SECOND YEAR DETAIL SYLLABUS

SI No	Sem ester	Sub. Code	Elective Papers	L-T-P	Credit	University Marks	Internal Evaluation
L	3'"	18MBA301A	Consumer Behaviour	3-0-0	3	100	50
2.	3rd	18MBA302A	Sales & Distribution Management	3-0-0	3	100	50
3.	3rd	18MBA303A	Digital Marketing	3-0-0	3	100	50
4.	3rd	18MBA304A	Service Marketing	3+0+0	3	100	50
5.	4th	18MBA401A	Retail Management	3-0-0	3	100	50
6.	4th	18MBA402A	Product & Branding Management	3-0-0	3	100	50
7.	4th	18MBA403A	B2B Marketing	3-0-0	3	100	50
			TOTAL,		21	700	350

Director, Curriculum Development Biju Patnak University of Technology, Odisha

Rouskola

3 rd Semester	18MBA301A	Consumer Behaviour	L-T-P	3 Credits	35 hrs
			3-0-0		

- To understand the role of consumer behavior in marketing and to develop the skills to map the consumer's mind set.
- To identify consumer behavior and to analyze emerging issues in buying behavior.

COURSE OUTCOME:

The student will understand the influences on customer choice and the process of human decision making in a marketing context.

Module -1:

Theories of Consumer Behaviour: Learning theory, Psychoanalytic theory, Gestalt, Cognitive theory, Psychological field, Black box Model, Distributive Approach, implication of these theories, Consumer decision: Process approach, Factors, influencing consumer decision making, Segmentation, Psychographics & VALS; Diffusion of Innovations.

Module - II:

Individual Determinants of Behaviour: Personality, perception, attitude (attitudinal models), learning, Motivation, Group influence on consumer behaviour-Social class, Social groups, Opinion leaders. Role of social media in shaping consumer behavior, Culture and its impact on Consumer behaviour, Relevance of culture in making decisions, Characteristics of culture, Cultural Values, Cultural Changes, Cross cultural understandings. Family: Role & Structure, Family Life Cycle, Purchasing decisions, changing role of families.

Module - III

Models of Consumer Behaviour: Engel- Kollat-Blackwell Model. Changing Consumer Behaviour and its dynamics, Consumer Behaviour in online marketing, Characteristics of modern women and Netizens, Consumer decision Journey and stages, Omni Channel Behaviour,

Books:

- Consumer Behavior, Leon G. Schiffman, Leslie Lazar Kanuk, S.Ramesh Kumar, Pearson
- Consumer Behavior, David L. Loudon & Albert, J. Della Bitta, Tata McGraw Hill
- Consumer Behavior Indian Perspective, Suia R. Nair, Himalaya Publishing House
- Consumer Behavior, Satish K. Bhatra& S H HKazmi, Excel Books

Director, Curriculum Development Siju Painait University of Technology, Odisha Rounteia

3 rd Semester	18MBA302A	Sales	de	Distribution	L-T-P	3 Credits	35 hrs
		Manag	ement		3-0-0		

- To enrich students with the dynamics of sales & its strategy for accomplish organizational goal.
- To teach various functions of distribution, service outputs to be delivered by marketing channel for mass coverage and in international market.

Module-1:

Sales Management: Objectives and Functions, Setting up a sales organization, Selling process, Management of Sales force, Recruitment & Selection, Training, sales force motivation, Compensating Sales Force, Sale forecasting, Territory design and Management, Evaluation of sales force, Sales Budget, Sales Quota, concept of Sales analytics.

Module - II:

Distribution Management: Designing customer oriented marketing channel, own sales channel vs intermediary, Managing channel member behavior, Channel Conflict, Co-operation & competition. Omni Channel, Distribution analysis- Depth and width of distribution, Per Dealer Stocking, Percentage Dealer Stocking, Per Dealer Off take, Stock Turnover Ratio, Weighted Distribution. Vertical marketing system, Horizontal Marketing system.

