



**MASTER CERTIFICATE COURSE  
IN CNC TECHNOLOGY**



**curriculum**

**Ministry of Micro, Small and  
Medium Enterprises, New Delhi  
(MSME-Technology Centre)**

SEMESTER: I

COURSE NAME: WORKSHOP PRACTICE

COURSE CODE:

COURSE OUTCOMES:

After completion of course Student should be able to

- Understand Various Principles of Measurements.
- Identify various Length Standards & Knowledge of Limits, Fits & Tolerances.
- Explain and demonstrate various gauges like NPL gauge
- Understand, define, and explain work shop equipment working principal.
- Classify & describe various measuring instrument like scale Vanier caliper, micrometer. Etc.
- Evaluate and do analysis of parameters of different machine.
- Determine and describe various methods of measurements of joints.

THEORY HOURS:

PRACTICAL HOURS: 120

THEORY MARKS:

PRACTICAL MARKS: 60

Unit No.	Unit Name	Unit level outcomes	Contents (chapters/topics)	PR hours	Marks	
I	Basic Measurements	After completion of unit Student should be able to <ul style="list-style-type: none"><li>• Understand the Principles of measurements.</li><li>• List the various length standards</li><li>• Knowledge of Limits, fits &amp; tolerances</li><li>• Understand Design of Gauges</li></ul>	Introduction, standards of measurement, Classification of measuring instruments, Linear Measurements, Angular Measurement, Surface Measurement, Taper Measurement, Comparators, Measuring machines. Advantages disadvantages and applications.	30	20	
II	Material Technology	After completion of unit Student should be able to: <ul style="list-style-type: none"><li>• Explain advantages and disadvantages welding materials</li><li>• Explain applications of materials</li><li>• Understand and explain difference between Ferrous and Non-ferrous Materials</li></ul>	Introduction, Classification of Materials and its alloys, Ferrous and Non-ferrous Materials, Cutting Alloys, Copper, Zinc, Aluminum, Brass alloys. Advantages Material Technology	30	20	

			Material Technology disadvantages and applications.			
III	Workshop technology	<p>After completion of unit Student should be able to:</p> <ul style="list-style-type: none"> <li>• Understand various features to Inspections.</li> <li>• Inspection Straightness &amp; Flatness of various surface.</li> <li>• Understand tools required for different operations</li> <li>• Calibrate edges Measurement</li> </ul>	<p>Introduction, Manufacturing processes, Classification of Manufacturing Process, Conventional and Non-conventional machining, Lathe machine, Milling machine, Drilling machine, Bench work, Filing, Types of Files, Tools required for different operations, Advantages and Disadvantages of different machining operations and applications,</p>	60	20	

SEMESTER: I

COURSE NAME: CNC PROGRAMMING

COURSE CODE:

COURSE OUTCOMES:

- Explain applications and advantages of CNC machines and technology
- Prepare CNC program for CNC Lathe & Milling
- Calculate CNC Machining Parameters
- Prepare program for CNC Lathe & Milling
- Follow Safety norms during operations

THEORY HOURS:

PRACTICAL HOURS: 120

THEORY MARKS:

PRACTICAL MARKS: 60

Unit No.	Unit Name	Unit level outcomes	Contents (chapters/topics)	PR hours	Marks	
I	Introduction to CNC technology and CNC programing	After completion of unit Student should be able to: <ul style="list-style-type: none"><li>• Explain applications and advantages of CNC machines and technology</li><li>• Understand and explain difference between conventional &amp; non-conventional machine tool</li><li>• Demonstrate and explain various CNC control</li><li>• Calculate technological data for CNC machining</li><li>• Explain the JH system, its use and application</li><li>• Understand the importance and use of PPE's</li></ul>	Introduction to CNC technology – CNC machines & controls. History & development of CNC technology. Conventional Vs. non-conventional machine tool. Numerical control on CNC machine tools CNC control and CNC Control and types of CNC control Calculation of technological data for CNC machining. CNC clamping system. Implementation of JH for CNC Basic health and safety CNC programming basics. Introduction to manual NC programming Manual NC programming for lathe & milling machines. Application Numerical Control,	20	6	

