Sri Ramakrishna Mission Vidyalaya College of Arts and Science Coimbatore – 641020

(An Autonomous College Re-Accredited with "A" grade by NAAC and Affiliated to Bharathiyar University, Coimbatore)

B.Voc., Degree course (Three years)

Production Technology (Tool & Die)

(An UGC sponsored DDU-KAUSHAL KENDRA Programme)

SYLLABUS

(ACADEMIC YEAR 2017-2018 Onwards)

Sri Ramakrishna Mission Vidyalaya College of Arts and Science

(AUTONOMOUS)

For Students admitted from 2017-2018& onwards

COURSE OF STUDY

- Syllabus is framed for B.VOC in Production Technology (Tool & Die) according to UGC norms and National Vocational Education Quality Framework
- There are 2 components. They are General components of 24 credits and Skill components of 36 credits.
- One credit is equal to 15 hours for theory and 30 hours for practical. Practical could be either in the campus or in the working place of the Industry.

ELIGIBILITY:

- Candidates who have successfully completed their Higher Secondary (10+2) will be eligible for admission.

PLANNING AND FITTING

Course code	17KUPT101	Credits	04	Year	I
No. of Lecture Hours	60	No. of Practical Hours	--	Sem	I

UNIT – I

Working safety – Health and safety – environmental and operating conditions – Safety considerations – Personal protective equipment (PPE) – Safety regulations – Tools and equipments – Hand tools – Machine tools – Inspection.

UNIT – II

Obtaining and understanding drawings – Tools and dies – Engineering information – Company procedures – Analyze design drawings – Knowledge of available resources – Sequencing / Process planning – Reporting – Specifications – Computing – Production planning

UNIT – III

Various operations – Tool selection – Material selection – Tool life – Factors affecting tool life – Types of equipments – Time estimation – Sequence analysis – Milestones – Approval - Responsibility – Allocation of responsibility – ensure and inspect – Release drawings, machining specifications, process planning, production planning to operators – Selection of tools – Selection of equipments – Selection of materials.

UNIT – IV

Fitting – Types of fitting – Procedures and instructions – Fitting tools – Equipments – Job specification – Requirements – Reporting – Preparation of work area – Measuring instruments – Calibration – Selection of raw materials – Inspection - Selection of tools and equipments – Work holding devices – Supporting mechanisms – Marking – Templates – Transfer / Trace – Hand tools and manually operated machine tools for fitting – Assembling – Inspection.

UNIT – V

Quality – Measurement – Types of measurement – Visual inspection – Standards – Target – Risk of failure – Conditions – Reporting – Time estimation – Production target and specifications – Inspect and check – Documentation.

Equipments – Types – Error – Calibration – Tool components – Tool clamping – Various operations – Drilling, Reaming, Boring, Tapping – Assembling equipments – Fasteners – Adhesives – Soldering – Brazing – Dismantling and assembling – Problem solving – Tool and die – Measure – Inspect – Procedure.

LATHE

Course code	17KUPT102	Credits	04	Year	I
No. of Lecture Hours	--	No. of Practical Hours	120	Sem	I

UNIT – I

Working safety – Environmental conditions – Operating conditions – Personal protective equipment (PPE) – Procedures and guidelines – Health and safety – Safety regulations – Safety instructions.

UNIT – II

Measuring instruments – Types – Error – Calibration – Range – Selection – Materials – Types – Selection – Requirements – Specification – Raw materials – Work area – Process planning.

UNIT – III

Turning – Turning tools – Selection – Types – Properties – Tool materials – Safe working practices – Machine inspection – Work holding devices – types – Tool holding devices.

UNIT –IV

Turning machine – Types – Main parts – Specification – Turret and capstan lathe – Turret indexing mechanism – Driving mechanisms – Various operations – Various attachments – Taper turning – Various methods – Thread cutting – Special attachments – Speed – Feed – Depth of cut.

