C. U. SHAH UNIVERSITY

FACULTY OF: -Technology & Engineering
DEPARTMENT OF: -Humanities
SEMESTER: - II **CODE**: -DEHM201
NAME – Advance Mathematics (AM)

Teaching & Evaluation Scheme:-

Subject Code	Name of the Subject	Teaching Scheme				Evaluation Scheme								
						Theory					Practical (Marks)			
		Th	Tu	Pr	Total	Sessional Exam		University Exam		Total	Pr/ Viva	TW	Total	Total
						Marks	Hours	Marks	Hours					
DEHM201	Advance Mathematics (AM)	2	2	0	4	30	1.5	70	2.5	100	30	20	50	150

Objectives: -

- Proficiency in Basic Mathematical tools
- Understanding the new basic concepts
- Apply the concepts and principles of mathematics to solve simple engineering problems

Prerequisites: -

- Addition, Subtraction, Multiplication, Division, Factorizations, Expansions and Trigonometric ratios.

Course Outlines:-

Sr. No.	Course Contents	Number of hours
1	**Co ordinate Geometry:** **Point:** Distance formula for R^2, Circum centre of a triangle, Area of triangle, Midpoint, Locus of a point. **Straight line:** Equation of straight line in R^2, Slope of a Straight line, Intercepts on axis, Angle between two Straight lines, Forms of equation of Straight lines: Slope point form, Two point form, Intercept form, parallel and perpendicular lines **Circle:** Equation of circle: Standard equation, General equation, Centre radius form, Formation of equation of circle, Tangent and normal	16
2	**Function and Limit:** Concept of function, Examples of function, Concept and rules of limit, Standard formulae and related examples	14
3	**Differentiation:** Definition and related examples, Rules of sum, product, quotient of	16

	functions, Chain rule, Derivative of Implicit functions, Derivative of parametric functions, Logarithmic differentiation, Successive differentiation up to second order, Application (Velocity, Acceleration, Maxima and Minima)	
4	**Integration:** Concept, Integral of standard functions, Rules of integration, Evaluation of simple indefinite integrals, Integration by parts, Integration by substitution, Definite Integral and its properties, Solution of simple problems of definite integral, Application (Area and Volume of circle, parabola and ellipse only)	14

Learning Outcomes:-

- Find the distance between two points, use midpoint formula for quadrilateral.
- Find the equation of locus using distance formula.
- Find the equation of line using the different forms.
- Find the equation of circle.
- Find Tangent and Normal to the circle.
- Solve the problem using functions.
- Solve the problem of function using the concept of Limit.
- Differentiate the various functions.
- Apply the differentiation to Velocity, Acceleration and Maxima & Minima.
- Integrate the various functions.
- Apply the integration for finding Area and Volume.

Books Recommended:-

1. "Polytechnic mathematics" , **D. S. Prakash** ,S. Chand company ltd.
2. "Polytechnic Mathematics" , **S. P Deshpande ,** Pune Vidyarthi Gruh Prakashan, 1984
3. "Engineering Mathematics(third edition)" , **Anthony croft and others** , Pearson Education,2012
4. "Advanced Mathematics for polytechnic", **N. R. Pandya** , Macmillan Publishers India Ltd., 2012
5. "Applied Mathematics – I", **W. R. Neelkanth** ,Sapna Publication

C. U. SHAH UNIVERSITY

FACULTY OF: -Technology & Engineering
DEPARTMENT OF: -Humanities
SEMESTER: -__II__ **CODE**: -DEHM202
NAME – Professional Communication Skills

Teaching & Evaluation Scheme:-

Subject Code	Name of the Subject	Teaching Scheme				Evaluation Scheme								
						Theory					Practical (Marks)			
		Th	Tu	Pr	Total	Sessional Exam		University Exam		Total	Pr/Viva	TW	Total	Total
						Marks	Hours	Marks	Hours					
DEHM202	Professional Communication Skills	02	02	00	04	30	1.5	70	2.5	100	30	20	50	150

