ND	Unit3:SpeakingSkills(Activity –Public Speaking and Presentation)
11TH	1ST	Unit3:SpeakingSkills(Activity-Conversation Practice and Role Play)
	2ND	Unit3:SpeakingSkills(Activity-Conversation Practice and Role Play)
12TH	1ST	Unit3:SpeakingSkills(Activity- Conversation Practice and Role Play)
	2ND	Unit3:SpeakingSkills(Activity- Conversation Practice and Role Play)
13TH	1ST	Unit3:SpeakingSkills(Activity-Mock Interview)
	2ND	Unit3:SpeakingSkills(Activity-Mock Interview)
14TH	1ST	Unit3:SpeakingSkills(Activity-Mock Interview)
	2ND	Unit3:SpeakingSkills(Activity-Mock Interview)
15TH	1ST	Unit3:SpeakingSkills(Assessment)
	2ND	Unit3:SpeakingSkills(Assessment)

LEARNINGRESOUCES:

1. **Bansal and Harrison.** ***Spoken English.*** **Orient Black Swan, 2011.**
2. **James Hartman & et al. Ed.** ***English Pronouncing Dictionary.*** **Cambridge: Cambridge University Press, 2006.**
3. **Pfeiffer; William Sanborn and T.V.S Padmaja.** ***Technical Communication: A Practcal Approach.*** **6th edn. Delhi: Pearson, 2007.**

Bandana Pattnaik
Signature of Faculty

K Padmini 08/01/26
Signature of HOD

Lesson Plan of Engg. Mechanics (TH-4B) (60 Periods)
Semester & Branch : 2nd Sem. Civil Engg.
Session : 2026-Summer

Name of the Teaching Faculty: Ashis Kashyap

Semeester from Date: 09.01.2026
To Date: 08.05.2026
No.of Weeks: 17
No. of Days per Week: 4

Chapters	Periods	Week	Class Day	Topics to be covered
Chapter-1 (BASICS OF MECHANICS & FORCE SYSTEM) (12 Periods)	1	1st	1	•1.1 Significance and relevance of Mechanics,
	2		2	•1.1 Applied mechanics, Statics, Dynamics.
	3		3	•1.2 Space, time, mass, particle,
	4		4	•1.2 flexible body and rigid body.
	5	2nd	1	•1.3 Scalar and vector quantity, Units of measurement (SI units)
	6		2	•1.3 Fundamental units and derived units.
	7		3	•1.4 Force – unit, representation as a vector and by Bow's notation, characteristics and effects of a force,
	8		4	•1.4 Principle of transmissibility of force, Force system and its classification.
	9	3rd	1	•1.5 Resolution of a force - Orthogonal components of a force,
	10		2	•1.5 moment of a force, Varignon's Theorem
	11		3	•1.6 Composition of forces – Resultant, analytical method for determination of resultant for concurrent, non-concurrent and parallel co-planar force systems
	12		4	•1.6 Law of triangle, parallelogram and polygon of forces.
Chapter-2 (EQUILIBRIUM) (12 Periods)	13	4th	1	•2.1 Equilibrium and Equilibrant, Free body and Free body diagram
	14		2	•2.1 Equilibrium and Equilibrant, Free body and Free body diagram
	15		3	•2.1 Equilibrium and Equilibrant, Free body and Free body diagram
	16		4	•2.2 Analytical and graphical methods of analysing equilibrium
	17	5th	1	•2.2 Analytical and graphical methods of analysing equilibrium
	18		2	•2.3 Types of beam, supports (simple, hinged, roller and fixed)
	19		3	•2.3 Types of beam, supports (simple, hinged, roller and fixed)

Ashis Kashyap.

(12 Periods)	20		4	•2.4 Beam reaction for cantilever, simply supported beam with or without overhang
	21	6th	1	•2.4 Beam reaction for cantilever, simply supported beam with or without overhang
	22		2	•2.4 Beam reaction for cantilever, simply supported beam with or without overhang
	23		3	•2.5 Beam reaction graphically for simply supported beam subjected to vertical point loads only
	24		4	•2.5 Beam reaction graphically for simply supported beam subjected to vertical point loads only
Chapter-3 (FRICTION) (12 Periods)	25	7th	1	•3.1 Friction and its relevance in engineering, types and laws of friction,
	26		2	•3.1 Friction and its relevance in engineering, types and laws of friction,
	27		3	•3.1 limiting equilibrium, limiting friction,
	28		4	•3.1 limiting equilibrium, limiting friction,
	29	8th	1	•3.1 co-efficient of friction, angle of friction,
	30		2	•3.1 co-efficient of friction, angle of friction,
	31		3	•3.1 angle of repose, relation between co-efficient of friction and angle of friction.
	32		4	•3.1 angle of repose, relation between co-efficient of friction and angle of friction.
	33	9th	1	•3.2 Equilibrium of bodies on level surface subjected to force parallel and inclined to plane.
	34		2	•3.2 Equilibrium of bodies on level surface subjected to force parallel and inclined to plane.
	35		3	•3.3 Equilibrium of bodies on inclined plane subjected to force parallel to the plane only.
	36		4	•3.3 Equilibrium of bodies on inclined plane subjected to force parallel to the plane only.
Chapter-4 (CENTROID &	37	10th	1	•4.1 Centroid of geometrical plane figures (square, rectangle, triangle, circle, semi-circle, quarter circle)
	38		2	•4.1 Centroid of geometrical plane figures (square, rectangle, triangle, circle, semi-circle, quarter circle)
	39		3	•4.1 Centroid of geometrical plane figures (square, rectangle, triangle, circle, semi-circle, quarter circle)
	40		4	•4.2 Centroid of composite figures composed of not more than three geometrical figures
	41	11th	1	•4.2 Centroid of composite figures composed of not more than three geometrical figures

Ashis Kashyap.

CENTRE OF GRAVITY) (12 Periods)	42		2	•4.2 Centroid of composite figures composed of not more than three geometrical figures
	43		3	•4.2 Centroid of composite figures composed of not more than three geometrical figures
	44		4	•4.3 Centre of Gravity of simple solids (Cube, cuboid, cone, cylinder, sphere, hemisphere)
	45	12th	1	•4.3 Centre of Gravity of simple solids (Cube, cuboid, cone, cylinder, sphere, hemisphere)
	46		2	•4.3 Centre of Gravity of simple solids (Cube, cuboid, cone, cylinder, sphere, hemisphere)
	47		3	•4.3 Centre of Gravity of composite solids composed of not more than two simple solids.
	48		4	•4.3 Centre of Gravity of composite solids composed of not more than two simple solids.
Chapter-5 (SIMPLE LIFTING MACHINES) (12 Periods)	49	13th	1	•5.1 Simple lifting machine, load, effort,
	50		2	•5.1 mechanical advantage, applications and advantages.
	51		3	•5.1 Velocity ratio, efficiency of machines, law of machine.
	52		4	•5.1 Velocity ratio, efficiency of machines, law of machine.
	53	14th	1	•5.2 Ideal machine, friction in machine,
	54		2	•5.2 maximum Mechanical advantage and efficiency,
	55		3	•5.2 reversible and non-reversible machines, conditions for reversibility
	56		4	•5.2 reversible and non-reversible machines, conditions for reversibility
	57	15th	1	•5.3 Velocity ratios of Simple axle and wheel, Differential axle and wheel, Worm and worm wheel,
	58		2	•5.3 Single purchase and double purchase crab winch,
	59		3	•5.3 Simple screw jack, Weston's differential pulley block, geared pulley block.
	60		4	•5.3 Simple screw jack, Weston's differential pulley block, geared pulley block.