UNIT – V

Mounting of tools – Work piece – Operating procedures – Modes of control – Usage of Lathe parts – Various methods in clamping work piece – Various equipments used – Backlash – Effects of backlash – Accuracy – Dimensional accuracy – Tool life – Factors affecting tool life – Cutting fluids – Types – Properties – Selection – In-process inspection – Quality control procedures.

SPECIAL MACHINES

Course code	17KUPT203	Credits	04	Year	I
No. of Lecture Hours	60	No. of Practical Hours	--	Sem	II

UNIT : I

Milling – Types of milling – Milling machine – Types – Constructional features – Main parts – Working principle – Inspection of machine – Training – Safety – Tools and equipments – Cutters – Types – Work holding devices – Cutter holding devices – Flexibility of machine – Component drawings – Specifications – Extraction – Various milling machines – Various operations – Hand mode – Power mode – Emerging situations – Safety

UNIT : II

Measurements – System of measurement – Imperial system – Metric system – Quality standards – Production targets – Backlash – Tool life – Surface finish – Accuracy – Cutting fluids – Properties – Types – Quality control procedures – Inspecting equipments – Inspection – Hazards – Equipments – Working tools – Measurements – Measuring instruments – Calibration – Least count – Error – Types – Work holding devices – Clamping – Material selection – Equipment selection.

UNIT : III

Grinding – Types – Grinding machine – Types – Constructional features – Working principle – Grinding wheel – Designation – Preparation – Abrasives and types – Bonding – Materials – Preparation – Types – Various operations – Mounting of grinding wheels – Steps in mounting – Safety considerations – Speed – Feed – Depth of cut – Surface finish – Factors affecting – Coolants – Types – Properties – Selection – Measurement – Measuring instruments – Calibration – Inspection.

UNIT – IV

Work holding devices – Selection – Set – Mark – Prepare the work – Selection of tool – Stone – Wheel – File – Abrasives – Specification of grinding wheel – Factors considered for selection – Bond – Types – Wheel types – Cut-off discs (Diamond blade) – Abrasive grinding discs – Grinding stones – Wire brush wheels

UNIT : V

Control setting – Work handling – Grinding machine – Types – Angle grinders – Bench grinders – Straight grinders – Rotary die grinders – Disc grinder – Electronic grinder – Electric grinder – Hydraulic grinder – Pneumatic grinder – Pedestal grinder – Cylindrical grinder – Inspection – Surface finish – Geometric dimensions – Dressing and truing of wheels – Cutter – Diamond cutter – Common surface imperfections – Errors – Texture – Roughness – Secure tools and equipments – Repairing – Maintenance – Types – Documentation – Job card – Progress reports – Incident reports – Support – Monitor.

PRINCIPLES OF MANAGEMENT

Course code	17KUGE307	Credits	4	Year	II
No. of Lecture Hours	60	No. of Practical Hours	-	Sem	III

OBJECTIVES:

To enable the students to study the evolution of Management, to study the functions and principles of management and to learn the application of the principles in an organization.

UNIT I: INTRODUCTION TO MANAGEMENT AND ORGANIZATIONS

Definition of Management – Science or Art – Manager Vs Entrepreneur – types of managers – managerial roles and skills – Evolution of Management – Scientific, human relations , system and contingency approaches – Types of Business organization – Sole proprietorship, partnership, company-public and private sector enterprises – Organization culture and Environment – Current trends and issues in Management.

UNITII: PLANNING

Nature and purpose of planning – planning process – types of planning – objectives – setting objectives – policies – Planning premises – Strategic Management – Planning Tools and Techniques – Decision making steps and process.

UNIT III: ORGANISING

Nature and purpose – Formal and informal organization – organization chart – organization structure – types – Line and staff authority – departmentalization – delegation of authority – centralization and decentralization – Job Design – Human Resource Management – HR Planning, Recruitment, selection, Training and Development, Performance Management , Career planning and management.

UNIT IV: DIRECTING

Foundations of individual and group behavior – motivation – motivation theories – motivational techniques – job satisfaction – job enrichment – leadership – types and theories of leadership – communication – process of communication – barrier in communication – effective communication – communication and IT.

