ARKA JAIN University
Jharkhand
Estd. Under Jharkhand State Private University Act

Detail Syllabus of

Diploma in Computer Science Engineering

1st Semester

w.e.f - 2017-18

Diploma in Computer Science Engineering

(CBCS) Semester Scheme

1. Title:

The degree shall be titled as Diploma in Engineering of Computer Science Branch **(DECS)**.

2. Objectives:

On the successful completion of the Diploma in Computer Science Engineering will be able:

- To provide employment to the students in the IT Sector
- To develop critical thinking, creativity and personal integrity

3. Duration:

The Course shall be a full time course and the duration of the course shall be of three years (Six Semester).

4. Eligibility:

- A candidate for being eligible for admission to the Diploma/Polytechnic programmer in Computer Science Engineering shall have passed 10th Std. Examination (S.S.C.)

5. Medium of instruction: Medium of instruction shall be in English only.

6. Method of Evaluation:

a) Marks assessment for Theory Paper

Total Marks-100

End Term Exam – 70 Marks, Continuous Internal Assessment – 30 Marks

Sl. No.	Evaluation type	Marks
1	Mid-Term Test (subjective/objective)	20
2	Two Assignments/Class Test	5
3	Classroom attendance	5

b) Marks Assessment for Practical Paper

Total Marks-50

End Term Exam/External Exam – 35 Marks, Continuous Internal Assessment – 15 Marks

External assessment-

Sl. No.	Evaluation type	Marks
1	Viva-voce	20
2	Practical Evaluation at the time of practical Examination	10
3	Practical Notebook	5

Internal Assessment-

Sl. No.	Evaluation type	Marks
1	Viva-voce	5
2	Practical Notebook in case of Practical Paper	5
3	Classroom attendance	5

7. 1st Semester – Scheme of Study

Sl No.	Code	Subject	Modules	Max Marks	Pass %	Credit(s)
1	**PT4016**	Communication Skills in English	5	100	40%	3
2	**PT5001**	Engineering Maths-1	5	100	40%	4
3	**PT5002**	Applied Science	5	100	40%	4
4	**PT5003**	Engineering Graphics	5	100	40%	3
5	**PT5004**	Basic Computer Skills	5	100	40%	3
6	**PT5005**	Applied Science Lab	5	50	40%	1
7	**PT5006**	Engineering Graphics Lab	5	50	40%	2
8	**PT5007**	Basic Computer Skills Lab	5	50	40%	1
9	**PT5008**	Workshop Practice –I	5	50	40%	3
						24

SUBJECT	**COMMUNICATION SKILLS IN ENGLISH**
CODE	**PT4016**
CREDITS	**3**
OBJECTIVE:	To introduce students to the understanding of English language and its usage in their field of engineering. It helps the students to enhance their ability to read, write and speak English well.
EVALUATION	End Term Evaluation – **70 Marks** I CIA - **30 Marks**
MODULE(S)	**TOPIC(S)**
1	**CAREER PLANNING** **8 Lectures**
	Glossary, Comprehension Exercises, Vocabulary Exercises – Spelling, Grammar- Parts of Speech, Newspaper Reading and Comprehension, Descriptive Writing – Describing Objects, Listening/ Speaking Exercise – Self Introduction.
2	**THE GREAT INDIAN PSYCHOTHERAPY** **9 Lectures**
	Glossary, Comprehension Exercises, Vocabulary Exercises – Prefixes and Suffixes, Grammar – Articles and Prepositions, Descriptive Writing – Describing People, Listening/ Speaking Exercises – Listening to speeches and writing gist of it in one's own words.
3	**GLOBAL WARMING** **8 Lectures**
	Glossary, Comprehension Exercises, Vocabulary Exercises – Synonyms and Antonyms, Grammar – Auxiliaries, Question Tags and Short-form Answers, Descriptive Writing – Describing Places, Listening/ Speaking Exercises – Narrating one's own experiences of different situations in their day- to-day life.
4	**RENDEZVOUS WITH A WOMAN CORPORATE GIANT** **8 Lectures**
	Glossary, Comprehension Exercises, Vocabulary Exercises – Homonyms, Homophones, Homographs, Grammar – Subject-Verb Agreement, Descriptive Writing – Describing Processes, Listening/ Speaking Exercises – A short presentation on a given topic, Paraphrasing of Proverbs, Different kinds of Interviews.
5	**A UNIQUE PATIENT & A FARMER'S WIFE** **12 Lectures**
	Glossary, Comprehension Exercises, Vocabulary Exercises – Compound words, Grammar – Tenses, Descriptive Writing – Describing Events (Eg: College Day, National Festivals, Etc.), Comprehension of a paragraph, Quiz – Questions on health and hygiene. Glossary, Comprehension Exercises, Vocabulary Exercises – Formation of plurals, Grammar – Active and Passive Voices, Descriptive Writing – Describing one's goal and its attainment, Developing hints into a paragraph, Comprehension of an unseen passage.
Text Books:	Communication Skills in English for Polytechnics– ORIENT BLACKSWAN publishers – published by NITTTR Chennai