Objectives:-

- To make students aware of the important concepts of communication and its importance.
- To make students eligible to communicate (formally and informally) properly at their work place in English.
- To make students eligible to understand and interpret technical reports and official letters.
- To make students eligible to write technical reports and official letters.
- To make students eligible to express ideas and participate actively in group discussion, meetings etc at their work place.
- To make students eligible to pass through campus drive process successfully.
- To develop following linguistic/ behavioural skills of the diploma students.
- Improve vocabulary useful for professional communication.
- Write official letters of various types.
- Read and interpret instructions given in written form through circulars and notices.
- Understand and interpret instructions given in oral form in the meetings.
- Prepare technical reports of different types at work place.
- Express ideas in the meetings properly.
- Match with the superiors, sub ordinates, and peers (all over the country) through communication in English.
- Prepare their attractive and impressive resume.
- Remove fear of interviews.
- Face interviews effectively and successfully.
- Participate in group discussion at the time of campus interview.

Prerequisites: -

- Know Basic English.
- Know some general vocabulary of English.
- Know how to form grammatically correct sentences in English.
- Know method of learning new words and phrases.

Course Outlines:-

Sr. No.	Course Contents	Number of Hours
1	**Communication:** Introduction and Concept, Definition, Objectives, Process, Types	**5**
2	**Official Letters:** Inquiry letter, Reply to Inquiry letter, Complain, Adjustment, Placing an order, Circular, Notice, Memo, Explanation, Acknowledgement, Leave report, Resignation, Permission letters, Reports	**28**
3	**Job Oriented Communication:** Job Application and Resume, Group Discussion, Personal interviews	**25**
Total		**58**

Learning Outcomes:-

- Students will be aware of the important concepts of communication and its importance.
- Students will be eligible to communicate (formally and informally) properly at their work place in English.
- Students will be eligible to understand and interpret technical reports and official letters.
- Students will be eligible to write technical reports and official letters.
- Students will be eligible to express ideas and participate actively in group discussion, meetings etc at their work place.
- Students will be eligible to pass through campus drive process successfully.
- Students would have developed following linguistic/ behavioural skills through this syllabus.
- Improve vocabulary useful for professional communication.
- Write official letters of various types.
- Read and interpret instructions given in written form through circulars and notices.
- Understand and interpret instructions given in oral form in the meetings.
- Prepare technical reports of different types at work place.
- Express ideas in the meetings properly.
- Match with the superiors, sub ordinates, and peers (all over the country) through communication in English.
- Prepare their attractive and impressive resume.
- Remove fear of interviews.
- Face interviews effectively and successfully.
- Participate in group discussion at the time of campus interview.

Books Recommended:-

1) Business Correspondence and report writing, **R.C. Sharma and Krishna Mohan,** Tata McGraw Hill, New Delhi.
2) Professional Communication Skills, **Pravin S. R. Bhatia** and **A.M. Sheikh** S. Chand Company, New Delhi.
3) The Functional Aspects of Communication Skill,**Dr. P. Prashad**, Katariya and Sons, New Delhi.

C. U. SHAH UNIVERSITY

FACULTY OF: -Technology & Engineering
DEPARTMENT OF: -Humanities
SEMESTER: - II **CODE**: -DEHM203
NAME – Applied Physics (AP)

Teaching & Evaluation Scheme:-

Subject Code	Name of the Subject	Teaching Scheme				Evaluation Scheme								
						Theory					Practical (Marks)			Total
		Th	Tu	Pr	Total	Sessional Exam		University Exam		Total	Pr/Viva	TW	Total	
						Marks	Hours	Marks	Hours					
DEHM203	Applied Physics	4	0	2	6	30	1.5	70	2.5	100	30	20	50	150

Objectives:-

- Concept of physics
- Basic concepts of unit
- Properties of light
- Basic idea about force, band theory of solids and radioactivity

Prerequisites: - Wave motion, sound, Ohm's law, series and parallel combination, nano science and nano technology, concept of motion, force and laws of motion, and nuclear physics.