Rishi Kashyap.

Revision & Previous Year Question Paper Practice	61	16th	1	Chapter-1 Revision (BASICS OF MECHANICS & FORCE SYSTEM) Previous Year Question Paper Practice
	62		2	
	63		3	Chapter-2 Revision (EQUILIBRIUM) Previous Year Question Paper Practice
	64		4	
	65	17th	1	Chapter-3 Revision (FRICTION) Previous Year Question Paper Practice
	66		2	
	67		3	Chapter-4 Revision (CENTROID & CENTRE OF GRAVITY) Previous Year Question Paper Practice
	68		4	Chapter-5 Revision (SIMPLE LIFTING MACHINES) Previous Year Question Paper Practice

Rishi Kashyap.
Sign. of faculty

Padmini
08/01/2026.
H.O.D. I/c
Hum & Sc.

	LESSION PLAN FOR: ENGINEERING MECHANICS, TH-4(b)		
sl no	Discipline-Mechanical Engineering	2nd Semester	NAME- SUSANTA KUMAR BAG
	Subject :EM	No of Days per week class alloted (4 nos)	Semester from 09.01.2026 to 08.05.2026
	Week	Class days	Theory Topic
1	1st	1st	Significance and relevance of Mechanics.
2		2nd	Applied mechanics,Statics,Dynamics.
3		3rd	Space ,Time, Mass,particle.
4		4th	Flexible body and rigid body.
5	2nd	1st	Scalar and vector quantity,Units of measurement(SI units)
6		2nd	Fundamental units and derived units.
7		3rd	Force – unit, representation as a vector and by Bow's notation,
8		4th	characteristics and effects of a force
9	3rd	1st	Principle of transmissibility of force,Force systemand its classification.
10		2nd	Resolution of a force -Orthogonal components ofa force,
11		3rd	moment of a force, Varignon's Theorem
12		4th	Composition of forces – Resultant, analyticalmethod for determination of resultant for concurrent,
13	4th	1st	non-concurrent and parallel co-planar force systems
14		2nd	Law of triangle, parallelogram and polygon of forces.
15		3rd	Equilibrium and Equilibrant,Free body and Freebody diagram
16		4th	Equilibrium and Equilibrant,Free body and Freebody diagram
17	5th	1st	Equilibrium and Equilibrant,Free body and Freebody diagram
18		2nd	Analytical and graphical methodsof analysing equilibrium
19		3rd	Analytical and graphical methodsof analysing equilibrium
20		4th	Types of beam, supports(simple, hinged, roller and fixed)
21	6th	1st	Types of beam, supports (simple, hinged, roller and fixed)
22		2nd	Beam reaction for simply supportedbeam with or without overhang
23		3rd	Beam reaction for cantilever, simply supportedbeam with or without overhang
24		4th	Beam reaction for cantilever, simply supportedbeam with or without overhang
25	7th	1st	Beam reaction for simply supportedbeam with or without overhang
26		2nd	Beam reaction for cantilever, simply supported beam with or without overhang
27		3rd	Beam reaction graphically for simply supported beam subjected to vertical point loads only
28		4th	Beam reaction graphically for simply supported beam subjected to vertical point loads only
29	8th	1st	Friction and its relevance in engineering, types and laws of friction,
30		2nd	Friction and its relevance in engineering, types and laws of friction,
31		3rd	limiting equilibrium, limiting friction,

32		4th	limiting equilibrium, limiting friction,
33	9th	1st	co-efficient of friction, angle of friction,
34		2nd	co-efficient of friction, angle of friction,
35		3rd	angle of repose, relation between co-efficient of friction and angle of
36		4th	angle of repose, relation between co-efficient of friction and angle of
37	10th	1st	Equilibrium of bodies on level surface subjected to force parallel and
38		2nd	Equilibrium of bodies on level surface subjected to force parallel and inclined to plane.
39		3rd	Equilibrium of bodies on inclined plane subjected to force parallel to the
40		4th	Equilibrium of bodies on inclined plane subjected to force parallel to the plane only.
41	11th	1st	Centroid of geometrical plane figures (square, rectangle, triangle, circle, semi-circle, quarter circle)
42		2nd	Centroid of geometrical plane figures (square, rectangle, triangle, circle, semi-circle, quarter circle)
43		3rd	Centroid of geometrical plane figures (square, rectangle, triangle, circle, semi-circle, quarter circle)
44		4th	Centroid of composite figures composed of not more than three geometrical
45	12th	1st	Centroid of composite figures composed of not more than three geometrical
46		2nd	Centroid of composite figures composed of not more than three geometrical
47		3rd	Centroid of composite figures composed of not more than three geometrical figures
48		4th	Centre of Gravity of simple solids (Cube, cuboid,cone, cylinder, sphere, hemisphere)
49	13th	1st	Centre of Gravity of simple solids (Cube, cuboid, cone, cylinder, sphere, hemisphere)
50		2nd	Centre of Gravity of composite solids composed of not more than two simple solids.
51		3rd	Simple lifting machine, load, effort,
52		4th	mechanical advantage, applications and advantages.
53	14th	1st	Velocity ratio, efficiency of machines, law of Velocity ratio efficiency of machines, law of machine
54		2nd	Ideal machine, friction in machine,
55		3rd	maximum Mechanical advantage and efficiency,
56		4th	reversible and non-reversible machines, conditions for reversibility
57	15th	1st	Velocity ratios of Simple axle and wheel, Differential axle and wheel, Worm and worm wheel,
58		2nd	Single purchase and double purchase crab winch,
59		3rd	Simple screw jack, Weston's differential pulley block, geared pulley block.
60		4th	Simple screw jack, Weston's differential pulley block, geared pulley block.