Ref Books :	1	HIGH SCHOOL ENGLISH GRAMMAR AND COMPOSITION- WREN AND MARTIN (S.CHAND &CO.)
	2	THE KING'S GRAMMAR- SANJAY KUMAR SINHA (S.CHAND & CO.)

SUBJECT	**ENGINEERING MATHS-1**
CODE	**PT5001**
CREDITS	**4**
OBJECTIVE	To introduce students to the mathematics models are used to understand predict and optimized Engineering systems, many of these systems are deterministic and analysed using Probability and statistics.
EVALUATION	End Term Evaluation – **70 Marks** I CIA - **30 Marks**
MODULE(S)	**TOPIC(S)**
1	**MATRICES AND DETERMINANTS** **9 Lectures**
	Matrices: Basic concepts of matrices: Definition, types of matrices and mathematical operations on matrices (addition, subtraction and multiplication of matrices). **Determinant:** Definition, problems on finding the determinant value of 2^{nd} and 3^{rd} order. Problems on finding unknown quantity in a 2^{nd} and 3^{rd} order determinants using expansion. Solving simultaneous linear equations using determinant method (Cramer's rule up to 3^{rd} order). **Inverse and applications of matrices:** Minors and Cofactors of elements of matrix. Adjoin and Inverse of matrices of order $2^{nd}$and 3^{rd} order. Elementary row and column operations on matrices. Characteristic equation and characteristic roots (Eigen values) of 2x2 matrix. Statement of Cayley-Hamilton theorem and its verification for 2x2 matrixes.
2	**VECTORS** **8 Lectures**
	Definition of vector. Representation of vector as a directed line segment. Magnitude of a vector. Types of vectors. Position vector. Expression of vector by means of position vectors. Addition and subtraction of vectors in terms of line segment. Vector in plane and vector in a space in terms of unit vector i, j and k respectively. Product of vectors. Scalar product and vector product of two vectors. Geometrical meaning of scalar and vector product. Applications of dot (scalar) and cross (vector) products. Projection of a vector on another vector. Area of parallelogram and area of triangle. Work done by force and moment of force.
3	**PROBABILITY,STATISTICS AND LOGARITHMS** **8 Lectures**
	Probability: Introduction. Random experiments: outcomes and sample space. Event: Definition, occurrence of an event, types of events. Algebra of events- complementary event, the events A or B, A and B, A but not B, mutually exclusive events, exhaustive events, defining probability of an event. Addition rule of probability. **Statistics:** Measure of dispersion; mean deviation, variance and standard deviation of ungrouped/grouped (Simple Problems). **Logarithms:** Definition of common and natural logarithms. Laws of logarithms (no proof). Simple problems on laws of logarithms.
4	**ALLIED ANGLES,COMPOUND ANGLES and COORDINATE GEOMETRY** **14 Lectures**
	Allied angles: Meaning of allied angle. Signs of trigonometric ratios. Trigonometric ratios of allied angles in terms of θ. Problems on allied angles. **Compound angles:** Write the formulae for sin(A-B), cos(A-B) and tan(A-B), problems. Multiple and submultiple angle formulae for 2A and 3A. Simple problems. Transformation formulae. Expression for sum or difference of sine and cosine of angles into product form. Expression for product of sine and cosine of angles into sum or differences form. **Straight lines:** Different forms of equations of straight lines: $y = mx + c, y - y_1 = m(x - x_1), y - y_1 = \left(\frac{y_2 - y_1}{x_2 - x_1}\right)(x - x_1)$. General equation of a line$ax + by + c = o$ (graphical representation and statements) and problems on above equations. Equation of lines through a point and parallel or