			Advantages, & Disadvantages, Adoptive Control System. Practical training & workshop for above sub topics on CNC Machine.			
II	NC Machine & Programming in NC Machine	At the end of this unit students should be able to- <ul style="list-style-type: none"> <li>• Explain the features of NC Machine.</li> <li>• Understand difference between NC &amp; CNC .</li> <li>• Understanding programming for NC &amp; CNC.</li> <li>• Understand codes used for programming.</li> </ul>	Introduction to NC Constructional features of NC machine. Programming for NC Machines.	20	6	
III	Introduction to Programming Concepts	At the end of this unit students should be able to- <ul style="list-style-type: none"> <li>• Explain the coordinate system.</li> <li>• Understanding sequence of programming.</li> <li>• Explain the canned cycles.</li> </ul>	Introduction Terminology Types of co-ordinate system	20	6	
IV	Programming CNC Lathe	At the end of this unit students should be able to- <ul style="list-style-type: none"> <li>• Explain the parts of CNC Lathe</li> <li>• Explain different tools used in CNC Lathe</li> <li>• Explain different operations performed on CNC Lathe</li> <li>• Understand feeding the programme in machine control</li> <li>• Explain different canned cycles used in CNC Lathe .</li> </ul>	Using programming concepts & practice of programming.	30	16	
V	Programming CNC Milling	At the end of this unit students should be able to- <ul style="list-style-type: none"> <li>• Explain the parts of CNC Milling</li> <li>• Explain different tools used in CNC Milling</li> <li>• Explain different operations performed on CNC Milling</li> <li>• Understand feeding the programme in machine control</li> <li>• Explain different canned cycles used in CNC Milling .</li> </ul>	Using programming concepts & practice of programming.	30	16	

COURSE NAME: CNC MACHINING LATHE

COURSE CODE:

COURSE OUTCOMES:

- Explain applications and advantages of CNC machines and technology
- Prepare CNC program for CNC Lathe
- Calculate CNC Machining Parameters
- Prepare process plan, job card, inspection report
- Handle measuring instrument for inspection
- Prepare program and execute machining for CNC Lathe
- Follow Safety norms during operations

THEORY HOURS:

PRACTICAL HOURS: 160

THEORY MARKS:

PRACTICAL MARKS: 100

Unit No.	Unit Name	Unit level outcomes	Contents (chapters/topics)	PR hours	Marks	
I	Introduction to CNC technology and CNC programing	<p>After completion of unit Student should be able to:</p> <ul style="list-style-type: none"> <li>• Explain applications and advantages of CNC machines and technology</li> <li>• Understand and explain difference between conventional &amp; non-conventional machine tool</li> <li>• Demonstrate and explain various CNC control</li> <li>• Calculate technological data for CNC machining</li> <li>• Explain the JH system, its use and application</li> </ul> <p>Understand the importance and use of PPE's</p>	<p>Introduction to CNC technology – CNC machines &amp; controls.                      History &amp; development of CNC technology.                      Conventional Vs. non-conventional machine tool.                      Numerical control on CNC machine tools CNC control and CNC Control and types of CNC control                      Calculation of technological data for CNC machining.                      CNC clamping system.                      Implementation of JH for CNC                      Basic health and safety                      CNC programming basics.                      Introduction to manual NC programming                      Manual NC programming for lathe &amp; milling machines.                      Application Numerical Control, Advantages, &amp; Disadvantages, Adoptive Control System.                      Practical training &amp; workshop for above sub topics on CNC Machine.</p>	40	20	
II	CNC Programing Lathe	<p>After completion of unit Student should be able to</p> <ul style="list-style-type: none"> <li>• Understand and explain the concept and importance of CNC programming</li> <li>• Prepare and understand line program for various profiles</li> </ul>	<p>Introduction to CNC programming                      Introduction and demonstration of line programs                      CNC programming for lathe &amp; milling machine using iso codes into the CNC simulator.</p>	40	20	

