

B.Tech(MechanicalEngineering)detailSyllabusforAdmissionBatch2017-18^{7th}/^{8th} semester

SEVENTH SEMESTER					
Theory / Practical / Sessional					
Subject Code	Subject Name	Hours/ Week L/T	Credit Theory	University Marks	Internal Evaluation
PME7J001/ PME7J002	Mechanical Vibration/ Tribology	3-0-0	3	100	50
PME7J003/ PME7J004	Robotics/Simulation, Modeling & Control	3-0-0	3	100	50
PCP7H007/ PCP7H008/ PCP7H009	Internet of Things (IOT)/ NanoScience&BioTechnol ogy/ IntellectualPropertyRights(IPR)	3-0-0	3	100	50
PCP7H010/ PCP7H011/ PCP7H012	Soft Computing/ IntroductiontoManagement&Fun ction/ MarketingManagement	3-0-0	3	100	50
PCP7H013/ PCP7H014/ PCP7H015	Entrepreneurship Development/ E-Commerce & ERP / Business Regulatory Framework	3-0-0	3	100	50
Total Credit/Marks (Theory)			15	750	
Practical					
PME7N201	Seminar	0-0-2	2	-	100
PME7N202	Minor Project	0-0-2	4	-	200
PME7N203	Comprehensive Viva	0-0-1	2	-	100
Total Credit/Marks (Practical)			08	400	
Total Semester Credit/ Marks			23	1150	

*Those who taken the subject Marketing Management in 5th semester are not allowed to avail in 7th Semeste

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Eighth Semester					
Sl. No.	Subject Category	Subject Name	Credit	University Marks	Internal Marks
Practical					
1	PME8N201	Internship/ Major Project	10		500
Total Credit/Marks (Practical)			10	500	
Total Semester Credit/ Marks			10	500	

PME7J001

MECHANICAL VIBRATION

3-0-0

MODULE – I [12]

1. INTRODUCTION & IMPORTANCE OF MECHANICAL VIBRATION:

Brief history of Mechanical Vibration, Types of Vibration, Simple Harmonic Motion (S.H.M.), Principle of superposition applied to S.H.M., Beats, Fourier Analysis, Concept of degree of freedom for different vibrating systems.

2. UNDAMPED FREE VIBRATION OF SINGLE DEGREE FREEDOM SYSTEMS: Modeling of Vibrating Systems, Evaluation of natural frequency – differential equation, Energy & Rayleigh's methods, Equivalent systems.

3. DAMPED FREE VIBRATION OF SINGLE DEGREE FREEDOM SYSTEMS: Different types of damping, Equivalent viscous damping, structural damping, Evaluation of damping using free and forced Vibration technique, Concept of critical damping and its importance, study of vibration response of viscous damped systems for cases of under damping, critical damping and over damping, Logarithmic decrement.

MODULE – II [15]

4. FORCED VIBRATION OF SINGLE DEGREE FREEDOM SYSTEMS: Steady state solution with viscous damping due to harmonic force, reciprocating and rotating unbalance mass, vibration isolation and transmissibility due to harmonic force excitation and support motion. Vibration measuring instruments – vibrometer and accelerometer. Whirling of shaft with single disc and without damping, Concept of critical speed and its effect on the rotating shaft.

5. UNDAMPED VIBRATION OF TWO DEGREE FREEDOM SYSTEMS: Free vibration of spring coupled and mass coupled systems, Longitudinal, Torsional and transverse vibration of two degree freedom systems, influence coefficient technique, Un-damped vibration Absorber.

MODULE – III [13]

6. INTRODUCTION TO MULTI-DEGREE FREEDOM SYSTEMS: Normal mode vibration, Co-ordinate coupling-close coupled and far coupled systems, Orthogonality of mode shapes, Methods of matrix iteration, Holzer's method and Stodola method. Torsional vibration of two, three and multi-rotor systems. Dunkerley's lower bound approximate method.