Module - III:

Logistics management: Objectives of logistics, Logistics planning, Inventory management decisions, Transportation decisions, Supply chain Management in Online Marketing and Retailing.

Books :

- Sales and Distribution Management, Krishna K. Havaldar, V.M. Cavale, Tata McGraw
- Sales and Distribution Management Bhatt K S -Himalay
- Fundamentals of Sales Management, Ramneck Kapoor, Macmillan
- Sales and Distribution Management, Dr.S.L. Gupta, Excel Books
- Sales Management, Tanner, Honeycutt and Erffmeyer, Pearson

Director, Curriculum Development Biju Patnaik University of Technology, Odinha Rourketa

The parties of the same of

35 | Page

3rd Semester 18MBA303A Digital Marketing	L-T-P	3 Credits	35 hrs
N	3-0-0	7-50507-C4	

- To understand online consumer behavior and concept of cyber branding.
- To understand the technological importance of SEO
- How to creates Google AdWords campaign, Social Media planning to get basic knowledge of Google analytics for measuring effect of digital marketing and getting insight future trends that will affect future development of digital marketing.

Module - 1:

Basics of Digital Marketing: Evolution of Digital Marketing, Digital – the next wave of marketing, Digital Marketing Landscape, Key Drivers, Digital Consumer & Communities, Gen Y & Netizen's expectation & influence,

Module - II:

Search Engine Marketing: PPC and online marketing through social media, Social Media strategy, SEO techniques, On page and off page, Keyword advertising, Google web-master and analytics overview, Customer engagement, Affiliate Marketing & strategic partnership, CRM & CX in digital marketing – Email Marketing, Content strategies, consumer segmentation and positioning by online tools.

Module - III:

Google Analytics, AdWords, Ad Sense: Display adverting, different type of ad tools, remarketing, Display advertising terminology, types of display ads, different ad formats, Ad placement techniques, Important ad terminology, ROI measurement techniques, Mobile Marketing: Best practices of mobile marketing, types of mobile marketing.

Books :

- Using GoogleTM AdWords and AdSense, M. Miller, Que Publishers
- Digital Marketing –Kamat and Kamat-Himalaya
- Marketing Strategies for Engaging the Digital Generation, D. Ryan,
- Digital Marketing, V. Ahuja, Oxford University Press
- Digital Marketing, S.Gupta, McGraw-Hill
- Quick win Digital Marketing, H. Annmarie, A. Joanna, Paperback edition



3 ^{cit} Semester 18MBA304A Service Marketing	1_T-P	3 Credits	35 hrs
	3-0-0		

- To understand the meaning of services and the significance of marketing the services.
- To introduce and apply skills for the 7 Ps of services marketing and design the market plan
- To analyze the factors contributing to customer satisfaction in a service Organization

Module-1:

Introduction to services marketing, Characteristics of services compared to goods, Emergence of Service Economy, Services marketing Challenges, Service Encounter, Service Blueprint, Service triangle, Service scape, Service marketing mix,

Module-II:

Quality Issues and Models, Gap Analysis, SERVQUAL, Application of SERVQUAL, Service product, New service development, Branding, Packaging, Pricing, Promotion, Service delivery channels: direct channels, franchising, agents, brokers, internet channels, channel conflicts and resolution.

Module -III:

Building customer relationships- Relationship marketing, Relationship value of customers, customer profitability segment, customer life time value, Relationship development strategies, Relationship challenges, e-CRM, Service Consumer Behaviour, Service failure & Recovery, Service Research and innovations -Financial Services, Tourism Services, Education Services, ITES, Telecom services, Health Services.