		<ul style="list-style-type: none"> <li>Identify and set parameters for various simulators</li> <li>Prepare and simulate various operation cycles for lathe and milling</li> <li>Use and simulate cycles using various Controls</li> </ul> <p>Knowledge of the parameters for various machining cycles and operations</p>	<p>CNC programming for lathe and milling machines using different machining cycles into the CNC simulator. Procedures Associated with part programming, Cutting process parameter selection, Process planning issues and path planning, G &amp; M Codes, Interpolations, Canned Cycles and Subprograms, Tool compensations Exposure for programming and simulator of FANUC, SINUMERIC, DMG TURNPLUS &amp; Controls through post processors.</p> <p>Programming exercise.</p> <p>Machining of programmed exercise on CNC lathe &amp; milling machines.</p>			
III	CNC Machining – Lathe	<p>After completion of unit Student should be able to</p> <ul style="list-style-type: none"> <li>Calculate parameters for turning operations</li> <li>Understand the parameters of lathe operations</li> <li>Explain operation sequence for the lathe operations</li> <li>Prepare operation sequence for test run</li> <li>Set , Simulate, and perform various operations like turning , grooving threading etc.</li> </ul>	<p>Plan and optimize programs for CNC turning operations.</p> <p>Calculate parameters like speed feed etc. and set a references for the various operations</p> <p>Prepare operation and operation sequence for the lathe operations like turning, grooving etc.</p> <p>Prepare &amp; set CNC lathe operations and test run programmed</p> <p>Execute program and inspect simple geometrical forms / standard parts</p> <p>Use of various PPE's on CNC lathe machine</p>	80	60	

COURSE NAME: CNC MACHINING MILLING

COURSE CODE:

COURSE OUTCOMES:

- Explain applications and advantages of CNC machines and technology
- Prepare CNC program for CNC Milling
- Calculate CNC Machining Parameters
- Prepare process plan, job card, inspection report
- Handle measuring instrument for inspection
- Prepare program and execute machining for CNC Milling
- Follow Safety norms during operations

THEORY HOURS:

PRACTICAL HOURS: 160

THEORY MARKS:

PRACTICAL MARKS: 100

Unit No.	Unit Name	Unit level outcomes	Contents (chapters/topics)	PR hours	Marks	
I	Introduction to CNC technology and CNC programing	<p>After completion of unit Student should be able to:</p> <ul style="list-style-type: none"><li>• Explain applications and advantages of CNC machines and technology</li><li>• Understand and explain difference between conventional &amp; non-conventional machine tool</li><li>• Demonstrate and explain various CNC control</li><li>• Calculate technological data for CNC machining</li><li>• Explain the JH system, its use and application</li></ul> <p>Understand the importance and use of PPE's</p>	<p>Introduction to CNC technology – CNC machines &amp; controls. History &amp; development of CNC technology. Conventional Vs. non-conventional machine tool. Numerical control on CNC machine tools CNC control and CNC Control and types of CNC control Calculation of technological data for CNC machining. CNC clamping system. Implementation of JH for CNC Basic health and safety CNC programming basics. Introduction to manual NC programming Manual NC programming for lathe &amp; milling machines. Application Numerical Control, Advantages, &amp; Disadvantages, Adoptive Control System. Practical training &amp; workshop for above sub topics</p>	40	20	



			on CNC Machine.			
II	CNC Programing Milling	<p>After completion of unit Student should be able to</p> <ul style="list-style-type: none"> <li>• Understand and explain the concept and importance of CNC programming</li> <li>• Prepare and understand line program for various profiles</li> <li>• Identify and set parameters for various simulators</li> <li>• Prepare and simulate various operation cycles for lathe and milling</li> <li>• Use and simulate cycles using various Controls</li> </ul> <p>Knowledge of the parameters for various machining cycles and operations</p>	<p>Introduction to CNC programming</p> <p>Introduction and demonstration of line programs</p> <p>CNC programming for lathe &amp; milling machine using iso codes into the CNC simulator.</p> <p>CNC programming for lathe and milling machines using different machining cycles into the CNC simulator.</p> <p>Procedures Associated with part programming, Cutting process parameter selection, Process planning issues and path planning, G &amp; M Codes, Interpolations, Canned Cycles and Subprograms, Tool compensations</p> <p>Exposure for programming and simulator of FANUC, SINUMERIC, DMG TURNPLUS &amp; Controls through post processors.</p> <p>Programming exercise.</p> <p>Machining of programmed exercise on CNC lathe &amp; milling machines.</p>	40	20	
III	CNC Machining Milling	<p>After completion of unit Student should be able to</p> <ul style="list-style-type: none"> <li>• Calculate parameters for milling operations</li> <li>• Understand the parameters of milling operations</li> <li>• Explain operation sequence for the milling operations</li> <li>• Prepare operation sequence for test run</li> <li>• Set , Simulate, and perform various operations like core milling , cavity milling , PCD drilling etc.</li> </ul>	<p>Plan and optimize programs for CNC Milling operations.</p> <p>Calculate parameters like speed feed , depth of cut etc. and set a references for the various operations</p> <p>Various methods of work process like edge finding block center etc.</p> <p>Prepare &amp; set CNC Milling operations and test run programmed</p> <p>Execute program and inspect simple geometrical forms / standard parts</p> <p>Use of various PPE's on CNC milling machine</p>	80	60	