7. CONTINUOUS SYSTEMS: Vibration of strings, longitudinal vibration of rods, torsional vibration of rods, transverse vibration of Euler-beams.

TEXT BOOKS:

1. Theory of vibration with Applications: W.T. Thomson and Marie Dillon Dahleh, Pearson Education 5th ed. 2007.
2. Introductory Course on theory and Practice of Mechanical Vibrations. J.S. Rao & K. Gupta, New Age International Publication, New Delhi, 2007.

REFERENCE BOOKS:

1. Mechanical Vibrations: S.S. Rao, Prarson Education Inc, 4th ed. 2003
2. Mechanical Vibrations: S. Graham Kelly, Schaum's outline series, Tata McGraw Hill, Special Indian ed., 2007

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3. Mechanical Vibrations: V.P. Singh, Dhanpat Rai & company Pvt. Ltd. 3rd ed., 2006
4. Elements of vibration Analysis: Leonard Meirovitch, Tata McGraw Hill, Special Indian ed., 2007

PME7J002

TRIBOLOGY

3-0-0

(PROFESSIONAL
ELECTIVE)

MODULE - I (12 HOURS)

Introduction : Lubricant and lubrication, Types of bearings, properties and testing of lubricants, Basic equations: Generalized Reynolds equation, Flow and Shear Stress, Energy equation, Equation of state

Hydro dynamic lubrication :

Mechanism of pressure development and load carrying capacity, Plane-slider bearing, Idealized slider bearing with a pivoted shoe, Step bearing, Idealized journal bearing. – infinitely long journal bearing, Petroffs equation for a lightly loaded bearing, narrow bearing,

MODULE - II (11 HOURS)

Oil flow and thermal equilibrium - Heat balance of lubricants Hydrostatic Bearing :

Principles, Component of hydrostatic lubrication , Hydrostatic circular thrust bearing , calculation of pressure, load carrying capacity, flow rate , power loss in bearing due to friction.

MODULE - III (12 HOURS)

Concept of gas lubricated bearing

Concept of Elastohydrodynamic lubrication, Design and selection of antifriction bearing Friction and wear of metals :

Theories of friction, surface contaminants, Effect of sliding speed on friction, classification and mechanism of wear, Wear resistant materials.

TEXT BOOKS

1. Introduction to Tribology of Bearing , B.C .Majumdar , S. Chand & Co

REFERENCE BOOKS

1. Fundamentals of Tribology , Basu S K., Sengupta A N., Ahuja B. B., , PHI 2006
2. Basic Lubrication theory, A. Cameron, John Wiley & sons
3. Lubrication Fundamentals, D.M.Pirro and A.A.Wessol, CRC Press
4. Theory and Practice of Lubrication for Engineers, Fuller, D., New York company 1998
5. Principles and Applications of Tribology, Moore, Pergamon press 1998
6. Tribology in Industries, Srivastava S., S Chand and Company limited, Delhi 2002
7. Lubrication of bearings – Theoretical Principles and Design, Redzimoskay E I., Oxford press company 2000

PME7J003

ROBOTICS

3-0-0

MODULE – I

1. Fundamentals of Robotics: Evolution of robots and robotics, Definition of industrial robot, Laws of Robotics, Classification, Robot Anatomy, Work volume and work envelope, Human arm characteristics, Design and control issues, Manipulation and control, Resolution; accuracy and repeatability, Robot configuration, Economic and social issues, Present and future application.

2. Mathematical modeling of a robot: Mapping between frames, Description of objects in space, Transformation of vectors.

Direct Kinematic model: Mechanical Structure and notations, Description of links and joints, Kinematic modeling of the manipulator, Denavit-Hartenberg Notation, Kinematic relationship between adjacent links, Manipulator Transformation matrix.

MODULE – II

3. Inverse Kinematics: Manipulator workspace, Solvable of inverse kinematic model, Manipulator Jacobian, Jacobian inverse, Jacobian singularity, Static analysis.