Sign of faculty

08/01/2026

Sign of HOD

GOVT. POLYTECHNIC KALAHANDI BHAWANIPATNA

Lession plan for Engineering mechanics lab

sl no	Discipline-CE	2nd Semester summer 2026	NAME-SUSANTA KUMAR BAG
	Subject : Engineering Mechanics Lab	No of days/per week class alloted :02	Semester from Dtae:09-01-2026 to 08-05-2026
	Week	Class days	**Theory/ pratical Topics To be Covered**
1	1st	1st	To study various equipments related to Engineering Mechanics.
2		2nd	To find the M.A., V.R., Efficiency and law of machine for Differential Axle and Wheel.
3	2nd	1st	To find the M.A., V.R., Efficiency and law of machine for Simple Screw Jack.
4		2nd	Derive Law of machine using Worm and worm wheel.
5	3rd	1st	Derive Law of machine using Worm and worm wheel.
6		2nd	Derive Law of machine using Single purchase crab.
7	4th	1st	Derive Law of machine using double purchase crab.
8		2nd	Derive Law of machine using Weston's differential or wormed geared pulley block.
9	5th	1st	Derive Law of machine using Weston's differential or wormed geared pulley block.
10		2nd	VIVA -VOICE CONDUCT
11	6th	1st	Record checking of the student
12		2nd	Determine resultant of concurrent force system applying Law of Polygon of forces using force table.
13	7th	1st	Determine resultant of concurrent force system applying Law of Polygon of forces using force table.
14		2nd	Determine resultant of concurrent force system graphically.
15	8th	1st	Determine resultant of concurrent force system graphically.
16		2nd	Determine resultant of parallel force system graphically.
17	9th	1st	Verify Lami's theorem.
18		2nd	Study forces in various members of Jib crane.
19	10th	1st	Study forces in various members of Jib crane.
20		2nd	Determine support reactions for simply supported beam
21	11th	1st	Determine support reactions for simply supported beam
22		2nd	Obtain support reactions of beam using graphical method.
23	12th	1st	Obtain support reactions of beam using graphical method.
24		2nd	Determine coefficient of friction for motion on horizontal and inclined plane.
25	13th	1st	Determine coefficient of friction for motion on horizontal and inclined plane.
26		2nd	VIVA -VOICE CONDUCT
27	14th	1st	Record checking of the student
28		2nd	Determine centroid of geometrical plane figures.
29	15th	1st	Determine centroid of geometrical plane figures.
30		2nd	REVISION TEST

09/01/26
SIGN OF FACULTY

09/01/26
SIGN OF HOD

LESSON PLAN		
Department: ELECTRICAL, Semester: 2nd, Name of Faculty : BHUBANTA KAND		
Subject: FEEE	**No. of days/ week Class allotted: 2**	**From Date: 09.01.2026 To date :08.05.2026 SESSION: 2025-26(S)**
Week	**Class Day**	**Theory**
1st	1st	**Unit :IV- Electric and Magnetic Circuits:** EMF, Current, Potential Difference, Power and Energy;
	2nd	M.M.F, magnetic force, permeability, hysteresis loop
2nd	1st	-DO-
	2nd	reluctance, leakage factor and BH curve
3rd	1st	Electromagnetic induction, Faraday's laws of electromagnetic induction
	2nd	Lenz's law; Dynamically induced emf; Statically induced emf
4th	1st	Equations of self and mutual inductance; Analogy between electric and magnetic circuits.
	2nd	-DO-
5th	1st	**Unit: V- A.C. Circuits:** Cycle, Frequency, Periodic time
	2nd	Amplitude, Angular velocity, RMS value, Average value
6th	1st	Form Factor Peak Factor, impedance, phase angle, and power factor
	2nd	Mathematical and phasor representation of alternating emf and current
7th	1st	-DO-
	2nd	Voltage and Current relationship in Star and Delta connections
8th	1st	A.C in resistors, inductors and capacitors
	2nd	A.C in R-L series
9th	1st	A.C in R-C series, R-L-C series
	2nd	A.C in parallel circuits
10th	1st	Power in A. C. Circuits, power triangle.
	2nd	Problem Solving Class
11th	1st	**Unit: VI- (Revised) Transformer and Machines:** General construction and principle of different type of transformers
	2nd	-DO-
12th	1st	Emf equation and transformation ratio of transformers
	2nd	Auto transformers
13th	1st	-DO-
	2nd	Construction and Working principle of DC motors
14th	1st	-DO-
	2nd	Basic equations and characteristic of motors.
15th	1st	-DO-
	2nd	Doubt Clearing Class

09/01/2026

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09/01/2026

HOD (MATH&SCL)

LESSON PLAN

Department: ELECTRICAL, **Semester**: 2nd, **Name of Faculty : SATYAPRAKASH OJHA**

Subject: FEEE	**No. of days/ week Class allotted: 2**	**From Date: 09.01.2026 To date :08.05.2026 SESSION: 2025-26(S)**
Week	**Class Day**	**Theory**
1st	1st	**UNIT I** Overview of Electronic Components & Signals: Passive Active Components: Resistances, Capacitors, Inductors
	2nd	Diodes, Transistors
2nd	1st	FET, MOS and CMOS and their Applications
	2nd	-DO-
3rd	1st	(Concept and simple problems of Resistance, Capacitor & Inductor)
	2nd	Definition, classification and Working of diode(PN juction,LED, Zener),
4th	1st	Transistor, FET, Concept of MOS and CMOS)
	2nd	-DO-
5th	1st	Signals: DC/AC, voltage/current, periodic/non-periodic signals
	2nd	average, rms, peak values, different types of signal waveforms
6th	1st	Ideal/non-ideal voltage/current sources, independent/dependent voltage current sources. (Definitions)
	2nd	**UNIT II** Overview of Analog Circuits: Operational Amplifiers-Ideal Op-Amp
7th	1st	Practical op amp, Open loop and closed loop configurations
	2nd	-DO-
8th	1st	Application of Op-Amp as amplifier
	2nd	Adder
9th	1st	Differentiator and integrator
	2nd	-DO-
10th	1st	**UNIT III** Overview of Digital Electronics: Introduction to Boolean Algebra
	2nd	Electronic Implementation of Boolean Operations
11th	1st	Gates-Functional Block Approach (Simple problems of Number system)
	2nd	-DO-
12th	1st	Storage elements-Flip Flops-A Functional block approach
	2nd	-DO-
13th	1st	Counters: Ripple,
	2nd	Up/down and decade
14th	1st	-DO-
	2nd	Introduction to digital IC Gates (of TTL Type)
15th	1st	-DO-
	2nd	Practice session

09/01/26

Sign of Faculty

09/01/26

HOD (Math & Sci Dept)

LESSON PLAN

Department: ELECTRICAL, **Semester:** 2nd, **Name of Faculty : SATYAPRAKASH OJHA**

Subject: FEEE lab | **No. of days/ week Class allotted: 2** | **From Date: 09.01.2026 To date :08.05.2026** **SESSION: 2025-26(S)**