Books:

- Services Marketing, Valarie A. Zeithaml, Mary Jo Bitner, D. Gremler, Ajay Pandit, Megraw Hill
- Services Marketing –Karunakaran K Himalaya
- Services marketing, Christopher Lovelock, Jochen Wirtz, Javanta Chatterjee, Pearson
- Services marketing, GovindApte, Oxford University Press
- Services marketing, Rajendranargundkar, Tata Megraw Hill

Director, Curriculum Development Biju Patnaik University of Technology, Odisha Rourkella

4th Semester	18MBA401A	Retail Management	L-T-P	3 Credits	35 hrs
			3-0-0	200000000000000000000000000000000000000	17.25

- · To familiarize students with retailing concepts, strategies, and problems
- To enhance student's capability to identify and analyze business environment and its
 opportunities and limitations, to set appropriate goals and to design the strategies to
 achieve those goals within the current situations

Module - 1:

Emergence of organized retail in India, Retailing - Role, Relevance and Trends, Retail organization, Types of retailers, Retail Formats, Retail Consumer Behaviour, Retail Marketing Mix., Retail Market Strategy, Technology in Retail.

Module - II:

Retail Location Decisions, Merchandise Planning, Managing Assortments, Store Management, Layout, Design, Space Management, Visual Merchandising, Retail Aesthetics, Retail Atmospherics, Retail Equity.

Module - III:

Retail Communication Mix, Selection of promotion mix, Retail sales promotion, Retail Pricing: Price Setting, Pricing Strategies, GMROI, Managing Retail Brands- Branding strategies in retail, brand equity, Retail brand extension, Creating brand value.

Books:

- Retailing Management, Michael Levy, Borton A Weitz, Ajay Pandit, McGraw Hill
- Retailing Environment and Operations, Andrew J. Newman and Peter Cullen, Cengage Learning
- Retail Management A Strategic Approach, Barry Berman, Joel Evans, Mini Mathur, Pearson
- Retail Management ,Suja Nair, Himalaya Publishing Home

Director, Curriculum Development Bliu Patnets University of Technology, Odisha Rourkela

4th Semester	18MBA402A	Product	&	Branding 1T-P	3 Credits	35 hrs
		Management		3-0-0		

- To generate marketing skills among students to identify a product in its life cycle and formulating tactical strategies in a competitive marketing environment.
- To teach various fundamentals of brand management and compute brand value and equity.

Module -1:

Product Management: Emerging Indian market and relevance of product management, Concept of product management, Role of product manager, Product oriented organization, Product classification, Marketing of FMCG/FMCD product, Product mix and line decision, Product market strategy in competitive environment, New product development and design, Identifying PLC stages and designing suitable marketing strategy.

Module-II:

Branding: Naming a Brand, Brand association, Brand image, Brand relationship, Brand identity, Brand identity prism, Brand loyalty, Brand personality, Brand life cycle, Brand positioning.

Module-III:

Brand management: Stages in Brand building, brand strategy, brand architecture, reasons for success and failure of brand, Brand equity and valuation, branding ethics, Social media branding, brand rejuvenation.

Books:

- Product Management, D. R. Lehmann & R. S. Winer, 4th Edition, TATA McGraw-Hill publications
- Brand Management Practices –Sashikumar -Himalaya
- Product and Brand Management, UC Mathur, 2004, New Delhi: Excel Books
- Product Management in India, Ramanuj Majumdar, 3rd Revised edition, PHI publications
- · Product Management, S. A. Chunawalla, Himalaya Publishing House.
- Strategic Brand Management, K. L. Keller, 2nd Edition, Pearson Publications.

Director, Curriculum Development Biju Patnaik University of Technology, Odieha Rouskela

4th Semester 18MBA403A B2B Marketing	L-T-P 3-0-0	3 Credits	35 hrs
--------------------------------------	----------------	-----------	--------

- To provides theoretical, imperial and case based concepts geared to the needs of the students interested to work in business to business market.
- To study the Strategic Market Planning for Products and Channels in B2B Market

Module-L

Introduction to Business Marketing: The importance of Business Marketing, Business Marketing Vs Consumer Marketing, Type of Business customer, Type of Business products, Understanding business market &environment, Organizational buying and buying behavior, buying decision making process, Buying grid, Buying centre, Roles in the buying centre.

Module-II

Segmentation, Targeting and Positioning of Business Marketing: Segmentation Criteria — Company characteristics, Buying Process, Benefits Sought, Targeting — Selection of right segment, Differential — value creation in Marketing Mix, Relationship development for high performance, Pricing and bidding, Role of branding in B2B marketing.