SEMESTER: I

COURSE NAME: ADVANCE CAM (MASTERCAM & UG CAM)

COURSE CODE:

COURSE OUTCOMES:

- Understand capabilities of CAM Software like Master CAM & UG CAM.
- Create 2D geometric sketches by using Master CAM & UG CAM.
- Understand 3D solid & surface terminology.
- Clarify the Concept of CNC Programming.
- Understand Post processing.
- Execute & generate various Milling, Lathe, EDM operations NC program.

THEORY HOURS:

PRACTICAL HOURS: 80

THEORY MARKS:

PRACTICAL MARKS: 120

Unit No.	Unit Name	Unit level outcomes	Contents (chapters/topics)	PR hours	Marks	
I		<p>At the end of this Unit the student should be able to:</p> <ul style="list-style-type: none"> <li>• Understand capabilities of CAM Software like Master CAM &amp; UG CAM.</li> <li>• Understand scope of software.</li> <li>• Understand difference between CAM/CAD/CAE software.</li> <li>• Understand various CAM software compare to Master CAM &amp; UG CAM.</li> </ul>	<p>Capability of CAM Software and Introduction to Master CAM and Unigraphics CAM. Scope of CAM software in Market advantages of CAM. Introducing CNC machining by using CAM. Distinguish between Various types of CAM software and Master CAM and Unigraphics CAM. CAD software features. Concept of hardware &amp; software.</p>	10	15	
II		<p>At the end of this Unit the student should be able to:</p> <ul style="list-style-type: none"> <li>• Understanding 2D drawing.</li> <li>• Create basic geometry.</li> <li>• Execute editing, modification, creating features.</li> <li>• Understand brief Transformation feature.</li> <li>• Understand modify tool.</li> </ul>	<p>Introduction to master CAM environment. To understanding 2D drawing. Creation of basic geometry like Point, line, rectangle, arc, ellipse, helix, spline &amp; polygon. Modify Like fillet, chamfer, Trim, Break, Join, Extend, dragging spline to arc, control point I NURBS Spline, Break Drafting etc. Transformation of object - Mirror, Rotate, Translate, Scale. Selection Methods Creating Groups / Masking of entities / Assigning / Changing colors. Chain / Window / Area / Group / Delete / Undelete / Undo. Transformation of object - Mirror, Rotate, Translate, Scale.</p>	10	15	