Week	Period	Practical
1st	1st	Determine the permeability of magnetic material by plotting its B-H curve
	2nd	
2nd	1st	Measure voltage, current and power in 1-phase circuit with resistive load
	2nd	
3rd	1st	Measure voltage, current and power in R-L series circuit
	2nd	
4th	1st	Determine the transformation ratio(K) of 1-phase transformer
	2nd	
5th	1st	Connect single phase transformer and measure input and output quantities
	2nd	
6th	1st	Make Star and Delta connection in starter to run induction motor
	2nd	
7th	1st	Identify various passive and active electronics components
	2nd	
8th	1st	Connect resistors in series and parallel combination and measure its value using digital multimeter
	2nd	
9th	1st	Connect capacitors in series and parallel combination and measure its value using multimeter
	2nd	
10th	1st	Use multimeter to measure the value of given resistor and determine the value to confirm with colour code
	2nd	
11th	1st	Test the PN-junction diode and LED using digital multimeter
	2nd	
12th	1st	Test the performance of PN-junction diode
	2nd	
13th	1st	Test the performance of Zener diode
	2nd	
14th	1st	Identify three terminals of a transistor using digital multimeter
	2nd	
15th	1st	Test the performance of NPN transistor
	2nd	

09/01/26

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09/01/2026

HOD (Math & Sci Dept)

LESSON PLAN
GOVERNMENT POLYTECHNIC, KALAHANDI, BHAWANIPATNA

FACULTY NAME: BHUBANTA KAND BRANCH:ELECTRICAL SEM:2nd SESSION:2025-26(S)

SUB: FEEE LAB	No. of days/ week Class allotted: 2 Total Periods:30	w.e.f.09.01.2026 to 08.05.2026
Week	Class Day(No of periods)	Theory
1st	1st(2p)	Determine the permeability of magnetic material by plotting its B-H curve.
2nd	1st(2p)	Measure voltage, current and power in 1-phase circuit with resistive load.
3rd	1st(2p)	Measure voltage, current and power in R-L series circuit.
4th	1st(2p)	Determine the transformation ratio(K) of 1-phase transformer.
5th	1st(2p)	Connect single phase transformer and measure input and output quantities.
6th	1st(2p)	Make Star and Delta connection in starter to run induction motor.
7th	1st(2p)	Identify various passive and active electronics components.
8th	1st(2p)	Connect resistors in series and parallel combination and measure its value using digital multimeter.
9th	1st(2p)	Connect capacitors in series and parallel combination and measure its value using multimeter.
10th	1st(2p)	Use multimeter to measure the value of given resistor and determine the value to confirm with colour code.
11th	1st(2p)	Test the PN-junction diode and LED using digital multimeter.
12th	1st(2p)	Test the performance of PN-junction diode.
13th	1st(2p)	Test the performance of Zener diode.
14th	1st(2p)	Identify three terminals of a transistor using digital multimeter.
15th	1st(2p)	Test the performance of NPN transistor.

09/01/2026

SIGN. FACULTY

09/01/2026.

HOD(MATH&SCI.)

DISCIPLINE CSE civil Mech	SEMESTER:2nd	NAME OF THE TEACHING FACULTY: KHUSI PARIMITA
SUBJECT: Introduction to IT Systems	NO.OF DAYS/PER WEEK CLASS ALLOTTED:3	SEMESTER FROM DATE:09/01/2026 TO DATE: 08/05/2026 NO.OF WEEKS:15
WEEK	CLASS	THEORY/PRACTICAL TOPICS
1st	1st	UNIT 1:-Basic Internet skills: Understanding browser
	2nd	Understanding browser
	3rd	Understanding browser
2nd	1st	efficient use of search engines
	2nd	efficient use of search engines
	3rd	efficient use of search engines
3rd	1st	awareness about Digital India portals
	2nd	(state and national portals)
	3rd	(state and national portals)
4th	1st	And college portals.
	2nd	and college portals
	3rd	and college portals
5th	1st	General understanding of various computer hardware components – CPU
	2nd	General understanding of various computer hardware components – CPU
	3rd	General understanding of various computer hardware components – CPU
6th	1st	Memory,
	2nd	Display, Key- board, Mouse,
	3rd	HDD
7th	1st	and other Peripheral Devices
	2nd	and other Peripheral Devices
	3rd	and other Peripheral Devices
8th	1st	UNIT -2:-OS Installation (Linux and MS Windows)
	2nd	OS Installation (Linux and MS Windows)

	3rd	OS Installation (Linux and MS Windows)
9th	1st	Unix Shell and Commands, vi editor.
	2nd	Unix Shell and Commands, vi editor.
	3rd	Unix Shell and Commands, vi editor.
10th	1ST	**UNIT-3:-**
	2nd	**HTML4**
	3rd	CSS
11th	1st	Making basic personal webpage.
	2nd	Making basic personal webpage.
	3rd	Making basic personal webpage.
12th	1st	**UNIT 4**:-Office Tools: Open Office Writer, Open Office
	2nd	Open Office Writer
	3rd	Open Office
13th	1st	Spreadsheet (Calc),
	2nd	Spreadsheet (Calc),
	3rd	Open Office Impress.
14th	1st	**UNIT 5**:-Information security best practices.
	2nd	Information security best practices
	3rd	Information security best practices
15th	1st	Information security best practices
	2nd	Information security best practices
	3rd	Information security best practices

Khushi Parcimita

Signature Of
Faculty

08/01/2026

HOD(humanities&science)