UNIT V: CONTROLLING

System and process of controlling – budgetary and non-budgetary control techniques – use of computers and IT in Management control – Productivity problems and management – control and performance – direct and preventive control – reporting.

TEXT BOOKS:

1. Stephen P. Robbins & Mary Coulter, " Management", Prentice Hall (India) Pvt. Ltd., 10th Edition, 2009.
2. JAF Stoner, Freeman R.E and Daniel R Gilbert "Management", Pearson Education, 6th Edition, 2004.

CNC MACHINES AND EDM

Course code	17KUPT304	Credits	05	Year	II
No. of Lecture Hours	75	No. of Practical Hours	--	Sem	III

Unit-I

Working Safety – Personal Protective equipment – Hand tools – Cutting tools - Cutting tools materials – Measuring equipments. Preparing for machining activities on Turning Center – Valid sources – Job Specification documents- Job requirements.

Information pertaining to tapping sizes and thread, feed and speeds, machining symbol and tolerance – Preliminary check – Cutting tools- reference charts – Tables and Graphs – Preliminary check – Description of Turning machine specification.

Critical Parameters- Tooling data – Features of machined components produced work holding device and fixtures- Basic maintenance activities – features and profiles – Symbols used in program – Address characters function – G codes and M codes- identify different parts of the CNC turning machine -perform various turning operations to produce various features on metal and non-metal components.

Unit-II

Turning operations : straight turning, taper turning, facing, grooving, parting off, thread cutting, drilling, reaming, boring, etc.,

Milling operations: e.g. milling of flat services; gang and straddle milling; milling of sunk and recessed surfaces, face milling, side milling, angular milling, slotting, slitting, key way cutting, face slot cutting, woodruff cutting, dovetail cutting, etc.

CNC machines – 2 axis CNC m/c – 3 axis m/c centre (VMC,HMC) terms in programming – Checks – CNC Programming operation – Preparing, Loading, storing in appropriate format providing part program, trial runs – Simulation [Command and format] – Reference position – Cutter radius offset – Tool length offset] – Cutter compensation function.

Unit-III

Engineering drawing-Dimensioning and labeling – Projection – Isometric Projection Part – Programme for relative work – Tool movement of a CNC m/c tool – Co-ordinate positioning (Absolute, Incremental), use of sub routines, macros and canned cycles- Cad/Cam CNC Program –Tool material design.

Tooling and work holding devices – Carry out setting for CNC turning center – Set up of machine – Perform the necessary checks before allowing the machine to operation in full program run mode – Checks – Measure all dimension as per specification – Basic maintenance activities.

Unit-III

Introduction to Unconventional machining processes – Types of Unconventional machining processes – Measuring equipments. Preparing for machining activities – Valid sources – Job Specification documents- Job requirements. EDM-Spark erosion-Preliminary check e.g. Machine condition, position and alignment of work piece, lubricating systems, coolant level-sub-systems working condition, etc.,-Accuracy standards-free from damage-false tool cuts-burrs-scratches and non-specified sharp edges-general dimensional tolerance +/- 0.02mm-flatness and squareness 0.05mm-angles within +/-1 degree-setting of machine to achieve target

Unit-IV

Measuring and machining tools-Positioning and holding devices-Mechanical properties of metals-Features of finished components-Dimensional parameters-Accuracy parameters. Preparation of EDM for production-mount and setting of work holding devices-cutting tools-positioning of work piece-selecting and mounting of electrodes-setting machine tool operating parameters. Specification of EDM-electrical conditions-alignment of electrodes-filtration equipment-liner feeds and speeds-dielectric flow rates-ventilation and fume extraction-safety mechanisms/devices-maximum weight carrying capacity

Unit-V

Range of materials : ferrous e.g. low, medium and high carbon steels, low alloy steels, stainless steels, cast iron- nonferrous e.g Aluminium and its alloys, bronze, silicon carbide-Trial run-adjustment of parameters-positioning-hand over-instructions and documentation-completion of documentation-Switching on/off EDM-returning tools, equipments and instruments to store-changing of cutting tools-Documentation : job card-progress records-incident reports-problem solving-guidance-leaving work area.