4. Dynamic modeling: Lagrangian mechanics, 2D- Dynamic model, Lagrange-Euler formulation, Newton-Euler formulation.

5. Robot Sensors: Internal and external sensors, force sensors, Thermocouples, Performance characteristic of a robot.

MODULE – III

6. Robot Actuators: Hydraulic and pneumatic actuators, Electrical actuators, Brushless permanent magnet DC motor, Servomotor, Stepper motor, Micro actuator, Micro gripper, Micro motor, Drive selection.

7. Trajectory Planning: Definition and planning tasks, Joint space planning, Cartesian space planning.

8. Applications of Robotics: Capabilities of robots, Material handling, Machine loading and unloading, Robot assembly, Inspection, Welding, Obstacle avoidance.

TEXT BOOKS:

1. Robotics and Control, R.K. Mittal and I.J. Nagrath, Tata McGraw Hill
2. Introduction to Robotics: Mechanics and control, John J Craig, PHI
3. Robotics Technology and Flexible Automation, S.R.Deb and S. Deb, TMH

REFERENCE BOOKS:

1. Introduction to Robotics, S. K. Saha, Tata McGraw Hill
2. Robotics: Control, Sensing, Vision and Intelligence, K.S.Fu, R.C.Gonzalez and C.S.G.Lee, McGraw Hill
3. Robotics, AppuuKuttan K.K., I.K. international
4. Robot Dynamics and Control, M.W.Spong and M. Vidyasagar , Wiley India.
5. Industrial Robotics Technology, programming and application, M.P.Groover, TMH.
6. Introduction to Robotics: Analysis, Systems, Applications, S.B.Niku, PHI
7. Robotics: Fundamental Concepts and Analysis, A. Ghosal, Oxford University Press
8. Fundamentals of Robotics: Analysis and Control, R. J. Schilling, PHI

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9. Robotic Engineering: An Integrated Approach, R.D. KLAFTER, T. A. Chmielewski, and M. Negin, PHI
10. Robot Technology: Fundamentals: J. G. Keramas, Cengage Learning

PME7J004

SIMULATION, MODELING AND CONTROL

3-0-0

MODULE I 14 HOURS

Basic simulation modeling, Discrete event simulation, Simulation of queuing and Monte Carlo simulations.

inventory systems, Continuous, Discrete-continuous and Mon

Statistical models in simulation, Discrete and continuous distributions, Poisson process, Empirical distribution, Generation of pseudo random numbers, Analysis of simulation data,

Parameter estimation, Goodness-of-fit tests, Multivariable time series models.

MODULE II 12 HOURS

Overview of feedback control systems, Dynamics of mechanical systems, Differential equations and state variable form, Models of electromechanical, Heat-and fluid flow models, Linearization and scaling, Models from experimental data, Dynamic response using pole-zero locations, Time domain specifications, Classical 3-term controllers and its digital implementation, Stability analysis by Routh Criterion.

MODULES III 10 HOURS

Simulation of manufacturing and material handling systems, Goals and performance measures, Modeling downtime and failures, Trace driven models, Case studies.

TEXT BOOKS :

1. Discrete-Event system simulation by Jerry Banks, J.S. Carson, B.L. Nelson and D.M. Nicol (Pearson Publications).
2. Feedback control of dynamic systems by G.F. Franklin, J.D. Powell, A-Naeini, Pearson Publications.
3. Simulation modeling and analysis by A.M. Law, W.D. Kelton, Tata McGrawHill Publications.

PCP7H007

IOT

3-0-0

Course description and objectives:

Students will be explored to the interconnection and integration of the physical world and the cyber space. They are also able to design & develop IOT Devices.

Course Outcomes:

- Able to understand the application areas of IOT
- Able to realize the revolution of Internet in Mobile Devices, Cloud & Sensor Networks
- Able to understand building blocks of Internet of Things and characteristics.

Module I

Introduction & Concepts: Introduction to Internet of Things, Physical Design of IOT, Logical Design of IOT, IOT Enabling Technologies, IOT Levels.