DISCIPLINE: Mechanical and Civil	SEMESTER:2nd	NAME OF THE TEACHING FACULTY: KHUSI PARIMITA
SUBJECT: Introduction to IT systems lab	NO.OF CLASSES PER WEEK :4	SEMESTER FROM DATE:09/01/2026 TO DATE:08/05/2026 NO.OFWEEKS:15 ,Total Class alloted-60
WEEK	CLASS DAY	PRACTICALTOPICS
1st	1st	Browser features, browsing, using various search engines, writing search queries
	2nd	Browser features, browsing, using various search engines, writing search queries
	3rd	Browser features, browsing, using various search engines, writing search queries
	4th	Browser features, browsing, using various search engines, writing search queries
2nd	1st	Visit various e-governance/Digital India portals, understand their features, services offered.
	2nd	Visit various e-governance/Digital India portals, understand their features, services offered.
	3rd	Visit various e-governance/Digital India portals, understand their features, services offered
	4th	Visit various e-governance/Digital India portals, understand their features, services offered.
3rd	1st	Visit various e-governance/Digital India portals, understand their features, services offered.
	2nd	Read Wikipedia pages on computer hardware components, look at those components in lab, identify them, recognize various ports/interfaces and related cables, etc.
	3rd	Read Wikipedia pages on computer hardware components, look at those components in lab, identify them, recognize various ports/interfaces and related cables, etc.
	4th	Read Wikipedia pages on computer hardware components, look at those components in lab, identify them, recognize various ports/interfaces and related cables, etc.
4th	1st	Read Wikipedia pages on computer hardware components, look at those components in lab, identify them, recognize various ports/interfaces and related cables, etc.
	2nd	Read Wikipedia pages on computer hardware components, look at those components in lab, identify them, recognize various ports/interfaces and related cables, etc..
	3rd	Read Wikipedia pages on computer hardware components, look at those components in lab, identify them, recognize various ports/interfaces and related cables, etc...
	4th	Read Wikipedia pages on computer hardware components, look at those components in lab, identify them, recognize various ports/interfaces and related cables, etc..
5th	1st	Install Linux and Windows operating system on identified lab machines, explore various options, do it multiple times.
	2nd	Install Linux and Windows operating system on identified lab machines, explore various options, do it multiple times..
	3rd	Install Linux and Windows operating system on identified lab machines, explore various options, do it multiple times.
	4th	Install Linux and Windows operating system on identified lab machines, explore various options, do it multiple times
6th	1st	Connect various peripherals (printer, scanner, etc.) to computer, explore various features of peripheral and their device driver software
	2nd	Connect various peripherals (printer, scanner, etc.) to computer, explore various features of peripheral and their device driver software
	3rd	Connect various peripherals(printer,scanner,etc)to computer,explore various features of peripheral and their device driver software
	4th	Connect various peripherals(printer,scanner,etc)to computer,explore various features of peripheral and their device driver software
7th	1st	Practice HTML commands, try them with various values, make your own Webpage.
	2nd	Practice HTML commands, try them with various values, make your own Webpage.
	3rd	Practice HTML commands, try them with various values, make your own Webpage.
	4th	Practice HTML commands, try them with various values, make your own Webpage
8th	1st	Practice HTML commands,try them with various values,make your own Webpage.

	2nd	Practice HTML commands,try them with various values,make your own Webpage
	3rd	Practice HTML commands,try them with various values,make your own Webpage.
	4th	Practice HTML commands,try them with various values,make your own Webpage
9th	1st	Explore features of Open Office tools, create documents using these features, do it multiple times
	2nd	Explore features of Open Office tools, create documents using these features, do it multiple times
	3rd	Explore features of Open Office tools, create documents using these features,do it multiple times
	4th	Explore features of Open Office tools, create documents using these features, do it multiple times
10th	1st	Explore security features of Operating Systems and Tools, try using them and see what happens
	2nd	Explore security features of Operating Systems and Tools, try using them and see what happens
	3rd	Explore security features of Operating Systems and Tools, try using them and see what happens
	4th	Explore security features of Operating Systems and Tools, try using them and see what happens
11th	1st	Explore security features of Operating Systems and Tools, try using them and see what happens
	2nd	Record Submission
	3rd	Doubt classes
	4th	Doubt classes
12th	1st	Practice Browser features, browsing, using various search engines, writing search queries
	2nd	Practice to Visit various e-governance/Digital India portals, understand their features, services offered
	3rd	Read Wikipedia pages on computer hardware components, look at those components in lab, identify them, recognize various ports/interfaces and related cables, etc
	4th	Read Wikipedia pages on computer hardware components, look at those components in lab, identify them, recognize various ports/interfaces and related cables, etc
13th	1st	Discussed viva questions on Install Linux and Windows operating system on identified lab machines, explore various options, do it multiple times.
	2nd	Doubt clear on Connecting various peripherals (printer, scanner, etc.) to computer, explore various features of peripheral and their device driver software
	3rd	Practice HTML commands, try them with various values, make your own Webpage.
	4th	Practice HTML commands, try them with various values, make your own Webpage.
14th	1st	Explore features of Open Office tools, create documents using these features, do it multiple times
	2nd	Explore features of Open Office tools, create documents using these features, do it multiple times
	3rd	Explore security features of Operating Systems and Tools, try using them and see what happens
	4th	Explore security features of Operating Systems and Tools, try using them and see what happens
15th	1st	Explore security features of Operating Systems and Tools, try using them and see what happens
	2nd	Explore security features of Operating Systems and Tools, try using them and see what happens
	3rd	Explore security features of Operating Systems and Tools, try using them and see what happens
	4th	Explore security features of Operating Systems and Tools, try using them and see what happens

Khwsi Parmar

Signatureof Faculty

08/01/26.

(HOD)

Hum. & SC.

LESSON PLAN FOR SUMMER SEMESTER(2025-26)

Discipline : 2nd Semester(common)

Name of the Faculty: PADMINI PANIGRAHI (Lect. Stage- II in Mathematics)

Subject: Mathematics-II	4 therory	From: 09/01/2026 To: 08/05/2026 No. of Weeks: 15 Total no. periods : 60 Theory	
Week	Class Day	Theory	Range
1st	1st	UNIT - I: Determinants and Matrices INTRODUCTION, Definition of Determinant	09.01.2026 to 15.01.2026
	2nd	Value/Expansion of Determinants	
	3rd	Minors and Cofactors	
	4th	Properties of Determinants	
2nd	1st	Multiplication of Two Determinants	16.01.2026 to 22.01.2026
	2nd	Nature of System of Linear Equations and Cramer's rule	
	3rd	Homogeneous System of Linear Equations	
	4th	Matrix INTRODUCTION , Types of Matrices	
3rd	1st	ALGEBRA OF MATRICES	23.01.2026 to 29.01.2026
	2nd	The Transpose of a Matrix, Orthogonal Matrix	
	3rd	Symmetric and Skew Symmetric Matrix	
	4th	Inverse of a Matrix	
4th	1st	Symmetric and Skew Symmetric Matrix	30.01.2026 to 05.02.2026
	2nd	Inverse of a Matrix	
	3rd	Matrix Method	
	4th	Matrix Method	
5th	1st	UNIT - II: Integral Calculus , INTRODUCTION	06.02.2026 to 12.02.2026
	2nd	Indefinite integral and its properties	
	3rd	Integration of some standard function	
	4th	integration of some standard function	
6th	1st	Integration By Substitution	13.02.2026 to 19.02.2026
	2nd	Integration by Parts	
	3rd	Integration By Partial Fractions	
	4th	DEFINITE INTEGRALS	
7th	1st	DEFINITE INTEGRALS	20.02.2026 to 26.02.2026
	2nd	USE OF WALLI'S INTEGRAL FORMULA	
	3rd	USE OF WALLI'S INTEGRAL FORMULA	
	4th	APPLICATIONS OF INTEGRATION Area Bounded by a Curve and Axes	
8th	1st	Area Bounded by a Curve and Axes	27.02.2026 to 05.03.2026
	2nd	Volume of a Solid formed by Revolution of an Area about Axes	
	3rd	Volume of a Solid formed by Revolution of an Area about Axes	
	4th	Volume of a Solid formed by Revolution of an Area about Axes	
9th	1st	UNIT - III: Co-Ordinate Geometry, Cartesian Co-ordinates System	06.03.2026 to 12.03.2026
	2nd	UNIT - III: Co-Ordinate Geometry, Cartesian Co-ordinates System	
	3rd	STRAIGHT LINE	
	4th	Equation of Straight Line in Various Standard Forms	