	perpendicular to a given line. Problems. **Conic Section:** Definition of conic section. Definition of axis, vertex, eccentricity, focus and length of latus rectum. Geometrical representation of parabola, ellipse and hyperbola: Equations of parabola$y^2 = 4ax$, Equation of ellipse$\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$and Equation of hyperbola $\frac{x^2}{a^2} - \frac{y^2}{b^2} = 1$(without proof of above 3equations). Equations of parabola, ellipse and hyperbolawith respect to x-axis as axis of conic.Finding axes, vertices, eccentricity, foci and length of lattice rectum of conics. Problem son finding the above said equations with direct substitution
5	**COMPLEX NUMBERS** **9 Lectures**
	Meaning of imaginary number i and its value. Definition of complex number in the form of $a + ib$.Argand diagram of complex number$a + ib$ (Cartesian system). Equality of complex numbers.Conjugate of complex number. Algebra of complex numbers, modulus of complex number, principal value of argument of complex number, polar form: $Z = r(cos\theta + i\ sin\theta)$ and exponential form $Z = re^{i\theta}$of complex number, where r is modulus and θ is principal value of argument of complex number.
Ref Books : 1	NCERT Mathematics Text books of class XI and XII.
2	CBSE Class Xi & XII by Khattar & Khattar published PHI Learning Pvt. ltd.,
3	First and Second PUC mathematics Text Books of different authors.

SUBJECT	**APPLIED SCIENCE**
CODE	**PT5002**
CREDITS	**4**
OBJECTIVE	Applied science is a discipline that is used to apply existing scientific knowledge to develop more practical applications. For example technology, inventions. For polytechnic student it will help to understand technology behind machines, industries etc.
EVALUATION	End Term Evaluation – **70 Marks** I CIA - **30 Marks**
MODULE(S)	**TOPIC(S)**
1	**MECHANICS** **7 Lectures**
	Units and Measurements: Definition of unit, types of unit (fundamental and derived)
	SI units: Definition, Basic and supplementary units, advantages.
	Measuring Instruments: Venire callipers, principle and least count, diagram of venire callipers with labelling the parts. Screw gauge (pitch, ZE, ZC), principle and least count, diagram of screw gauge with labelling the parts, simple problems.
	Scalars and Vectors: Definition of scalar and vector with examples, representation of a vector, definition of resultant, equilibrium and equilibrant. Laws of vectors: Statement of law of parallelogram of forces, Converse law of triangle of forces, Lami's theorem. Deriving an expression for magnitude and direction of resultant of two vectors acting at a point. Resolution of vectors, mentioning rectangular component of resolution of vector. Experimental verification of law of parallelogram of forces, Converse law of triangle of forces, Lami's theorem. Simple problems on laws of vectors
	Parallel forces. Types of parallel forces, Moment of force: definition, S.I unit, types and examples. Couple: definition with examples. Moment of a couple. Conditions of equilibrium of coplanar parallel forces, applications. Experimental verification of Conditions of equilibrium of coplanar parallel forces using moment bar and simple problems.
2	**PROPERTIES OF SOLIDS AND LIQUIDS** **7 Lectures**
	Properties of solids: Definitions of deforming force, elasticity and plasticity, examples for elasticity and plasticity, definition of stress and its types with examples and its S.I unit, definition of strain and its types with examples, elastic limit, Hooke's law, stress - strain graph with explanation. Module of elasticity and its types, derivation of an expression for Young's modulus of a material. Definition of Compressibility and factor of safety. Simple problems on stress, strain and Young's modulus.
	Properties of liquids: Definition of thrust and pressure with S.I units. Derivation of expression for pressure at a point inside the liquid at rest, simple problems. **Energy of liquid in motion:** Kinetic, Potential energies and Pressure energy in moving liquid. Bernoulli's theorem: statement and expression (No derivation). Cohesive and adhesive forces, angle of contact.
	Surface Tension: Definition of surface tension and its S.I unit, factors affecting surface tension, applications of surface tension, capillarity and its applications.
	Viscosity: Types of flow of liquid, definition of stream line flow and turbulent flow, definition of viscosity, expression for coefficient of viscosity, experimental determination of coefficient of viscosity of water, effect of temperature on viscosity. List of applications of viscosity. Simple problems.
3	**HEAT AND PROPERTIES OF GASES** **8 Lectures**