Domain Specific IOTs: Home Automation, Cities, Environment, Energy, Retail, Logistics, Agriculture, Industry, Health & Life Style.

Module II

M2M & System Management with NETCONF-YANG: M2M, Difference between IOT and M2M, SDN and NFV for IOT, Software defined Networking, Network Function Virtualization, Need for IOT Systems Management, Simple Network Management Protocol, Limitations of SNMP, Network Operator Requirements, NETCONF, YANG, IOT Systems management with NETCONF-YANG.

Module III

Developing Internet of Things & Logical Design using Python: Introduction, IOT Design Methodology, Installing Python, Python Data Types & Data Structures, Control Flow, Functions, Modules, Packages, File Handling, Date/ Time Operations, Classes, Python Packages

Module IV

IOT Physical Devices & Endpoints: What is an IOT Device, Exemplary Device, Board, Linux on Raspberry Pi, Interfaces, and Programming & IOT Devices.

TEXT BOOKS:

1. VijayMadiseti, ArshdeepBahga, "Internet of Things A Hands-On- Approach", 2014, ISBN:978 0996025515

REFERENCE BOOKS:

1. AdrianMcEwen, "Designing the Internet of Things", Wiley Publishers, 2013, ISBN:978-1-118-43062-0
2. Daniel Kellmerit, "The Silent Intelligence: The Internet of Things". 2013, ISBN:0989973700

PCP7H008

Nano Science & Biotechnology

3-0-0

Module -1(6 Hours)

Fundamental and process of fabrication

The world of small dimensions, Nanoscale Properties (Electrical, Optical, Chemical, Mechanical), Nanoscale visualization techniques , Electron microscopy (TEM, SEM, Cryo-SEM), Scanning probe microscopy (AFM, STM), Diffraction techniques (XRD,synchrotron),Top-down and Bottom-Up approach , nanoparticles (synthesis,properties and applications).

Module-2 (12 Hours)

Nano-Device and Components:

Structure of carbon nanotube, Classification and physical properties of CNT, Graphene: structure, synthesis and properties, Nanophotonics (Photonic crystal in one, two and three dimensions), Quantum dot, quantum wire, Nanofluidics: nanopores and Nano capillaries, Debye length, Nanomechanics (elastic, thermal and kinetic material properties).

Module-3 (10 Hours)

Quantum Electronics:

Coulomb blockade in nano capacitors and quantum dot circuits. Single Electron Transistor (SET), Quantum information and computing, Spintronics devices and its classifications, Structural and optical properties of nanomaterials, Molecular Electronics, NEMS, Optical and Magnetic computer.

Module -4 (10 Hours)

Bio-Device and application

Bio-nanostructures (nanofibers, nanotubes, nanocellulose), Biological nanomachines Ribosomes, Photosynthesis systems,Near-field Bioimaging, Nanoparticles for optical diagnosticsand Targeted Therapy,Protein nanotechnology, DNA nanotechnology, Nano robot and its application, Nanocapsule, Nanosomes, Medibots, Artificial pancreas, Artificial Muscle,Nanoclinic for Gene delivery and photodynamic therapy Nanoparticle in cancer, Bionanomotors.

ADDITIONAL MODULE (Terminal Examination-Internal) (05 hr)

Nanotechnology safety and the environment,Impact of nanotechnology on society and industry, Biosensors (fabrication, functionalization, applications), Current research on nanotechnology.

Books:

1. Rishal Singh, S.M. Gupta,Introduction to nanotechnologyOxford university press,(2016).
2. Paras N. Prasad, Nanophotonics, John Wiley & Sons, (2016).
3. C. M. Niemeyer, C. A. Mirkin, —Nanobiotechnology: Concepts, Applications and Perspectives, Wiley – VCH, (2004).
2. 4 T. Pradeep, —Nano: The Essentials, McGraw – Hill education, (2007).
4. Challa, S.S.R. Kumar, Josef Hormes, CarolaLeuschaer, Nanofabrication

Towards Biomedical Applications, Techniques, Tools, Applications and Impact, Wiley – VCH, (2005).