10th	1st	Angle between Two Lines	12.03.2026 to 19.03.2026
	2nd	Distance of Perpendicular from a Point on a Line	
	3rd	Distance between Two Parallel Lines	
	4th	CONCEPT OF CIRCLE, General Equation of Circle	
11th	1st	Find Equation of Circle Given	20.03.2026 to 26.03.2026
	2nd	Find Equation of Circle Given II. Three points lying on it. III. Coordinates of end points of diameter.	
	3rd	CONIC SECTIONS	
	4th	Parabola	
12th	1st	Parabola	27.03.2026 to 02.04.2026
	2nd	Ellipse	
	3rd	Ellipse	
	4th	Hyperbola	
13th	1st	Hyperbola	03.04.2026 to 09.04.2026
	2nd	UNIT - IV: Vector Algebra , Introduction	
	3rd	representation of Vectors	
	4th	ALGEBRA OF VECTORS	
14th	1st	ALGEBRA OF VECTORS	10.04.2026 to 16.04.2026
	2nd	TYPES OF VECTORS	
	3rd	PRODUCT OF TWO VECTORS	
	4th	PRODUCT OF TWO VECTORS	
15th	1st	PRODUCT OF TWO VECTORS	17.04.2026 to 23.04.2026
	2nd	PRODUCT OF TWO VECTORS	
	3rd	UNIT-V: Differential Equations BASIC DEFINITIONS/CONCEPTS	
	4th	UNIT-V: Differential Equations BASIC DEFINITIONS/CONCEPTS	
16th	1st	Order and Degree of a Differential Equation	24.04.2026 to 30.04.2026
	2nd	Solution of an Ordinary Differential Equation	
	3rd	Formation of a Differential Equation Whose General Solution is Given	
	4th	SOLUTION OF FIRST ORDER AND FIRST DEGREE DIFFERENTIAL EQUATION BY VARIABLE SEPARATION METHOD	
17th	1st	MATLAB – AN INTRODUCTION	01.05.2026 to 07.05.2026
	2nd	Salient features of MATLAB	
	3rd	Basics OF MATLAB	
	4th	Advantages & Disadvantaes of MATLAB	
18th	1st	A Few Keyboard Shortcuts for MATLAB	08.05.2026

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GOVT. POLYTECHNIC KALAHANDI BHAWANIPATNA

Lession plan for Engineering workshop pratice

sl no	Discipline-ME	2nd Semester summer 2026	NAME- SUSANTA KUMAR BAG
	Subject : Engineering workshop pratice	No of Days per week class alloted (4 nos)	Semester from Dtae: 09-01-2026 to 08-05-2026 no. of weeks :15
	Week	Class	**Theory/ pratical Topics To be Covered**
1	1st	1st	Demonstration of different wood working tools / machines.
2		2nd	Demonstration of different wood working tools / machines.
3		3rd	Demonstration of different wood working tools / machines.
4		4th	Demonstration of different wood working processes, plaining and marking, .
5	2nd	1st	Demonstration of different wood working processes, plaining and marking, .
6		2nd	Demonstration of different wood working processes, like chiseling and grooving, turning of wood .
7		3rd	Demonstration of different wood working processes, like chiseling and grooving, turning of wood .
8		4th	Demonstration of different wood working processes, like chiseling and grooving, turning of wood .
9	3rd	1st	Demonstration of different wood working process like turning of wood .
10		2nd	Demonstration of different wood working process like turning of wood .
11		3rd	One simple job involving any one joint like mortise and tenon dovetail, bridle, half lap
12		4th	One simple job involving any one joint like mortise and tenon dovetail, bridle, half lap
13	4th	1st	One simple job involving any one joint like mortise and tenon dovetail, bridle, half lap
14		2nd	Demonstration of different fitting tools and drilling machines and power tools .
15		3rd	Demonstration of different fitting tools and drilling machines and power tools .
16		4th	Demonstration of different fitting tools and drilling machines and power tools .
17	5th	1st	Demonstration of different operations like chipping, filing and drilling.
18		2nd	Demonstration of different operations like chipping, filing and drilling.
19		3rd	Demonstration of different operations like chipping, filing and drilling.
20		4th	Demonstration of different operations like, tapping, sawing and cutting .
21	6th	1st	Demonstration of different operations like, tapping, sawing and cutting .
22		2nd	Demonstration of different operations like, tapping, sawing and cutting .
23		3rd	One simple fitting job involving practice of chipping, filing, drilling, tapping, cutting etc .
24		4th	One simple fitting job involving practice of chipping, filing, drilling, tapping, cutting etc .
25	7th	1st	One simple fitting job involving practice of chipping, filing, drilling, tapping, cutting etc .
26		2nd	Demonstration of different welding tools / machines.
27		3rd	Demonstration of different welding tools / machines.
28		4th	Demonstration on Arc Welding, Gas Welding, MIG, MAG welding, gas cutting and rebuilding of broken parts with welding.

29	8th	1st	Demonstration on Arc Welding, Gas Welding, MIG, MAG welding, gas cutting and rebuilding of broken parts with welding.
30		2nd	Demonstration on Arc Welding, Gas Welding, MIG, MAG welding, gas cutting and rebuilding of broken parts with welding.
31		3rd	Demonstration on MIG and MAG welding.
32		4th	Demonstration on MIG and MAG welding.
33	9th	1st	Demonstration on , gas cutting and rebuilding of broken parts with welding.
34		2nd	Demonstration on , gas cutting and rebuilding of broken parts with welding.
35		3rd	One simple job involving lap joint.
36		4th	One simple job involving lap joint.
37	10th	1st	One simple job involving butt joint.
38		2nd	One simple job involving butt joint.
39		3rd	Demonstration of different sheet metal tools / machines.
40		4th	Demonstration of different sheet metal tools / machines.
41	11th	1st	Demonstration of different sheet metal operations like sheet cutting and bending
42		2nd	Demonstration of different sheet metal operations like sheet cutting and bending
43		3rd	Demonstration of different sheet metal operations like sheet edging, end curling, brazing, and riveting.
44		4th	Demonstration of different sheet metal operations like sheet edging, end curling, brazing, and riveting.
45	12th	1st	Demonstration of different sheet metal operations like sheet lancing and soldering, .
46		2nd	Demonstration of different sheet metal operations like sheet lancing and soldering, .
47		3rd	Demonstration of different sheet metal operations like sheet brazing, and riveting.
48		4th	Demonstration of different sheet metal operations like sheet brazing, and riveting.
49	13th	1st	One simple job involving sheet metal operations and soldering and riveting
50		2nd	One simple job involving sheet metal operations and soldering and riveting
51		3rd	Practice on simple lamp circuits
52		4th	Practice on simple lamp circuits
53	14th	1st	one lamp controlled by one switch by surface conduit wiring
54		2nd	one lamp controlled by one switch by surface conduit wiring
55		3rd	Demonstration of measurement of Current, Voltage, Power and Energy.
56		4th	Demonstration of measurement of Current, Voltage, Power and Energy.
57	15th	1st	Demonstration of advance power tools, pneumatic tools, electrical wiring tools and accessories.
58		2nd	Demonstration of advance power tools, pneumatic tools, electrical wiring tools and accessories.
59		3rd	Tools for Cutting and drilling
60		4th	Tools for Cutting and drilling