	Concept of heat & temperature: Definitions of heat and temperature with S.I units, definition of Specific heat of substance with S I unit, equation for specific heat of a substance (no derivation).
	Transmission of heat: Definitions of conduction, convection and radiation with examples, definition of thermal conductivity, derivation of co-efficient of thermal conductivity (K) and its S.I unit. Applications of conduction, convection and radiation, simple problems on K.
	Gas laws: Statement of Boyle's law, Charle's law, Gay-Lussac's law, derive the relation between them (PV=nRT), definition of C_p and C_v, relation between them (Mayer's equation no derivation), simple problems on Boyle's law and Charle's law.
	Thermodynamics: Definition of thermodynamics, Laws of thermodynamics: Zeroth law, I^{st}law and II^{nd}law (only statement), types of thermodynamics process: isothermal process, adiabatic process.
4	**WAVE MOTION AND MODERN PHYSICS** **12 Lectures**
	Simple Harmonic Motion: Definition of periodic motion with example, definition of Simple Harmonic Motion, representation of S.H.M with respect to particle in circular motion, derivation of displacement of a particle executing S.H.M. Definitions of period, frequency, amplitude, in case of vibrating particle.
	Wave: Definition of wave, wave period(T), wave frequency (n or f), wave amplitude (a), Wave length (λ) and wave velocity (v) in case of wave motion. Derive the relation between v, n and λ. Simple problems.
	Types of waves: Mechanical and Non mechanical waves with examples. Definition of longitudinal and transverse waves, differences.
	Propagation of sound waves in air: Newton's formula for the velocity of sound in air and Laplace's correction to it, various factors affecting velocity of sound in air. Simple problems.
	Vibrations: Free vibrations, Forced vibration, Damped vibrations and Un-damped vibrations with examples. Resonance with examples. Laws of transverse vibrations of stretched string, derivation of equation for fundamental frequency of vibrations of stretched string. Simple problems. Experiment to determine the unknown frequency of a given tuning fork by absolute and comparison methods using sonometer.
	Stationary waves: Formation of stationary waves and their characteristics. Experimental determination of velocity of sound in air by using resonance air column apparatus.
	Beats: Formation of Beats, definition of beat frequency, its applications.
	Electromagnetic waves: Definition, generation of electromagnetic waves and their properties.
	Electromagnetic spectrum: Definition, classification and its applications.
	Lasers: Principle and listing the types of Laser, properties of Laser, applications.
	Nano-Technology: Definition of Nano-Technology, advantages and dis-advantages of Nano-Technology.
	Satellite communication: Introduction, advantages and disadvantages,
	Optical fibre: principle and applications.
	INDUSTRIAL CHEMISTRY **8 Lectures**
	Electrolysis: Definition of electrolyte, types of electrolytes with examples, definition of electrolysis. Arrhenius theory of electrolytic dissociation. Mechanism of Electrolysis. Faradays laws of Electrolysis: state and explain.
5	**Corrosion:** Definition, necessary conditions for corrosion, electrochemical theory of corrosion, list the preventive methods of corrosion.