5. Nicholas A. Kotov, —Nanoparticle Assemblies and Superstructures, CRC, (2006).
6. David S Goodsell, “Bionanotechnology, John Wiley & Sons, (2004).

PCP7H009

IPR

3-0-0

Module I:

Introduction to Intellectual property: Introduction, types of intellectual property, international organizations, agencies and treaties, importance of intellectual property rights.

Trade Marks: Purpose and function of trade marks, acquisition of trade mark rights, protectable matter, selecting and evaluating trade mark, trade mark registration processes.

Module II:

Law of copy rights: Fundamental of copy right law, originality of material, rights of reproduction, rights to perform the work publicly, copy right ownership issues, copy right registration, notice of copy right, international copy right law.

Law of patents: Foundation of patent law, patent searching process, ownership rights and transfer

Module III:

Trade Secrets: Trade secrete law, determination of trade secrete status, liability for misappropriations of trade secrets, protection for submission, trade secrete litigation.

Unfair competiitiion: Misappropriation right of publicity, False advertising.

Module IV:

New development of intellectual property: new developments in trade mark law; copy right law, patent law, intellectual property audits.

International overview on intellectual property, international - trade mark law, copy right law, international patent law, international development in trade secrets law.

TEXT BOOKS & REFERENCES:

1. Intellectual property right, Deborah, E. Bouchoux, cengage learning.
2. Intellectual property right - Unleashing the knowledge economy, prabuddhaganguli, Tata Mc Graw Hill Publishing Company Ltd.

PCP7H010

SOFT COMPUTING

3-0-0

MODULE – I (8 hours)

Basic tools of soft Computing: Fuzzy logic, Neural Networks and Evolutionary Computing, Approximations of Multivariate functions, Non – linear Error surface and optimization.

MODULE – II (8 hours)

Fuzzy Logic Systems: Basics of fuzzy logic theory, Crisp and fuzzy sets; Basic set operations; Fuzzy relations, Composition of Fuzzy relations, Fuzzy inference, Zadeh's compositional rule of inference; Defuzzification ; Fuzzy logic control; Mamdani and Takagi and Sugeno architectures. Applications to pattern recognition.

MODULE—III (16 hrs)

Neural networks: Single layer networks, Perceptron; Activation functions; Adalinc- its training and capabilities, weights learning, Multilayer perceptrons; error back propagation, generalized delta rule; Radial basis function networks and least square training algorithm, Kohonen self – organizing map and learning vector quantization networks; Recurrent neural networks, Simulated annealing neural networks; Adaptive neuro-fuzzy information; systems (ANFIS),

MODULE—IV (08 hrs)

Evolutionary Computing: Genetic algorithms: Basic concepts, encoding, fitness function, reproduction. Differences of GA and traditional optimization methods. Basic genetic, basic evolutionary programming concepts Applications, hybrid evolutionary algorithms.

Text Books

- 1) F. O. Karry and C. de Silva, "Soft Computing and Intelligent Systems Design – Theory, Tools and Applications". Pearson Education. (Printed in India).

Reference Books

- 1) J. S. R. Jang. C. T. SUN and E. Mizutani, "Neuro-fuzzy and soft-computing". PHI Pvt. Ltd., New Delhi.
- 2) Fredric M. Ham and Ivica Kostanic, "Principle of Neuro Computing for Science and Engineering", Tata McGraw Hill.
- 3) S. Haykins, "Neural networks: a comprehensive foundation". Pearson Education, India.
- 4) V. Keeman, "Learning and Soft computing", Pearson Education, India.
- 5) R. C. Eberhart and Y. Shi, "Computational Intelligence Concepts to Implementation". Morgan Kaufmann Publishers (Indian Reprint).

PCP7H011 INTRODUCTION TO MANAGEMENT AND FUNCTION 3-0-0

Module – I:Introduction

Introduction to Management: Concept, Definition, Functions; Levels of Management, Skills and Roles of a Manager; Management Process, School of Management thoughts: Pre-Scientific, Classical, Behavioral and Modern; Types of business organizations, merits and demerits, Public Organizations.