TECHNICAL DRAWING

Course code	17KUGE408	Credits	4	Year	II
No. of Lecture Hours	60	No. of Practical Hours	-	Sem	IV

Objectives:

At the end of the semester the student must be able to draw

- 2D diagrams using Auto CAD
- Symbols widely used in Electrical and Electronics circuits

Unit I- Introduction to AutoCAD

History of AutoCAD-Applications- Advantages over manual drafting - hardware requirements – software requirements – window desktop – AutoCAD screen interface – menus – toolbars - How to start AutoCAD – command groups – How to execute command – types of coordinate systems – absolute-relative-polar.

Unit II -Text and Dimensioning

Auto CAD importance, Auto CAD Tools, Drafting and Unit settings, Auto CAD commands, Types of Lines and Layers -Simple Sketches (lines and curves)

Single text and multi text- Basic dimensioning – editing dimensions – dimensions styles – dimensioning systems variables.

Unit III - Geometrical construction

-Triangle (Equilateral triangle, Right angle triangle, Isosceles triangle, Acute triangle) -Rectangle, Rhombus, Trapezium,-Circles (AutoCAD Relevant) -Regular Polygons (Square, Pentagon, Hexagon, Heptagon, Octagon)-Parabola (Tangent method, Offset method)-Ellipse (Parallelogram method, Four centre method, Concentric circles method)-Hyperbola-Cycloids -Involutes -Helix - Spiral curves.

Unit IV-Projections

Orthographic (first angle and third angle) (10 simple exercises each) - Isometric (5 simple exercises)- (Different types of machine parts- 2D and 3D wire frame models- Solid figures) - Oblique (2D and 3D wire frame models) (3 simple exercises) - Blue print reading (Missing views - Missing Lines - Missing dimensions)

Unit V -Electrical and Electronics Symbols

Draw symbols of – DC armatures – alternators – field winding shunt, series and compound – relays – contactors – fuses – main switch – electric bell – earth – aerial – DPST – DPDT – TPST – Network link – ammeters – voltmeters – wattmeter – energy meters – frequency meters – power factor meters – timers – buzzers – transformers – auto transformers Incandescent lamp, Fluorescent Lamp, Signal lamp, Push button, Fire alarm ,Siren, Water Heater, Ceiling Fan, Exhaust Fan.Draw symbols of Resistors – inductors – capacitors - diodes – transistors – FET – SCR – UJT – DIAC – TRIAC – MOSFET'S - LOGIC GATES – AND – OR – NOT – NAND – NOR – EXOR

Text Books:

1) Gopalakrishnan K.R., "Engineering Drawing" (Vol I & II combined), Subhas stores, Bangalore - 2007

2) Shah M.B., and Rana.B.C., " Engineering Drawing", Pearson, 2nd edition, 2009.

PROFESSIONAL ETHICS AND HUMAN VALUES

Course code	17KUGE409	Credits	4	Year	II
No. of Lecture Hours	60	No. of Practical Hours	-	Sem	IV

Objectives:

- Understand what morality is and how it connects to professional ethics
- Understand the features of moral reasoning, moral explanations and the role of moral theories
- Develop a case resolution model for resolving moral dilemmas faced by professionals

Unit I:Business Ethics

Conceptual approach – Emerging issues – Importance of Ethics – Understanding Ethics – Ethical decision making – Moral problem

Unit II:Managing Ethical Organization

Elements of ethical organization – Manager's role in influencing ethical climate - Codes of ethics – Codes of Contact – Ethical leadership – Ethical organization

Unit III:Business ethics in Profession

Ethical concern in Human Resource Management (HRM) – Ethical issue in marketing and advertising – Marketing ethics – Ethics in production management – work ethics

Unit IV:Corporate Governance and social responsibility:

Corporate Governance – Company management – Factors for success – Social responsibility towards stakeholders – Social responsibility of business

Unit V:Human Values

Wisdom Management – A person of character – Knowledge Management – Understanding success – Stress management

Text Book:

Business Ethics and Global Values by S.K Bhatia, Deep & Deep Publication Pvt. Ltd., New Delhi

DRAFTING AND PLOTTING

Course code	17KUPT405	Credits	05	Year	II
No. of Lecture Hours	75	No. of Practical Hours	--	Sem	IV

Basics of CAD

Intro of CAD - CAD Workspaces - Using The Application Menu, Ribbon And The QAT-Command Line, Dynamic Input And Auto Complete- Toolbars, File Tabs And The Menubar-Pallets And Short Cut Menus-Using Function Keys And Command Aliases- The Status Bar-An Introduction To Model Space And Paper Space- Quick Access the Drawings

Fundamental Operations

Start and Quitting CAD-Object Selection Methods, Undo Command- Working With Specific Units- Working With The Coordinate System- Using The Grid System With The Snap Feature- Pan , Zoom, Osnap,Ortho and Grips- Project related to until this Chapter

Drawing and Drafting Tools

Lines, Polylines And Their Uses-Arcs, Circles and its types-Points And Their Styles-Polygons , Rectangles And Ellipses- Methods To Create Precise Objects- Project related to until this Chapter

Editing and Transforming Tools

Trim and Extend Lines- Delete, Trim And Extend Lines- The Move And Copy Commands-Stretching, Rotating and Scaling Objects- Offset and Mirror- Fillet And Chamfer- Types of Arrays and Object Properties- Project related to until this Chapter

Using Layers

Creating And Editing Layers- Layer Properties and Manager- Freeze, Thaw, On, Off, And Lock

Annotations

Dimensions and its Styles- Dimensioning Tools And Settings- Multileaders- Single and Multiline Text- Text Styles and Tables- Chapter Project

Blocks

Intro about Blocks and its uses- Creating Blocks and Editing Blocks- Inserting Blocks And Using Them- Attributed and Dynamic Blocks- The Effect Of Exploding Blocks- Chapter Project

Plot And Publish

The Difference between Model Space And Paper Space-Viewports , Page Setup and Plotting-Export Your File.

Total Quality Management

Course code	17KUGE513	Credits	04	Year	III
No. of Lecture Hours	60	No. of Practical Hours	--	Sem	V

Unit- I INTRODUCTION

Introduction - Need for quality - Evolution of quality - Definitions of quality - Dimensions of product and service quality - Basic concepts of TQM - TQM Framework - Quality statements - Customer focus - Customer orientation, Customer satisfaction, Customer complaints, and Customer retention - Costs of quality.

Unit- II TQM PRINCIPLES

Leadership -Customer focus - Customer orientation, Customer satisfaction, Customer complaints, Customer retention - Employee involvement - Motivation, Empowerment, Team and Teamwork, Recognition and Reward, Performance appraisal - Continuous process improvement - PDSA cycle, 5s, Kaizen - Supplier partnership - Partnering, Supplier selection, Supplier Rating.

Unit- III TQM TOOLS & TECHNIQUES I

The seven traditional tools of quality - New management tools - Six-sigma: Concepts, methodology, applications to manufacturing, service sector including IT

Unit- IV TQM TOOLS & TECHNIQUES II

Control Charts - Process Capability - Concepts of Six Sigma - Quality Function Development (QFD) - Taguchi quality loss function - TPM - Concepts, improvement needs - Performance measures.

Unit - V QUALITY SYSTEMS

Need for ISO 9000 - ISO 9001:2015, ISO 29990:2010 Quality System - Elements, Documentation, Quality Auditing - QS 9000 - ISO 14000 - Concepts, Requirements and Benefits - TQM Implementation in manufacturing and service sectors.