	Batteries: Basic concept, classification and applications of batteries.
	Metallurgy: Definitions of minerals, ore, flux, slag, alloys. Purpose of making alloys, composition and uses of alloys.
	Polymers: Definition and classification of polymers, methods of polymerization and applications.
	Composite materials: Definition, types, advantages and dis-advantages of composite materials.
	Solutions: Definition of solute, solvent, solutions. Saturated and unsaturated solutions, concentration of solutions: normal, molar and molal solutions, simple problems on concentration of solution.
	PH Value: Hydrogen ion concentration and concept of pH, definition of pH of solution, pH scale, applications of pH in different fields.
Ref Books : 1	Principle of physics for class XI and XII by V.K.Mehata and Rohit Mehta, as per Karnataka state PUC syllabus S.Chand and Company, New Delhi
2	Engineering chemistry for Diploma by Ranjan Kumar Mahapatra(PHI Learning Pvt. Ltd., New Delhi)
3	Basic Physics by Kongbam Chandramani Singh (PHI Learning Pvt. Ltd., New Delhi)
4	Principle of physics by P.V.Naik (PHI Learning Pvt. Ltd. New Delhi)

SUBJECT	**ENGINEERING GRAPHICS**
CODE	**PT5003**
CREDITS	**3**
OBJECTIVE	Engineering graphics provide the fundamental knowledge and skills required for many career opportunities.
EVALUATION	End Term Evaluation – **70 Marks** I CIA - **30 Marks**
MODULE(S)	**TOPIC(S)**
1	**Introduction To Engineering Drawing, Lettering Practice, Dimensioning practice and construction of scales** **12 Lectures**
	Drawing Instruments. Standard Sizes of Drawing sheets-Layout of drawing sheets. Types of lines and their applications. Different types of lettering as per I.S.I. uppercase letters of vertical and slanting type as per I.S.I Numerical figures of vertical and slanting type as per I.S.I. Introduction to Dimensioning, Elements of Dimensioning, Systems of Dimensioning, Methods of arrangements of Dimensioning. Dimensioning of common features like diameters, radii, arcs and chords. Dimensioning of simple engineering Objects. Introduction of different types of scales. Construction of Plain and diagonal scale.
2	**Geometrical constructions and conic sections** **9 Lectures**
	Drawing of tangents to circles and arcs, Drawing a common tangent of given arcs to circles of equal or unequal radii. Inscribing a circle in a regular polygon -Inscribing circles touching each side of a regular polygon and its two adjacent circles. Inscribing circles touching two sides of polygon and two other circles Introduction to conic sections-Types of conic section Construction of ellipse by Intersecting lines method (Rectangular and parallelogram methods) and Concentric circles method Construction of parabola by rectangle method, parallelogram method and tangential method.
3	**Orthographic projection and projection of points** **9 Lectures**
	Introduction to orthographic projection-Principal planes of projection- Four Quadrants-Concept of First angle & Third angle projection methods- Projection of points in all the four quadrant system.
4	**Projection of lines and plane surfaces** **21 Lectures**
	Projection of lines – Line Parallel to both HP and VP, Line parallel to one plane and Perpendicular to other-Line parallel to one plane and Inclined to the other, Line inclined to both HP and VP. Projection of plane Surfaces -Construction of polygons Plane surface parallel to one plane and Perpendicular to other two – Plane surface Perpendicular to one plane and inclined to the other- Plane surface inclined to both HP and VP
5	**Isometric Projections** **15 Lectures**
	Principles of isometric Views Isometric views of simple solids – cube – prisms, pyramids, cylinder and cone. Conversion of orthographic views into isometric View Drawing of Isometric views of combination of solids
Text Books: 1	1. K.R.Gopalakrishna, "Fundamentals of Drawing" , Subhas Publications, 2010.