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GOVT. POLYTECHNIC KALAHANDI BHAWANIPATNA

Lession plan for Engineering workshop pratice

sl no	Discipline CE	2nd Semester summer 2026	NAME-ROHIT KUMAR ROUT
	Subject : Engg. workshop pratice	No of days/per week class alloted :04	Semester from Dtae: 09-01-2026 to 08-05-2026 no. of weeks :15
	Week	Class days	**Theory/ pratical Topics To be Covered**
1	1st	1st	Demonstration of different wood working tools / machines.
2		2nd	Demonstration of different wood working tools / machines.
3		3rd	Demonstration of different wood working tools / machines.
4		4th	Demonstration of different wood working processes, plaining and
5	2nd	1st	Demonstration of different wood working processes, plaining and
6		2nd	Demonstration of different wood working processes, like chiseling and grooving, turning of wood .
7		3rd	Demonstration of different wood working processes, like chiseling and grooving, turning of wood .
8		4th	Demonstration of different wood working processes, like chiseling and grooving, turning of wood .
9	3rd	1st	Demonstration of different wood working process like turning of wood .
10		2nd	Demonstration of different wood working process like turning of wood .
11		3rd	One simple job involving any one joint like mortise and tenon dovetail, bridle, half lap etc.
12		4th	One simple job involving any one joint like mortise and tenon dovetail, bridle, half lap etc.
13	4th	1st	One simple job involving any one joint like mortise and tenon dovetail, bridle, half lap etc.
14		2nd	Demonstration of different fitting tools and drilling machines and power
15		3rd	Demonstration of different fitting tools and drilling machines and power
16		4th	Demonstration of different fitting tools and drilling machines and power
17	5th	1st	Demonstration of different operations like chipping, filing and drilling.
18		2nd	Demonstration of different operations like chipping, filing and drilling.
19		3rd	Demonstration of different operations like chipping, filing and drilling.
20		4th	Demonstration of different operations like, tapping, sawing and cutting .
21	6th	1st	Demonstration of different operations like, tapping, sawing and cutting .
22		2nd	Demonstration of different operations like, tapping, sawing and cutting .
23		3rd	One simple fitting job involving practice of chipping, filing, drilling,
24		4th	One simple fitting job involving practice of chipping, filing, drilling,
25	7th	1st	One simple fitting job involving practice of chipping, filing, drilling,
26		2nd	Demonstration of different welding tools / machines.
27		3rd	Demonstration of different welding tools / machines.
28		4th	Demonstration on Arc Welding, Gas Welding, MIG, MAG welding, gas cutting and rebuilding of broken parts with welding.

29	8th	1st	Demonstration on Arc Welding, Gas Welding, MIG, MAG welding, gas cutting and rebuilding of broken parts with welding.
30		2nd	Demonstration on Arc Welding, Gas Welding, MIG, MAG welding, gas cutting and rebuilding of broken parts with welding.
31		3rd	Demonstration on MIG and MAG welding.
32		4th	Demonstration on MIG and MAG welding.
33	9th	1st	Demonstration on , gas cutting and rebuilding of broken parts with welding.
34		2nd	Demonstration on , gas cutting and rebuilding of broken parts with welding.
35		3rd	One simple job involving lap joint.
36		4th	One simple job involving lap joint.
37	10th	1st	One simple job involving butt joint.
38		2nd	One simple job involving butt joint.
39		3rd	Demonstration of different sheet metal tools / machines.
40		4th	Demonstration of different sheet metal tools / machines.
41	11th	1st	Demonstration of different sheet metal operations like sheet cutting and bending
42		2nd	Demonstration of different sheet metal operations like sheet cutting and bending
43		3rd	Demonstration of different sheet metal operations like sheet edging, end curling, brazing, and riveting.
44		4th	Demonstration of different sheet metal operations like sheet edging, end curling, brazing, and riveting.
45	12th	1st	soldering, .
46		2nd	soldering, .
47		3rd	riveting.
48		4th	riveting.
49	13th	1st	One simple job involving sheet metal operations and soldering and riveting
50		2nd	One simple job involving sheet metal operations and soldering and riveting
51		3rd	Practice on simple lamp circuits
52		4th	Practice on simple lamp circuits
53	14th	1st	one lamp controlled by one switch by surface conduit wiring
54		2nd	one lamp controlled by one switch by surface conduit wiring
55		3rd	Demonstration of measurement of Current, Voltage, Power and Energy.
56		4th	Demonstration of measurement of Current, Voltage, Power and Energy.
57	15th	1st	Demonstration of advance power tools, pneumatic tools, electrical wiring tools and accessories.
58		2nd	Demonstration of advance power tools, pneumatic tools, electrical wiring tools and accessories.
59		3rd	Tools for Cutting and drilling
60		4th	Tools for Cutting and drilling

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Lesson Plan of Engg. Graphics (PR3a) (60 Periods)
Semester & Branch : 2nd Sem Electrical
Session : 2026-Summer

Name of the Teaching Faculty: Ashis Kashyap

Semester from Date: 09.01.2026
To Date: 08.05.2026
No.of Weeks: 17
No. of Days per Week: 4

Chapters	Periods	Week	Class Day	Topics to be covered
Chapter-1 (BASIC ELEMENTS OF DRAWING) (10 Periods)	1	1st	1	•1.1 Drawing Instruments and supporting materials
	2		2	•1.2 Method to use them with applications.
	3		3	•1.3 Convention of lines and their applications
	4		4	•1.4 Representative Fractions – reduced, enlarged and full size scales;
	5	2nd	1	•1.4 Representative Fractions – reduced, enlarged and full size scales;
	6		2	•1.4 Representative Fractions – reduced, enlarged and full size scales;
	7		3	•1.5 Engineering Scales such as plain and diagonal scale.
	8		4	•1.6 Dimensioning techniques as per SP-46:2003
	9	3rd	1	•1.7 types and applications of chain, parallel and coordinate dimensioning.
	10		2	•1.8 Geometrical and Tangency constructions. (Redraw the figure)
Chapter-2 (ORTHOGRAPHIC	11		3	•2.1 Introduction of projections-orthographic, perspective, isometric and oblique: concept and applications.
	12		4	•2.1 Introduction of projections-orthographic, perspective, isometric and oblique: concept and applications.
	13	4th	1	•2.1 Introduction of projections-orthographic, perspective, isometric and oblique: concept and applications.
	14		2	•2.2 Introduction to orthographic projection, First angle and Third angle method, their symbols.
	15		3	•2.2 Introduction to orthographic projection, First angle and Third angle method, their symbols.