III		<p>At the end of this Unit the student should be able to:</p> <ul style="list-style-type: none"> <li>• Understand Plane concept.</li> <li>• Understand Wireframe 3D modeling.</li> <li>• Create surface modeling by use modification &amp; editing surface feature.</li> <li>• Understand solid terminology</li> <li>• Create Drafting with all Engineering symbols &amp; dimensions.</li> </ul>	<p>Plane concepts. Wireframe Modelling: 3D Wireframe, normal, entity, rotated, named, number. Surface terminology. Modification of surfaces and Editing of Surfaces features. Solid terminology - Creation of solids extrude, revolve, lofts, sweep, solids manager, fillet, chamfer, solids editing, trim, Boolean operations, shell, draft etc. Creating drafting : dimensions/ drafting note/ freestanding witness / leader lines / attributes / Editing drafting text/ Creating hatch /Smart mode function to create a layout of different part views/ Layout view selection / dimensioning.</p>	10	15	
IV		<p>At the end of this Unit the student should be able to:</p> <ul style="list-style-type: none"> <li>• Understand 2D tool path generation.</li> <li>• Understand concept of CNC machining.</li> <li>• Perform &amp; execute generate various milling &amp; Lathe operations.</li> <li>• Understand Post processing.</li> <li>• Understand NC program Transfer to machine.</li> </ul>	<p>2D Tool path generation. Concepts of Machining: CNC control basics, &amp; coordinate systems, Selection of tool, tool parameters, Program Manager / Creation of 2D tool path: contour / Facing / Pocket. Compensations, Drilling parameters / 3D contour machining surface roughing methods. - Pocket / Parallel for 3D Surfaces and Solids. Various 3D machining surface finishing methods. 3D machining surface roughing methods. Various 3D machining surface finishing methods. Post Processing: Generating NC / NCI Files / Editing NC Files / Verification and Program generation for actual machining / verification / post processing / Job machining on CNC Milling Machine DMU 50 T simulation - Backlot / Solid NC Verification of material cutting and simulation .DNC Data I.e. NC Program Transfer to machine.</p>	10	15	
V		<p>At the end of this Unit the student should be able to:</p> <ul style="list-style-type: none"> <li>• Understand capabilities of UG CAM.</li> <li>• Understand CAM concept, Master Model concept.</li> <li>• Understand Manufacturing application.</li> </ul>	<p>Introduction to Unigraphics CAM environment. Review of Modelling. Introduction to CAM concept, Master model concept. Machining environment, Operation Navigator. Re-entering into the Manufacturing application. Manufacturing Tools, Creating new operation. Manufacturing applications, Saving part file, closing part file.</p>	20	30	
VI		<p>At the end of this Unit the student should be able to:</p> <ul style="list-style-type: none"> <li>• Understand Various Milling and Lathe operations by using Unigraphics CAM.</li> <li>• Execute various drilling, reaming</li> </ul>	<p>Various Milling and Lathe operations by using Unigraphics CAM. Point to point machining. Creating drilling &amp; reaming operation and hole making. Planner mill overview Profiling, Single level, Multi-level. Multi region, Creation of Boundaries. Setting Custom Boundary Member Data Setting</p>	20	30	

		<p>operation &amp; hole making etc.</p> <ul style="list-style-type: none"> <li>• Understand various boundary setting.</li> <li>• Execute all milling &amp; lathe operation by using UG CAM.</li> <li>• Understand Wire EDM, EDM operation.</li> <li>• Understand generate Wire EDM Operation.</li> </ul>	<p>Drive Cutting Method, Ramping method. Cut types, Trim boundary, and Uncut Region boundary. Creating Cavity Milling operation. Blank Geometry and offset, uses of cutting option. Creating fixed contour operation. Lathe cross section, common turning parameters. Rough &amp; Finish turning, what is wire EDM, EDM dialog overview? Wire EDM operation, creating Wire EDM Operation. Internal &amp; External Trim operation.</p>			
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SEMESTER: I

COURSE NAME: DELCAM

COURSE CODE:

COURSE OUTCOMES:

- Understand capabilities of DEL CAM Software.
- Create 2D/Wireframe geometric sketches by using DEL CAM.
- Understand 3D solid & surface terminology.
- Understand CNC Programming Concept.
- Understand Post processing.
- Execute & generate various Milling, Lathe, EDM operations NC program.
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THEORY HOURS:

PRACTICAL HOURS: 80

THEORY MARKS:

PRACTICAL MARKS: 60

Unit No.	Unit Name	Unit level outcomes	Contents (chapters/topics)	PR hours	Marks	
I	INTRODUCTION TO DELCAM ENVIRONMENT	At the end of this Unit the student should be able to: <ul style="list-style-type: none"><li>• Understand capabilities of CAM Software like Del CAM Master CAM &amp; UG CAM.</li><li>• Understand scope of software.</li><li>• Understand difference between CAM/CAD/CAE software.</li><li>• To knowledge various CAM software compare to Del CAM</li></ul>	Capability of CAM Software and Introduction to Del CAM. Scope of CAM software in Market, advantages of CAM. Introducing CNC machining by using CAM. Distinguish between Various types of CAM software and Del CAM. CAM software features. Concept of hardware & software.	12	10	8
II	WIREFRAME MODELLING	At the end of this Unit the student should be able to: <ul style="list-style-type: none"><li>• Understanding 2D drawing.</li><li>• Create basic geometry.</li><li>• Execute editing, modification, creating features.</li><li>• Understand brief Transformation feature.</li></ul>	Introduction to Del CAM environment. To understanding 2D drawing. Creation of basic geometry like Point, line, rectangle, arc, ellipse, helix, spline & polygon. Selection Methods- Creating Groups / Masking of entities / Assigning / Changing colors. Chain / Window / Area / Group / Delete / Undelete / Undo. Misc. Screen Function - grid / clipboard / view ports / shading / hide / attributes / Creation / renaming / switching between levels / Main level & Visible	14	10	10