Module – II:Planning

Nature & Elements of Planning, Planning Types, Steps, MBO, MBE, Planning Premises. Decision making process, Decision Making under Risk and Uncertainty, Participation in Decision making, Creativity in decision making

Module – III:Organizing and Staffing

Formal and Informal, Line and Staff Relationship, Centralization Vs. Decentralization, Basic issues in Organizing, Work Specialization, Chain of Command, Delegation, Span of Management, Principles of organizing; Organization Structure for Departmentalization.

Module – IV: Directing and Controlling: Process, Standards and Bench Marking; Control techniques, Factors influencing control effectiveness, Co-ordination-Principles of Co-ordination; Inter- Dependence.

Reference Books

1. Management Theory & Practice; SubbaRao P &HimaBindu, HPH
2. Principles and Practices of Management – Kaul, Vikas
3. Management, Robbins, Coulter &Vohra, Pearson.
4. Management: Text and Cases-VSP Rao, Excel Books

PCP7H012

MARKETING MANAGEMENT

3-0-0

Objective of the Course: The course aims at introducing the basic concepts of marketing to the undergraduate students in engineering. The learning shall help the students in better designing, manufacturing and selling product/ service packages keeping competitive market, customers and cost in view.

Module – I (10 hours)

Marketing Management: Concept, Process, Functions and relevance in the current context. Marketing Environment: Elements of micro and macro environment Competition Analysis: Factors contributing to competition, porter's five forces model, Identifying and analyzing competitors. Marketing Planning : Exploring Opportunity, Product –market selection, Marketing Planning Process. Market Research and Information Systems: Research Process, The Internet and World Wide Web based Information collection and processing, Database, Data Warehouses and Data Mining, Global Market Research. Consumer Behavior: Factors influencing consumer behavior, consumer decision process. Organizational buying behavior.

Module II (10 hours)

Market Segmentation, Targeting and Positioning: Definition, Bases of segmenting consumer and Industrial markets. Target Market strategies: Market Positioning. Market Demand Forecasting: Key Terms, Forecasting Tools: Short term tools: Moving average and Exponential smoothing methods, Long-term forecasting Tools: Time series analysis, Econometrics methods, Qualitative tools : Buying Intention Survey, Sales Force Opinion and Delphi Techniques. Product Planning : Product Life Cycle, New Product Development Process, Branding Strategy, Positioning a Brand, Brand Equity, Packaging and Labeling, Product-mix and Product Line, Planned Obsolescence.

Module – III (10 hours)

Pricing Decision: Objectives and Factors influencing pricing, Pricing method and strategies. Integrated Marketing Communication(IMC)- Concept of IMC, the marketing communication process, Promotion Mix, elements of promotion mix, Direct marketing. Channels of Distributions: Types of intermediaries, functions of distribution channels, channel levels, Designing Distribution Channels, Physical Distribution, Supply Chain Management (Basic only). Trends in Marketing: Green Marketing, Customer Relationship Management, Emarketing, Rural Marketing and Service Marketing (concepts only)

Text Book:

1. Etzel , Walker ,Stanton and Pandit, Marketing, 14/e, Tata McGraw Hill.
2. Saxena, "Marketing Management" Tata McGraw Hill, 4/e.

Reference

1. Grewal, Levy, 'Marketing' Tata McGraw Hill, special Indian edition.
2. Karunakaran "Marketing Management", Himalaya Publishing House, 2010/e.
3. Kotler, Keller,Koshy and Jha, "Marketing Management", 13/e, Pearson Education.