Course Outlines:-

Sr. No.	Course Contents	Number of Hours
1	**SI Units And Measuring Instruments :** what is physics?, Fundamental forces in nature, Unit, Systems of units, Types of Physical quantity, Measuring Instruments: Vernier calliper, Micrometer Screw gauge and physical balance, Problems based on vernier calliper and Micrometer Screw	7
2	**Wave Motion And Sound :** Definition of wave and wave motion, Classification and types of waves, definitions related to wave, Relation between Velocity, Wave Length & Frequency, Simple Harmonic motion, Simple pendulum, Acoustics: Introduction, Definition and meaning of Acoustics, Echo, Reverberation, and Reverberation time, Ultrasonic Properties, applications and production of ultrasonic waves	11
3	**Surface Tension And Viscosity :** Cohesive and Adhesive force, Surface tension	5

	Illustrations, Explanation of surface tension by molecular phenomenon, Angle of contact Definition and illustrations, Capillary action. Derivation of expression for surface tension, Determination of surface tension of a liquid using capillary action, Viscosity Definition of Viscosity and Viscosity index, Measurement of Viscosity, Red wood Viscometer	
4	**Ray Optics, Nano Science And Nano Technology :** Electromagnetic waves, electromagnetic spectrum, Properties of light and their illustrations, Light in nature – Scattering of light, Rainbow, Introduction to Nanotechnology Carbon based structure of nano technology, Use of Nano technology in engineering field, Name of techniques to produce nano materials	**6**
5	**Force And Motion :** Recapitulation of equations of motion, Newton's 1st law of motion, basic forces in motion, Newton's 2nd law of motion, Simple problems on F = ma and equations of motion, Newton's 3rd law of motion and its examples, Law of conservation of momentum, Statement, simple Problems	**6**
6	**Semi Conductor And Transistor :** Band Theory of Solid, Classification of solids based on energy band - Conductors, Insulators and Semiconductors, Types of semi conductor - intrinsic and extrinsic Semiconductors, Temperature dependence of conductivity, P-N junction diode, V-I characteristics of P-N junction diode, Rectifier circuits -Full wave, half wave and bridge rectifiers (no design), Transistor : Introduction, Types of semiconductor transistor and their symbols Characteristics of pnp and npn semiconductor transistor, Application of transistor	**9**
7	**Current Electricity :** Introduction, Concept of charge, Coulomb's inverse square law, Electric field intensity, potential and potential difference, Electric current, Ohm's law, laws of series and parallel combination of resistance, Electric circuits, Kirchhoff's law, Heating effect & chemical effect of current	**7**
8	**Radioactivity And Nuclear Physics :** Introduction, Radioactivity: Definition. Kinds of radioactivity. (Natural & Artificial) Units of radioactivity, Laws of radioactivity, Half Life, Average Life & Decay Constant, Radioactive Rays: Properties and uses of alpha, beta and gamma particles, Nuclear Physics: Structure of nucleus, Mass defect and Binding Energy, Nuclear fission: Phenomenon of fission, Elements undergoing fission, Chain reactions and multiple chain reactions, Application of nuclear fission, Nuclear fusion and Nuclear reactor, Nuclear fusion: Phenomenon of fusion, elements Undergoing fusion, Applications of nuclear fusion, Nuclear reactor	**9**

List of experiments:-

- To Measure linear dimensions by vernier caliper and calculate volume.
- To Measure linear dimensions by Micrometer screw.
- Measurement of specific gravity of given solid.
- Determination of radius of surface tension of a given liquid.
- Measurement of Viscosity
- Measurement of area.
- To calculate resistance using Ohm's law
- To verify law of Resistance in series and parallel

- Determination of acceleration due to gravity (g) using simple pendulum.
- To determine errors in electrical measurements.
- Measurement of Energy
- To study p-n junction in forward and reverse bias

Learning Outcomes:-

- Explain Physical Quantities and their units.
- Measure given dimensions by using appropriate instruments accurately and Calculate error in the measurement.
- Comprehend the concept of wave motion. Definition related to wave and wave motion.
- Acoustics of building and factors affecting it.
- Production and applications of Ultrasonic waves.
- State Properties of Light.
- Use of nanotechnology in engineering field.
- Newton's law of gravitation.
- Basics of Semiconductor, P-N junction diode and transistor.
- Ohm's Law and Combination of resistance.
- Radioactivity and concept of nuclear physics

Books Recommended:-

1. **H.C.Verma** "*Concept of Physics(Volume-1-2013,volume-2-2009)*"Bharti bhavan
2. **Halliday & Resnick** "Principe of *Physic (9th edition)*", Wiley India Pvt. Ltd. New Delhi
3. **Paul G Hewitt** "*Conceptual Physics*" Wesley Addison 2001