TEXT BOOK

1. Dale H.Besterfiled, et at., "Total Quality Management", Pearson Education Asia, Third Edition, Indian Reprint (2006).
2. Janakiraman,B and Gopal, R.K, "Total Quality Management - Text and Cases", Prentice Hall (India) Pvt. L

DESIGN OF JIGS AND FIXTURES

Course code	17KUPT506	Credits	05	Year	III
No. of Lecture Hours	75	No. of Practical Hours	--	Sem	V

UNIT-I

Organization's policies and procedures for creating mechanical designs – roles and responsibilities of a designer - Microsoft office tools – presentation of designs - Sources of information and methodologies available – accessing – applied mechanics in practice – different types of simple mechanical designs and its uses – constraints – impact of constraints in mechanical designs - importance of design materials.

Creation of detailed drawings - Preparation of Bill of Materials (BOM) - Documents – knowledge sharing – creating documents for knowledge sharing - Organization's policies, procedures and guidelines for knowledge sharing – purpose and scope of knowledge sharing.

UNIT-II

Team working – methods and techniques used in team working – tools, templates and language standards - document preparation tools – word, excel, power point – uses of document preparation tools - Organization's policies, procedures and priorities for your area of work – roles and responsibilities to carry out the work - Specific work requirements - Accuracy – importance of completing work accurately – procedure for accurate working – timescales.

UNIT-III

Organization's procedures, guidelines for providing data/information – role and responsibilities in providing data/information – knowledge management culture – organization's policies and procedures for recording and sharing information – importance of complying the information - techniques used to obtain data/information – role based analysis – typical anomalies occur in data/information – reporting of inaccurate data/information

UNIT-IV

Tool design objectives - Production devices - Inspection devices - Materials used in Jigs and Fixtures – Types of Jigs - Types of Fixtures-Mechanical actuation-pneumatic and hydraulic actuation-Analysis of clamping force-Tolerance and error analysis.Drill bushes –different types of jigs-plate latch, channel, box, post, angle plate, angular post, turnover, pot jigs-Automatic drill jigs-Rack and pinion operated. Air operated Jigs components. Design and development of Jigs for given components. General principles of boring, lathe, milling and broaching fixtures- Grinding, planning and shaping fixtures, assembly, Inspection and welding fixtures- Modular fixtures. Design and development of fixtures for given component.

UNIT-V

Press working terminology-Presses and press accessories-Computation of capacities and tonnage requirements. Elements of progressive combination and compound diesDie block-die shoe. Bolster plate-punch plate-punch holder-guide pins and bushes – strippers –knockouts-stops –pilots-Selection f standard die sets strip lay out-strip lay out calculations.Design and development of progressive and compound dies for Blanking and piercing operations. Bending dies – development of bending dies-forming and drawing dies-Development of drawing dies. Design considerations in forging, extrusion, casting and plastic dies.

(Use of approved design data book is permitted)

TEXT BOOKS

1. Edward G Hoffman, Jigs & Fixture Design, Thomson – Delmar Learning, Singapore 2004
2. Donaldson. C, Tool Design, Tata McGraw-Hill, 1986

REFERENCES

1. Kempster, “Jigs & Fixtures Design, The English Language Book Society”, 1978
2. Joshi, P.H., “Jigs & Fixtures, Second Edition”, Tata McGraw-Hill Publishing Company Limited, New Delhi 2004
3. Hiram E Grant, ‘ Jigs and Fixture’ Tata McGraw-Hill, New Delhi, 2003
3. Fundamentals of Tool Design, CEEE Edition, ASTME, 1983
4. PSG College of Technology, Coimbatore - Design Data Handbook.

Safety Engineering

Course code	17KUGE615	Credits	04	Year	III
No. of Lecture Hours	60	No. of Practical Hours	--	Sem	VI

Unit-I Introduction

Evolution of modern safety concept- Safety policy - Safety Organization - line and staff functions for safety- Safety Committee- budgeting for safety - Risk assessment & management - Safety Education and training- Importance, various training methods – First Aid, Resuscitation, Bleeding, management of shock, Burns, scalds and accidents caused by electricity, Rescue and transport of casualty Role of management and role of Govt. in industrial safety, safety analysis.