	2	K.R.Gopalakrishna, “Engineering Drawing” (Vol. I & II), Subhas Publications, 2014
Ref Books :	1	R.K. Dhawan, “A text book of Engineering Drawing”, S.Chand Publishers, Delhi, 2010.
	2	G.S. Phull and H.S.Sandhu, “Engineering Graphics”, Wiley Publications, 2014.
	3	K.Venugopal and V.Prabhu Raja, “Engineering Graphics”, New Age International Private Limited, 2008
	4	M.B.Shah and B.C.Rana, “Engineering Drawing”, Pearson Education, 2005.
	5	N D BHATT, Charotar Publishing House Pvt. Ltd.

SUBJECT	**BASIC COMPUTER SKILLS**
CODE	**PT5004**
CREDITS	**3**
OBJECTIVE	The objective of the course is to provide student with basic knowledge of computers: Hardware & Software
EVALUATION	End Term Evaluation – **70 Marks** I CIA - **30 Marks**
MODULE(S)	**TOPIC(S)**
1	**INTRODUCTION** **9 Lectures**
	Computer, Functional part of computers, Hardware and software, Computer Language and language processor, Advantages and disadvantages of computers. Computer Hardware: Input unit: keyboard and mouse Output unit: monitor Memory: primary memory (RAM and ROM) and secondary memory
2	**INTRODUCTION TO WINDOWS** **9 Lectures**
	My computer, recycle bin, status bar, Start and Menu Selection, Creating and rename of files and folders, copy, paste, moving files , opening and closing of different windows.
3	**WORD PROCESSOR** **9 Lectures**
	Introduction: Opening, the menu bar, using help menu, using icons below menu bar
	Text creation and manipulation: paragraph setting, text selection, cut copy paste, front and size selection, Alignment of Text- Centre, left, right and justify
	Formatting the text: changing font size and colour, Bullets and numbering using tab and tan setting.
	Table creation: rows, columns and cell, Drawing table, Alignment of text in cell, delete insertion of rows and columns. Borders for tables.
4	**SPREAD SHEET** **9 Lectures**
	Application usage of Electronic spread sheet, the menu bar, Creation of cells and addressing of cells, cell input. Manipulation of cells: Enter text numbers and dates creation of tables, copying of cells. Providing formulas: Using basic functions of cell: sum, max, min, Average and percentage.
5	**POWER POINT** **9 Lectures**
	Difference between presentation and documents, opening a power point presentation. Create a presentation: Title, Text Creation: Fonts and size, Bullets ,moving to next slides ,Presentation of slides: Selection of types of slides, importing text from word document, Moving to next slide, slide design, background and text colors, slide show and presentation
Ref Books:	Computer Fundamentals Concepts, Systems, Application, D.P.Nagapal, S.Chand Publication, RP-2014, ISBN: 81-219-2388-3

SUBJECT	APPLIED SCIENCE LAB
CODE	PT5005
CREDITS	1
OBJECTIVE	To understand the concept and procedure of applied science clearly.
EVALUATION	External Evaluation – **35 Marks** I CIA - **15 Marks**
LIST OF PRACTICALS	
1	To determine the volume of a solid cylinder using venire calliper.
2	To determine the volume of a hollow cylinder using venire calliper.
3	To determine the thickness of the glass and metal plate, using screw gauge (micrometre).
4	To verify experimentally the law of parallelogram of forces.
5	To verify experimentally the law of converse of triangle of forces.
6	To verify experimentally the Lami's theorems.
7	To determine the velocity of sound in air at room temperature and at 0 C by using Resonance Air Column method.
8	To find the time period of a simple pendulum for small amplitudes and draw the graph of length of the pendulum against square of the time period. Use the graph to find the length of the second's pendulum.
9	To determine viscosity of the given liquid.
10	To determine strength of a given solution of hydrochloric acid by titrating it against standard Na2CO3 solution.
11	To determine the strength of a given solution of sodium hydroxide by titrating it against the standard solution of oxalic acid.