C. U. SHAH UNIVERSITY

FACULTY OF: - Technology & Engineering
DEPARTMENT OF: - Mechanical Engineering
SEMESTER: - II **CODE**: - DEME204
NAME – Engineering Drawing

Teaching & Evaluation Scheme:-

Subject Code	Name of the Subject	Teaching Scheme (Hours) (Hours)				Evaluation Scheme								
						Theory					Practical (Marks)			Total
		Th	Tu	Pr	Total	Sessional Exam		University Exam		Total	Pr/Viva	TW	Total	
						Marks	Hours	Marks	Hours					
DEME204	Engineering Drawing	2	0	4	6	30	1.5	70	2.5	100	30	20	50	150

Objectives: -

- To understand Engineering Drawing
- To understand Lines, Lettering and Dimensioning,
- To get knowledge of projection like front view, top view, side view, bottom view and rear view.
- To understand method of Projection.
- To understand orthographic and isometric projection.

Prerequisites: -

- Basic knowledge of geometry

Course outline:-

Sr. No.	Course Contents	Number of Hours
1	**Fundamental Of Engineering Drawing:** Introduction to Engineering Drawing, Drawing instruments and its applications-Drawing Board , T-Square, Mini Drafter, Set-Square, Instrument Box , Engineer's Scales, Drawing board Clips, Pencils, Eraser, Protractor, French Curves, Duster, Drawing Papers, Title Block, Planning and Layout as per IS, Different types of Lines, Vertical and Inclined Letters-Single stroke and Gothic numerals and Alphabets, Dimensioning- Dimensioning systems, Dimensioning of circle, angles etc.	---
2	**Scales:** Introduction, Representative Fraction (RF), Definition with formula,	03

	Full scale, Reducing scale and Enlarging scale, To find out the RF for various lengths, Construction of Scales, Types of Scales-Plain scales, Diagonal scales, Comparative scales, Vernier scale and Scale of chord (Only name and applications), Plain scales-Method of onstruction and problems, Diagonal scales-Principle of diagonal scale, Methods of Construction and problems, Exercises.	
3	**Geometric Construction:** Geometric construction related with line-Bisecting a line, to draw perpendicular with a given line, divide a line into some equal divisions, to draw a parallel line to a given straight line to draw a parallel line passing through a point etc., Geometric construction related with circle and arc-to make 8 or 12 equal divisions using set-squares and compass, Bisect an arc etc., Geometric construction related with angle- Bisect an angle, trisect an angle, to draw an arc or circle of given radius into it, Construction of polygons-like Triangle, Square/Rectangle, Pentagon and Hexagon by general (universal) and special methods, To draw tangent, Exercises.	**03**
4	**Engineering Curves:** Introduction, Conic sections-Definition, Axis, Vertex and Focus, Types like Ellipse, Parabola and Hyperbola.Different methods of construction of Ellipse, Parabola and Hyperbola,Cycloid Curves-Cycloid, Epicycloids and Hypocycloid, Definition and methods of construction, Involutes- Definition and construction of Involutes of circle and polygons, Spiral- Definition, Archimedean spiral, method of construction, Exercises	**06**
5	**Projection Of Points, Lines And Planes:** Projection, Orthographic projection Concept of quadrant, Planes of projections, reference line etc., Projections of points-Position of points in different quadrant in reference to H.P and V.P., Conventions employed Exercises, Projections of Straight Lines-(a) Line parallel to one plane and perpendicular to the other, Line parallel to the HP and perpendicular to the VP. Line parallel to the VP and perpendicular to the HP (b) Line parallel to both the planes (HP and VP) (c) Line parallel to one plane and inclined to the other, Line parallel to the HP and inclined to the VP. Line parallel to the VP and inclined to the HP Line inclined to both the planes (HP and VP) Exercises Projections of Planes-Plane parallel to one plane and perpendicular to the other, Projection, Orthographic projection Concept of quadrant, Planes of projections, reference line etc., Projections of points-Position of points in different quadrant in reference to H.P and V.P., Conventions employed Exercises.	**06**