Unit-II Safety prevention

Definitions and theories, Accident, Injury, unsafe condition, Dangerous occurrence- Cost of accidents- Accident prevention- Safety performance - Personal protective equipment- survey the plant for locations and hazards, part of body to be protected - Economic importance of accidents, Analysis of accident records, accident investigations.

Unit-III Safety in Material Handling

General safety rules, principles, maintenance, Inspections of turning machines, boring machines, milling machine, planning machine and grinding machines, CNC machines, electrical guards, work area, material handling, inspection - Heat treatment operations, paint shops, sand and shot blasting, safety in inspection and testing, pressure vessels, air leak test, steam testing, safety in radiography, personal monitoring devices, radiation hazards.

Unit-IV Shopfloor Safety

Automotive vehicle design, selection, operation and maintenance of motor vehicle - Basic automotive road Signals, Symbols, Rules and Regulation - safety on manual, mechanical handling equipment operations - Servicing and maintenance equipment grease rack operation wash rack operation - battery charging - gasoline handling - other safe practices - preventive maintenance-check lists - motor vehicle insurance and surveys.

Unit-V Electrical Safety

General principles of electric safety - Preventive maintenance - Electricity & Human body - Earthing / Grounding - Safety against over voltage, extra-low and residual voltages - Hazardous areas, Electrical insulation - Energy leakage - Electrical fires and Arc flash - Electrical causes of fire and explosion - National electrical Safety code - Safety in the use of portable tools.

Text Books:

1. C.RayAsfahl , *Industrial Safety and Health management,* Pearson Prentice Hall,2003.
2. N.V Krishnan. *Safety Management in Industry* Jaico Publishing House, Bombay, 1997.

Entrepreneurship Development

Course code	17KUGE616	Credits	04	Year	III
No. of Lecture Hours	60	No. of Practical Hours	--	Sem	VI

Unit I: Entrepreneurship

Meaning, Definition, Characteristics and Functions-Role of Entrepreneur in economic development -Types-Qualities of an Entrepreneurs - Classification of Entrepreneurs-Factors Influencing Entrepreneurship – Entrepreneurship development programme – Self Employment schemes – Government policies on Entrepreneurial development.

Unit II: Institutional Finance to Entrepreneurs

State Level Financial Institutions: State Financial Corporation (SFCS) - State Industrial Development Corporation (SIDCS) – Tamilnadu Industrial Investment Corporation (TIIC) - Small Industries Promotion Corporation of Tamilnadu (SIPCOT).

All Indian Financial Institutions:

Industrial Development Bank of India (IDBI) – Industrial Finance Corporation of India (IFCI) – Industrial Credit Investment Corporation of India (ICICI) – Industrial Rural Development Bank of India (IRDBI).

Unit III: Institutional Setup to Entrepreneurs

District Industries Centre (DIC) – National Small Industries Corporation (NSIC) – Small Industries Development Corporation (SIDC) – Small Industries Service Institute (SISI) – Indian Investment Centre – Kadhi and Village Industries (KVIC).

Unit IV: Incentives and Subsidies of State and Central Government

Subsidy For Market – Capital Assistance - Subsidized Services – Taxations, Benefits to SSI – Transport Subsidy – Seed Capital Assistance – Special Facilities for imports.

Unit V: Sources of Ideas

Preliminary Evaluation and Testing of ideas – Demand based industries and Resource based industries - Project Formulation - Project Identification-Evaluation-Feasibility Analysis-Project Report.

Text Books:

1. Radha V, Entrepreneurship Development, Prasanna Publication House, 2008.
2. Khaka SS, Entrepreneurship Development, S. Chand & Co. Ltd. 2010.
3. Vasant Desai. The Dynamics of Entrepreneurship Development and Management.
4. Gupta C. B, Srinivasan N.P. Entrepreneurship Development, S. Chand & Co. Ltd. 2011.