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(ORTHOGRAPHIC PROJECTIONS) (10 Periods)	16		4	•2.2 Introduction to orthographic projection, First angle and Third angle method, their symbols.
	17	5th	1	•2.3 Conversion of pictorial view into Orthographic Views – object containing plain surfaces, slanting surfaces, slots, ribs, cylindrical surfaces
	18		2	•2.3 Conversion of pictorial view into Orthographic Views – object containing plain surfaces, slanting surfaces, slots, ribs, cylindrical surfaces
	19		3	•2.3 Conversion of pictorial view into Orthographic Views – object containing plain surfaces, slanting surfaces, slots, ribs, cylindrical surfaces
	20		4	•2.3 Conversion of pictorial view into Orthographic Views – object containing plain surfaces, slanting surfaces, slots, ribs, cylindrical surfaces
Chapter-3 (ISOMETRIC PROJECTIONS) (10 Periods)	21	6th	1	•3.1 Introduction to isometric projections. Isometric scale and Natural scale.
	22		2	•3.1 Introduction to isometric projections. Isometric scale and Natural scale.
	23		3	•3.2 Isometric view and isometric projection.
	24		4	•3.2 Isometric view and isometric projection.
	25	7th	1	•3.3 Illustrative problems related to objects containing lines, circles and arcs shape only.
	26		2	•3.3 Illustrative problems related to objects containing lines, circles and arcs shape only.
	27		3	•3.3 Illustrative problems related to objects containing lines, circles and arcs shape only.
	28		4	•3.4 Conversion of orthographic views into isometric view/projection
	29	8th	1	•3.4 Conversion of orthographic views into isometric view/projection
	30		2	•3.4 Conversion of orthographic views into isometric view/projection
	31		3	•4.1 Free hand sketches of machine elements: Thread profiles, nuts, bolts, studs, set screws, washer, Locking arrangements.
	32		4	•4.1 Free hand sketches of machine elements: Thread profiles, nuts, bolts, studs, set screws, washer, Locking arrangements.
	33	9th	1	•4.1 Free hand sketches of machine elements: Thread profiles, nuts, bolts, studs, set screws, washer, Locking arrangements.
	34		2	•4.1 Free hand sketches of machine elements: Thread profiles, nuts, bolts, studs, set screws, washer, Locking arrangements.

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Chapter-4 (FREE-HAND SKETCHES OF ENGG. ELEMENTS) (10 Periods)	35		3	•4.1 Free hand sketches of machine elements: Thread profiles, nuts, bolts, studs, set screws, washer, Locking arrangements.
	36		4	•4.2 Free hand sketches of orthographic view (on squared graph paper) and isometric view (on isometric grid paper)
	37	10th	1	•4.2 Free hand sketches of orthographic view (on squared graph paper) and isometric view (on isometric grid paper)
	38		2	•4.2 Free hand sketches of orthographic view (on squared graph paper) and isometric view (on isometric grid paper)
	39		3	•4.2 Free hand sketches of orthographic view (on squared graph paper) and isometric view (on isometric grid paper)
	40		4	•4.2 Free hand sketches of orthographic view (on squared graph paper) and isometric view (on isometric grid paper)
Chapter-5 (COMPUTER AIDED DRAFTING INTERFACE) (10 Periods)	41	11th	1	•5.1 Computer Aided Drafting: concept.
	42		2	•5.2 Hardware and various CAD software available.
	43		3	•5.3 System requirements and Understanding the interface.
	44		4	•5.4 Components of AutoCAD software window: Title bar, standard tool bar, menu bar, object properties tool bar, draw tool bar, modify tool bar, cursor cross hair
	45	12th	1	•5.4 Components of AutoCAD software window: Title bar, standard tool bar, menu bar, object properties tool bar, draw tool bar, modify tool bar, cursor cross hair
	46		2	•5.4 Components of AutoCAD software window: Title bar, standard tool bar, menu bar, object properties tool bar, draw tool bar, modify tool bar, cursor cross hair
	47		3	•5.5 Command window, status bar, drawing area, UCS icon.
	48		4	•5.5 Command window, status bar, drawing area, UCS icon.
	49	13th	1	•5.6 File features: New file, Saving the file, Opening an existing drawing file, Creating templates, Quit.

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	50		2	•5.7 Setting up new drawing: Units, Limits, Grid, Snap. Undoing and redoing action
Chapter-6 (COMPUTER AIDED DRAFTING) (10 Periods)	51		3	•6.1 Draw basic entities like Line, Circle, Arc, Polygon, Ellipse, Rectangle, Multiline, PolyLine.
	52		4	•6.1 Draw basic entities like Line, Circle, Arc, Polygon, Ellipse, Rectangle, Multiline, PolyLine.
	53	14th	1	•6.2 Method of Specifying points: Absolute coordinates, Relative Cartesian and Polar coordinates.
	54		2	•6.3 Modify and edit commands like trim, extend, delete, copy, offset, array, block, layers.
	55		3	•6.3 Modify and edit commands like trim, extend, delete, copy, offset, array, block, layers.
	56		4	•6.4 Dimensioning: Linear, Horizontal Vertical, Aligned, Rotated, Baseline, Continuous, Diameter, Radius, Angular Dimensions.
	57	15th	1	•6.5 Dim scale variable. Editing dimensions.
	58		2	•6.6 Text: Single line Text, Multiline text.
	59		3	•6.7 Standard sizes of sheet. Selecting Various plotting parameters such as Paper size, paper units,
	60		4	•6.8 Drawing orientation, plot scale, plot offset, plot area, print preview.
Revision and Previous Year Question Paper	61	16th	1	Chapter-1 Revision (BASIC ELEMENTS OF DRAWING) Previous Year Question Practice
	62		2	Chapter-2 Revision (ORTHOGRAPHIC PROJECTIONS) Previous Year Question Practice
	63		3	Chapter-3 Revision (ISOMETRIC PROJECTIONS) Previous Year Question Practice
	64		4	
	65	17th	1	Chapter-4 Revision (FREE-HAND SKETCHES OF ENGG. ELEMENTS) Previous Year Question Practice
	66		2	Chapter-5 Revision (COMPUTER AIDED DRAFTING INTERFACE) Previous Year Question Practice
	67		3	Chapter-6 Revision (COMPUTER AIDED DRAFTING) Previous Year Question Practice
	68		4	

Tehsib Kashyap.
(G.F, Civil Dept.)

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