SUBJECT	ENGINEERING GRAPHICS LAB
CODE	PT5006
CREDITS	2
OBJECTIVE	Engineering graphics provide the fundamental knowledge and skills required for many career opportunities.
EVALUATION	External Evaluation – **35 Marks** I CIA - **15 Marks**
LIST OF PRACTICALS	
1	Layout of drawing sheet
2	Lettering as per ISI
3	Dimensioning Practice
4	Construction of plain and diagonal scale
5	Geometrical construction
6	Projection of points
7	Projection of lines
8	Projection of plane
9	Isometric Projection

SUBJECT	**BASIC COMPUTER SKILLS LAB**
CODE	**PT5007**
CREDITS	**1**
OBJECTIVE	The objective of this lab is to provide practical knowledge to the students about the basics of Hardware & Software's, Internet, Email and to solve exercise using application tools
EVALUATION	External Evaluation – **35 Marks** I CIA - **15 Marks**
LIST OF PRACTICALS	
1	To Understand and identify front panel switches and back panel connection and physical components of computer
2	Create icons ,folders, Creating/Opening of files, Editing and saving the documents, Copy, Cut and paste operation with built in utilities of OS like- Text Editors, paint etc.
3	(A) Practice browsing of different sites using different search engines (B) Practice Creating E-mail accounts, Sending and receiving of E-mails
4	Using Word processor create a Business or personal letter of application using italics, Bold, font, Paragraph etc.
5	Using word processor creates a company letter head using tables, text Box, pictures and backgrounds.
6	Using word processor Create simple newsletter using 2 columns ,Drop cap, pictures etc.
7	Using word processor Create a resume using bullets lines, tables etc.
8	Using word processor Create a time table for class
9	Using word processor Create the cover page of the project report using Word Art, Insert picture image
10	Using Spread sheet Create a Worksheet with 10 columns , Each columns for serial name, Registration number, Student name and one column for student record and find the sum of all columns and rows
11	Create a result sheet candidates registration number, name for all courses, Total marks, Percentage and Result.
12	Using worksheet sheet create a simple bar chart and pie chart
13	Create a presentation using 6 slides
14	Create automated presentation six slides with timings and animation

SUBJECT	**WORKSHOP PRACTICE -1**
CODE	**PT5008**
CREDITS	**1**
OBJECTIVE	The objective of this lab is to make students familiar with industry practices and help them understand the basics of working in a workshop
EVALUATION	External Evaluation – **70 Marks** I CIA - **30 Marks**
LIST OF PRACTICALS	
PRACTICAL EXERCISE IN FITTING SECTION	
1	Introduction of instruments used in workshop
2	To prepare a mild steel plate 40mm with right angle and dimension
3	To prepare a job of 10mm*20mm height as per the given dimension with Chamfer 2*45 degree all the four corner of the plate
4	To practice of Hack sawing
5	To Prepare Radius filling and use of spring device, radius gauge
6	To Prepare a job with hack sawing cutting in angle and checking by bevel gauge
7	To Prepare a job with Fitting square as per the given dimensions
8	To prepare a “v” type fitting with mild steel plates as per dimension
9	Marking by height gauge, use of surface plate, L Block. Prepare the work piece for marking & Drilling
10	Letter punching and number punching on job
PRACTICAL EXERCISE IN CARPENTRY SHOP	
1	Butt Joints
2	“T” Lap Joints
3	Cross Lap Joints
4	Mortise and Tennon Joints