6	**Orthographic Projections:** Principle of projection, Types of projections-Parallel, Perspective and Oblique, Remember- Orthographic projection Concept of quadrant, Planes of projections, reference line etc., Methods of projection- First angle projection and Third angle projection, Symbols for methods of projection (BIS code of practice), Exercises.	**06**
7	**Isometric Projections:** Introduction, Isometric axis, Isometric lines and Isometric planes, Isometric views of plane geometric figures like Triangle, Pentagon, Hexagon etc., Difference between Isometric Drawing/View and Isometric Projection, Constructions of Isometric circle (Four centre method) and Isometric scale, Exercises.	**04**
8	**Introduction To Computer Aided Drawing:** Introduction, Basic knowhow of computer hardware, software and peripherals, AutoCAD screen, library, symbols, templates in context of machine drawing, Simple 2D production drawings using AutoCAD	**02**

List of Experiments:

- **Sketch Book Work**

  1.1 Demonstration of the following (Teacher will demonstrate)-

  (a) Drawing Instruments and its uses.

  (b) Planning and Layout as per IS –Border line, Margin, Title Block with detail and dimensions.

  (c)Dimensioning system and technique.

  1.2 Draw following (Practice sheet)-

  Problem -1, Draw Horizontal, Vertical and Inclined lines at 30˚, 45˚, 60˚ and 75˚ using Tee square, Set squares or Mini drafter.

  Problem -2, Types of Lines.

  Problem -3, Dimensioning system-Aligned, Unidirectional, Parallel and Chain dimensioning. Dimensioning of Arc, Circle and Angle.

  Problem -4, Alphabets and Numerical (vertical and inclined As per IS).
- **Scale**

  Problem -1 ,2 and 3 Construction of Plain scales

  Problem -4 and 5 Construction of Diagonal scales
- **Geometric Construction**

  Problem-1, To divide a circle into 12 equal parts (radial) using Set-squares and Compass (one each).

  Problem-2,To divides a line into some equal parts.

  Problem -3, 4 To draw parallel line to given line and through a given point.

Problem -5, 6 and 7, Construction of Polygons-Problem by Universal or General method, Problem by special Method, Problem by Inscribed circle.
Problem -8, Related to draw arcs and circles with different Geometric conditions and with lineconstrains.

- **Engineering Curves**
  Problem -1, Draw an Ellipse by any one method.
  Problem -2, Draw a Parabola by any one method.
  Problem -3, Draw a Hyperbola by any one method.
  Problem -4, Draw an Involute of a circle or a polygon .
  Problem-5 Draw a Cycloid or Epicycloid and Hypocycloid.
  Problem -6, Draw an Archimedean spiral..

- **Projections Of Points And Lines**
  Problem -1, Projection of points-for 8 various conditions.
  Problem-2 to 5 (Four problems), Projections of lines with Different conditions (Use 1st and 3rd quadrant only).
- **Projections Of Planes**
  Problem -1 to 4 (Four problems), Projections of planes with different conditions (square / rectangle, pentagon, Hexagon and circular planes one each).
- **Orthographic Projections**
  Problem -1 and 2 (Two problems)- Draw orthographic projections of different two objects (Draw Elevation, Plan, R.H Side view and/or L.H. Side view).
- **Isometric Drawings**
  Problem -1 and 2 (Two problems)-Draw isometric drawings from Given orthographic views
- **Computer Aided Drawings**
  Problem -1 and 2 (Two problems)-Draw simple 2D drawings using Auto-CAD software from Given views.

Learning Outcomes:-

- Drawing of object related to engineering stream.
- Know about IS Standard which are using in industries.
- Know about different types of shape are use in industries.
- Know about first and third angle drawing.

Books Recommended:-

1. **N. D. Bhatt** " *Engineering Drawing*", Charotar Publication
2. **P. J. Shah** "*Engineering Graphics*" ,
3. **R.K.Dhavan** "*Engineering Drawing*" S Chand Publication
4. **P.S.Gill** *"Engineering Drawing"* S.K.Kataria

C. U. SHAH UNIVERSITY

FACULTY OF: -Technology & Engineering
DEPARTMENT OF: -Electronics & Communication Engineering
SEMESTER: - II **CODE**: -DEEC205
NAME – Basic Electronics Engineering (BEE)

Teaching & Evaluation Scheme:-

Subject Code	Name of the Subject	Teaching Scheme				Evaluation Scheme								
						Theory					Practical (Marks)			Total
		Th	Tu	Pr	Total	Sessional Exam		University Exam		Total	Pr/Viva	TW	Total	
						Marks	Hours	Marks	Hours					
DEEC 205	Basic Electronics Engineering (BEE)	4	0	2	6	30	1.5	70	2.5	100	30	20	50	150

Objectives:-

- This course provides information about the basic introduction of Electronics Devices with short & sweet analysis. The students will learn the concepts of Semiconductor Materials. They also learn different Applications of Semiconductor Materials. The content of the course includes various basic concepts of Electronics Components, Switching Devices.