Module-III

Distribution Management: Types of Business channel intermediaries, channel functions, Business market channel design – design criteria and Strategy, Logistic Management – need & importance in Business Marketing, Tendering and quotation management, negation skill, Market Logistics decision: Logistics activities in Supply Chain Management, order processing transportation mode, warehousing, Inventory Management, Cost control in S.C.M., Reverse Logistics.

Books:

- B2B Marketing, K. Venkataraman, Notion Press, First edition (2017)
- B2B Marketing, N. Ellis & S. Sarkar, Asian Edition, Oxford Publications.
- B2B Marketing, M.D. Hutt & D. Sharma, T.W. Speh., 11th Edition, Cengage B2B marketing, Sage Publications.
- Mastering B2B Marketing, J. Coleman, Independently published (June 23, 2018)
- B2B Marketing Strategy, H.Taylor, 1st Edition, Kogan (December 10, 2017)

Director, Curriculum Development Biju Patnak University of Technology, Odisha Routsels

40 | Page

SI No	Sem ester	Sub. Code	Elective Papers	L-T-P	L-T-P Credit	University Marks	Internal Evaluat ion
1.	310	18MBA301B	Security Analysis & Portfolio Management	3-0-0	3	100	50
2.	3rd	18MBA302B	Financial Derivatives	3-0-0	3	100	50
39.	3rd	18MBA303B	Advanced Management Accounting	3-0-0	3	100	50
4.	3rd	18MBA304B	Project Appraisal and Financing	3-0-0	3	100	30
5.	4th	18MBA401B	Business Taxation	3-0-0	3	100	50
6.	4th	18MBA402B	Behavioural Finance	3-0-0	3	100	50
7,:	4th	18MBA403B	Mergers and Corporate Restructuring	3-0-0	3	100	30
			TOTAL		21	700	350

Director, Curriculum Development Biju Patnaik University of Technology, Odisha Routseia

3rd Semester 18MBA301B	Security	Analysis	8	Portfolio	L-T-P	3 Credits 35 hrs
	Managem	ent			3-0-0	50 M M M M M S4500

OBJECTIVES: To enable student to understand the numees of stock market operations understand the techniques involved in deciding upon purchase or sale of securities.

Module-I:

Investment: Features and objectives, Alternative forms of investment, Risk & Return on investment measuring risk and return on single Asset and on 'n' assets portfolio, Computation of Risk and Return on a portfolio, Interpretation of portfolio, Basics of Stock Market Operations.

Module-II

Investment Models, Selection: Markowitz Model for portfolio selection, feasible set portfolios, efficient set, selection of optional portfolio. Sharpe's Single Index model, Alpha, Beta, Efficient frontier with risk free lending and borrowing. CAPM, pricing of securities with CAPM, Arbitrage pricing theory. Efficient Market Hypothesis.

Module-III:

Fundamental and Technical Analysis and evaluation: Economic, Industry and Company Analysis, Technical Analysis, Charting tools, Volume and price trends, technical indicators, Performance Evaluation of portfolio, Portfolio management strategies.

Books:

- Security Analysis & Portfolio Management, S.Kevin, PHI
- Security Analysis & Portfolio Management, P Singh, HPH
- Security Analysis & Portfolio Management, A P Dash, IK International, New Delhi
- SAPM, K. Sasidharan, Alex K.Mathews, McGraw Hill

Director, Curriculum Development Biju Panak University of Technology, Odisha Routula

42 Page

3rd Semester [18MBA302B] Financial Derivatives	L-T-P	3 Credits	35 hrs
	3-0-0		

Course Objective: This paper will enable students to understand the mances involved in derivatives and understand the basic operational mechanisms in derivatives

Module-I

Financial Derivatives - An overview: Introduction, Definition of Financial Derivative, Features, Types of Derivatives, Basic Financial Derivatives, History, development and growth of Derivatives Market, Use of Derivatives, Traders in Derivative Markets, Factors contributing to the growth of Derivatives, Forward contract, Features of Forward Contract, Classification of Forward Contracts.