		<ul style="list-style-type: none"> <li>Understand modify tool.</li> </ul>	Level, Transformation of object - Mirror, Rotate, Translate, Scale etc.			
III	WORKPLANES	<p>At the end of this Unit the student should be able to:</p> <ul style="list-style-type: none"> <li>Understand Plane concept.</li> <li>Understand Wireframe 3D modeling.</li> <li>Create surface modeling by use modification &amp; editing surface feature.</li> <li>Create Drafting with all Engineering symbols &amp; dimensions.</li> </ul>	Plane concepts - Geometric views, construction planes / Construction depth Z level setting, 3D construction plane. Wireframe Modelling : 3D Wireframe, normal, entity, rotated, named, number	16	10	12
IV	SURFACE MODELLING & SOLID MODELLING	<p>At the end of this Unit the student should be able to:</p> <ul style="list-style-type: none"> <li>Understands surface Terminology</li> <li>Create surface 3D models By Using Surface Tools.</li> <li>Understand solid terminology</li> <li>Create 3D solid modelling by using creating, editing &amp; modify tools</li> <li>Understand concept of drafting.</li> <li>Execute Drafting by using various Drafting tools.</li> </ul>	Surface terminology, Types, creating of surfaces, Lofts, ruled, revolved, sweep and draft surfaces, from solid, coons; Solid terminology - Creation of solids extrude, revolve, lofts, sweep, solids manager, fillet, chamfer, solids editing, trim, Boolean operations, shell, draft etc. Creating drafting : dimensions/ drafting note/ freestanding witness / leader lines / attributes / Editing drafting text/ Creating hatch /Smart mode function to create a layout of different part views/ Layout view selection / dimensioning.	12	10	8
V	3D TOOL PATH GENERATION - FINISH	<p>At the end of this Unit the student should be able to:</p> <ul style="list-style-type: none"> <li>Understand surface roughing methods.</li> <li>Execute 3D Machining surface finish Method</li> <li>Check surface &amp; related parameters.</li> <li>Understand using drive &amp; check surface/Solids and related parameters.</li> </ul>	3D machining surface roughing methods. - Radial/ plunge / contour / flow line/ Rest Mill for 3D Surfaces and Solids / Using drive and check surfaces and related parameters - plunge and retract moves About tool containment boundaries. 3D machining surface finishing methods : Project , Flow line, Pencil, Leftover, toolpaths for 3D Surface And Solids, Using drive and check surfaces/ Solids and related parameters - plunge and retract moves About tool containment boundaries etc.	14	10	10
VI	NC UTILITY & MACHINING OF JOB WITH NC	<p>At the end of this Unit the student should be able to:</p> <ul style="list-style-type: none"> <li>Understand 2D tool path generation.</li> </ul>	Post Processing: Generating NC / NCI Files / Editing NC Files / Verification and simulation - back plot / Solid NC Verification of material cutting and simulation. DNC Data	12	12	

	PROGRAMS	<ul style="list-style-type: none"><li>• Understand concept of CNC machining.</li><li>• Perform &amp; execute generate various milling &amp; Lathe operations.</li><li>• Understand Post processing.</li><li>• Understand NC program Transfer to machine.</li></ul>	I.e. NC Program Transfer to machine. Program generation for actual machining / verification / post processing / Job machining on CNC Milling Machine DMU 50 T			
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SEMESTER: I

COURSE NAME: Business Communication

COURSE CODE:

COURSE OUTCOMES:

- Understand appropriate communication skills across settings, purposes, and audiences.
- Demonstrate knowledge of communication theory and application
- Use technology to communicate effectively in various settings and contexts.
- Understanding of opportunities in the field of communication.
- Communicate ethically.
- Demonstrate positive group communication exchanges.
- Understand effective business writing
- Understand effective business communications
- Understand research approaches and information collection
- Understand developing and delivering effective presentations
- Understand effective interpersonal communications
- Understand skills that maximize team effectiveness
- Understand good time management
- effective problem solving

THEORY HOURS: 60

PRACTICAL HOURS:

THEORY MARKS: 60

PRACTICAL MARKS:

Unit No.	Unit Name	Unit level outcomes	Contents (chapters/topics)	TH hours	Marks	
I		After completion of unit Student should be able to: <ul style="list-style-type: none"><li>• Understand definition of communication &amp; various types of communication.</li><li>• Understand effective communication &amp; 7 communications Skills,</li><li>• Understand stages of communications.</li><li>• Understand barriers of communications.</li><li>• Understand Principles of Business</li></ul>	Business Communication at Work: Definition of communication and various types of business communication, channel of communication, importance of effective communication at work, 7 Cs of communication; stages of communication; barriers to effective communications, Principles of Business Communication: Choosing right words that your receivers will comprehend; constructing clear, concise and effective sentences; developing clear, concise, logical, coherent and effective paragraphs. Effective learning.	15	15	



		Communication.			
II		<p>After completion of unit Student should be able to:</p> <ul style="list-style-type: none"> <li>• Understand definition of non-verbal communication &amp; various types of non-verbal communication.</li> <li>• Use effective non-verbal communication.</li> <li>• Understand business writing.</li> <li>• Understand advantages and disadvantages of written communication.</li> <li>• Understand challenges in written communication,</li> <li>• Understand process of writing &amp; art of writing professionals.</li> </ul>	<p>Non-Verbal Communication: Significance of non-verbal communication; types of non-verbal communication; analysis of non-verbal communication; effective use of non-verbal communication</p> <p>Business Writing: Importance of business writing at workplace; advantages and disadvantages of written communication; challenges in written communication; process of writing; art of writing professional letters process of writing</p>	15	15
III		<p>After completion of unit Student should be able to:</p> <ul style="list-style-type: none"> <li>• Understand presentation knowledge.</li> <li>• Understand &amp; developing qualities of effective presenters</li> <li>• Knowledge of Preparing and Delivering Presentations</li> <li>• Understand Role of technology in business communication.</li> <li>• Understand classification of technological tools for communication</li> <li>• Understand resume writing skill.</li> <li>• Understand various application letters writing skill.</li> </ul>	<p>Preparing and Delivering Presentations: Reasons why people are afraid of giving presentations; qualities of effective presenters; common mistakes committed by the presenters; common challenges while giving presentations; journey to successful presentations ,</p> <p>Technology Enabled Business Communication: Role of technology in business communication; advantages and disadvantages of technology based communication; classification of technological tools for communication; effective use of technology enabled communication tools.</p> <p>Résumé Writing: Significance of well drafted résumé; challenges in drafting résumé; various styles and formats of résumé; major sections of résumé; improving presentation of résumé</p> <p>Application Letters: Significance of application letters in the recruitment process; organization of application letters; improving the presentation of application letters.</p>	15	15
IV		<p>After completion of unit Student should be able to:</p>	<p>Handling Job Interviews : Significance of job interviews; employers' expectations from the candidates in an interview;</p>	15	15

		<ul style="list-style-type: none"> <li>• Clarify knowledge about Handling job Interview.</li> <li>• Understand planning and preparation required for an interview.</li> <li>• Understand importance of soft skills in handling interviews.</li> <li>• Understand knowledge in Handling Meetings.</li> <li>• Understand Drafting Routine and Positive Messages.</li> <li>• Make Business Reports and Proposals.</li> <li>• Understand Cross-Cultural Communication.</li> </ul>	<p>types of employment interviews; planning and preparation required for an interview; questions frequently asked in the interviews and how to handle them effectively; importance of soft skills in handling interviews.</p> <p>Handling Meetings, Drafting Routine and Positive Messages, Drafting Negative Messages, Drafting Persuasive Messages, Business Reports and Proposals, Cross-Cultural Communication.</p>			
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