Prerequisites: -Basic concepts of materials & their Applications..

Course Outlines:-

Sr. No.	Course Contents	Hours
1	**Electronic components**: Construction and use of common electronic components. Resistors - carbon composition, carbon film, cracked carbon, metal oxide film wire-wound, variable resistors. Capacitors - paper , silvered paper, mica, silvered mica, ceramic plastic foil, electrolytic, variable resistor. Inductors - fixed and variable inductors.	**8**
2	**Switches & Relays**: Switches - Toggle switch- SPDT, DPDT,TPDT ,Centre off, Without centre off ,Rotary switch types depending on their poles and positions, Rocker switch , Push button latch and non latch , Tactile switch, Micro switch. Relays - electromagnetic and reed relay.	**8**

	Chokes - A.F and R.F chokes	
3	**Transmission Media:** Types of Medias Guided Media Unguided Media Cables Connectors Fuses	**8**
4	**Semiconductor physics and diodes**: Energy levels of conductors, semiconductors and insulators. Extrinsic material N & P type. Ideal diode basic construction & characteristics. D.C. & A.C. resistance of diode. Diode equivalent circuits. Drift and diffusion currents. Transition and diffusion capacitance.	**12**
5	**Diode application:** Series and parallel diode configuration with d.c. inputs. The half-wave, full-wave and bridge rectifier and determination of PIV. Determination of average d.c. current, voltage, ratio of rectification and ripple factor. Requirement of filters. Simple capacitor filter & induction filter. Diode clamper and clipper. Voltage doubler and multipliers. Zener diode characteristics & operation. Schottky barrier diode. Varactor diode. Tunnel diode.	**12**
6	**Transistor** : Transistor construction Transistor operation and amplifying action. Common base configuration. Common emitter configuration. Common collector configuration. Relation between current gain, alpha and beta.	**12**

Experiment List:-

- To test AC/DC voltage sources with Digital Multimeter (DMM)
- To identify ,find value and test different types of Resistors .
- To identify ,find value and test different types of capacitors .
- To identify ,find value and test different types of Inductors .
- To make use of Resister ,capacitor, inductor in series and parallel connection.
- To identify different types of cables & test it .Discover their application.
- To identify different types of connectors & Discover their application.

- To identify different types of fuses & test it.
- To identify different types of Switches and discover its usage.
- To identify different types of Relays and discover its usage.
- To demonstrate external controls of CRO & function Generator.
- To measure amplitude & frequencies of different sine waveform using CRO & Function Generator.
- To measure amplitude & frequencies of different square waveform using CRO & Function Generator.
- To study forward & reverse V-I characteristics of diode.
- To study the positive & negative clipping.
- To study the positive & negative clamping.
- To test Half wave rectifier and observe waveforms with and without filter.
- To test Full wave rectifier and observe waveform with and without filter.
- To test Bridge rectifier and observe waveforms with and without filter.
- To study zener diode characteristic.
- To test CE amplifier & obtain the frequency response.

Learning Outcomes:-

- Student can aquire the basic Knowledge of electrical & electronics fundamentals.
- Students will be able to know about Relay, Switches, Cables, Connectors, Opto Electronics Devices which will helpful for Understanding of new applications and techniques for their use.

Books Recommended:-

1. Electronics Principles , **A.P. Malvino ,** MGH, 2009 or latest
2. Principle of Electronics , **V.K.Mehta** , S. Chand
3. Electronic Devices and Circuit Theory , **Boylstad Robert ,** Pearson Education, 2007
4. Electronic Devices and Circuits , **Bell David A ,** Oxford University Press, 2008 or latest
5. Electronic Components and Materials, **Madhuri Joshi**, Shroff Publishers & Distributors private ltd.