PCP7H013 ENTREPRENEURSHIP DEVELOPMENT

Module-I

Entrepreneurship: Concept of entrepreneurship and intrapreneurship, Types of Entrepreneur, Nature and Importance, Entrepreneurial Traits and Skills, Entrepreneurial Motivation and Achievement, Entrepreneurial Personality

Module II

Entrepreneurial Environment, Identification of Opportunities, Converting Business Opportunities into reality. Start-ups and business incubation, Setting up a Small Enterprise. Issues relating to location, Environmental Problems and Environmental pollution Act, Industrial Policies and Regulations,

Module III

Need to know about Accounting, Working capital Management, Marketing Management, Human Resources Management, and Labour Laws. Organizational support services - Central and State Government, Incentives and Subsidies.

Module IV

Sickness of Small-Scale Industries, Causes and symptoms of sickness, cures of sickness, Role of Banks and Governments in reviving industries.

Reference Book:

1. Entrepreneurship Development and Management, Vasant Desai, HPH
2. Entrepreneurship Management, Bholanath Dutta, Excel Books
- 3 Entrepreneurial Development, Sangeeta Sharma, PHI
4. Entrepreneurship, Rajeev Roy, Oxford University Press

PCP7H014 E-Commerce & ERP

Module I

Overview of Electronic Commerce, Driving the Electronic Commerce Revolution, The Internet, Portals. Open Systems Inter Connection (OSI) Model, XML, Data Warehousing, Building own Website, Internet Security

Module II

E-Commerce and Internet, Electronic Market, Business to Business E-Commerce, Four C's (Convergence, Collaborative Computing, Content Management and Call Center) , Wireless Application Protocol (WAP), Intranet and Extranets. Data Interchange (EDI), Electronic Payment Systems, E-Security

Module-III

Overview of enterprise systems – Evolution - Risks and benefits - Fundamental technology - Issues to consider in planning designing and implementation of cross functional integrated ERP systems. Small, medium and large enterprise vendor solutions, BPR, and best business practices
- Business process Management, Functional modules.

Module IV

ERP IMPLEMENTATION: Planning Evaluation and selection of ERP systems, Implementation life cycle - ERP implementation, Methodology, Data Migration, Success and Failure factors of ERP Implementation. Extended ERP systems and ERP add-ons -CRM, SCM, Manufacturing prospective, Business analytics .

Reference Book:

1. E- Commerce and Enterprise Resource Planning ; CSV Murthy, HPH
2. Enterprise Resource Planning- Concepts and Practices ; V K Garg and N K Venkatkrishna, PHI
3. Enterprise Resource Planning; Alexix Leon ; TMH

PCP7H015 Business Regulatory Framework

Module – I

Overview of legal world, Law of Contract : Contract Act: Indian Contract Act, 1872, Agreement, Contract, Essentials of Contract (Offer & Acceptance, Consideration, Capacity of Parties, Free Consent, and Legality of Object), Performance and Discharge of Contract, Remedies for breach of contract, Quasi-Contract and Contingent Contract.

Module – II

Special Contracts: Contract of Agency: Mode of creating & revocation of Agency, Rights and Duties of Agents and Principals. Contract of Bailment (Rights and duties of Bailor and Bailee). Sales of Goods Act: Sale and agreement to sell, Condition and Warranty, Transfer of properties, Finder of Goods, Performance of Contract of sale, Unpaid seller and his rights.

Module- III

Consumer Protection Law: Consumers, Rights of Consumers, Redressal Machinery under the Act, Procedure of Complaint, Relief available to the consumers, Procedure of filing appeal, Powers of Redressal agencies, Unfair Trade Practices. Overview of Competition Act,

Module – IV

Company Law: Indian Companies Act 2013, Salient features and Classes of Company. Lifting of corporate veil, Procedure of Incorporation and Certificate of commencement of business, Memorandum and Articles of Association, Doctrine of ultra vires and Indoor Management, Management of Company: Qualification, Appointment of Directors, Company Meetings, Resolutions, Winding-up of Companies and their modes.

Reference:

1. Business Regulatory Framework–Mohapatra and Patra,HPH
2. Business Law – N D Kapoor, SChand
3. Business Law – Pathak, Tata Mc Graw
4. Legal frame work,Oxford.