FACULTY OF: - Technology & Engineering
DEPARTMENT OF: -Computer Engineering
SEMESTER: - II **CODE**: -DECE206
NAME – Fundamentals of Computer Application (FCA)

Teaching & Evaluation Scheme:-

Subject Code	Name of the Subject	Teaching Scheme				Evaluation Scheme								
						Theory					Practical (Marks)			Total
		Th	Tu	Pr	Total	Sessional Exam		University Exam		Total	Pr/Viva	TW	Total	
						Marks	Hours	Marks	Hours					
DECE 206	Fundamentals of Computer Application	00	00	04	04	---	---	---	---	---	30	20	50	50

Objectives:-

Basic computing Knowledge is very important in today's world. Computers are a part of our day to day life. Engineering students learn soft skills for overall development to solve their problems. Basic computing Knowledge is a necessity that aids the students to perform day to day operations. This course introduces the Students with basic Knowledge as a building block of their higher level computing skills.

Prerequisites: -Basic Computer Skills.

Course Outlines:-

Sr. No.	Course Contents	Hours
1	**Introduction to Computer:** History, Applications **,**Working principal of computer, Components of computer, Hardware peripherals(monitor, mouse, keyboard, cpu, printer, scanner, joystick, digital pen, webcam, modem)**,** Software **,**Application software , System software, Windows and its components (Desktop, My Computer, Taskbar, Start menu, control panel, creating files and folders, recycle bin, shortcuts)**,** Working with programs**,**Managing files and folders.	**04**
2	**Introduction to Operating System:** Introduction, Different types of operating system, DOS(Disk Operating System),DOS Commands (cmd , cd ,date, echo, dir, md, mkdir, rd, rmdir, copy, delete, ren, format, edit,time.).	**04**
3	**Introduction to Office Tools:** How Office works, Menu Bar and Tool Bar, Help assistance in Office Tools.	**04**

4	**Working With Word Processor:** Introduction and application, Creating and saving new word document,Different operations on word document, paragraph, table, margin, font styles and size, hyperlink, change case , highlighting texts, alignment , spacing,numbering, borders and watermark, header, footer, mail merge, find and replace text,Printing and setting layout of documents.	06
5	**Working With Spread Sheet:** Introduction and application, Creating worksheet, Entering, Editing Cells, Inserting Rows and Columns, Inserting and Deleting Cells, Moving & Copying Data, Filling an Entry Range, Auto filling a range, Entering a Simple Calculations, Building a Simple Formula, Sum Function, Copying Formulas, Average Functions, Function Wizard, Formatting worksheets, Formatting text, Auto format, Adding borders**,** Conditional formatting**,** Charts**,** Creating default chart**,**Creating and formatting chart using chart wizard.	**04**
6	**Working With Presentation Tools:** Introduction and application, Creating and formatting new presentation, Selecting templates and setting layouts, Selecting fonts and font styling's, Adding text slides, Drawing shapes , lines, Adding Shadows and 3-D Effects, Adding transition effects, Animations, Slideshow, Making a real time presentation, Use of charts and pictures in slides, Formatting box.	**04**
7	**Introduction to Internet:**Introduction, History and evolution, How internet works?Understanding www and web browser, Search engines, Email, Messaging.	**04**
8	**Working With HTML:** Introduction and application, Tools required, Basic html page using different html tags (head, body, title, table, tr, td, th, p, br, b, I, u, div, ul, li, ol, marquee, font, hr, img, address), Creating forms In html page.	**06**

List of Experiments: -

- Introduction to computer including hardware and software.
- Introduction to OS and DOS commands.
- Developing Word Documents with different operations. (Minimum 2 exercises. For ex. Prepare Resume).
- Developing Excel spreadsheets using different operations and functions. (Minimum 3 exercises. For ex. Prepare Student Mark sheet).
- Developing PowerPoint presentations and formatting the slides. (Minimum 2 exercises. For Ex. Prepare Presentation on INTERNET).
- Introduction to internet and its components.
- Designing of Web Pages using different HTML tags. (Minimum 5 exercises. For Ex. Develop a web page which shows your BIODATA).

Learning Outcomes: -

- Basic Computer Skills
- Microsoft Office (Word, Excel and PowerPoint)
- Basics of Web, HTML and Scripting.

Books Recommended:-

1. Microsoft Office XP Plain And SimpleBy**Carol Brown** PHI Publication.
2. Complete Reference HtmlBy**Thomas A Powell** TMH Publication.