Module-II

Future Market: Introduction, Financial Futures contracts, Types of Financial Futures, Basic hedging practices, continuous compounding, cost of carry, margin requirement for futures, convenience yield, stock futures, use and application of stock index futures, arbitrage with stock futures, Beta and the optimal hedge ratio, Currency Futures Market.

Module-III:

Options Market and SWAP: Types of options, payoff of long and short put, payoff of long and short call, covered call writing, protective put strategy, straddle, strangle, bull spreads, bear spread, butterfly spread, box spread. Principles of option pricing- put-call parity, binomial mode for pricing options, Black-Scholes model, volatility and implied volatility from the Black-Scholes model, options Greeks and basic delta hedging. SWAP: Introduction, concept, Nature, Evolution, Features, And Types of Swaps; plain vanilla swaps, interest rate swaps, currency swaps,

Books:

- Options , Futures and other Derivatives, Hull J.C., Pearson
- Financial Derivatives-Theory, concepts and problems, Gupta, PHI
- Derivatives and Risk Management, Srivastava, Oxford
- Derivatives and Risk Management, Verma J.R. TMH
- Fundamentals of Financial Derivatives, NR Parasuraman, Wiley India

Director, Curriculum Development Biju Painab University of Technology, Odisha Rourkels

3 rd Semester	18MBA303B	Advanced Management Accounting	1T-P	3 Credits	35 hrs
			3-0-0	- 08.77.00	

Module-L

Introduction to Cost Accounting and Management Accounting: Basic concepts: Scopes. Types of Cost, Financial Accounting, Cost Accounting and Management Accounting., Methods of Costing, Techniques of Costing, Classification of Costs, Cost Centre, Cost Unit, Profit Centre, Investment Centre, Preparation of Cost Sheet, Total Costs and Unit Costs.

Module-II.

Methods and Techniques: Job Costing, Contract costing and Process Costing, Joint Product and By Products. Service Costing: Variable Costing and break-even analysis. Short term decisions using variable costing, short term decisions using relevant costing. Product costs using activity based costing.

Module-III

Management Tools: Budgetary Control: Functional budgets, Cost budget, Master Budget, Performance budgeting and Zero based budgeting. Flexible budgets. Standard Costing: Standard cost and standard costing, standard costing and budgetary control. Analysis of variances (Material, Labour and Sales). Balance Score card for measuring total business unit performance. Financial Measures of Performance: Investments and EVA

Books:

- A text book on Cost and Management Accounting, M.N Arora, Vikas
- Advanced Management Accounting, Kaplan and Atkinson, Pearson
- Advanced Management Accounting, Madegowda J., Himalya Publishing House
- Management Accounting, Khan and Jain, Mc GrawHill

Director, Curriculum Development Biju Patnaik University of Technology, Odena Routesia

3rd Semester 18MBA304B	Project Appraisal and Financing	L-T-P	3 Credits	35 hrs
		3-0-0		

Module - I: Project Identification and Formulation

Project characteristics, Taxonomy of projects, Attributes of a Good Project Manager, Project Identification, Project formulation, Screening of Project Ideas, Tax Incentives and Tax Planning for project investment decisions, Zero based project formulation, Project objectives, establishing the Project, UNIDO manuals, Detailed Feasibility Study Report.

Module-II: Project Cost Estimation and Project Appraisal:

Cost of project, Components of capital cost of a project, Order of Magnitude estimate, Technical appraisal, Commercial appraisal, Economic appraisal, Financial Appraisal, Management appraisal, Govt. projects and social projects, Social Cost benefit analysis. Environmental Appraisal.

Module -III: Project Financing and Risk Analysis

Sources of financing, Role of Financial institutions in project financing, covenants attached to lending. Project Risk Analysis, Techniques of Risk Analysis, Project Organization, Infrastructure projects- characteristics and issues related to infrastructure projects, state of infrastructure in India, New Approaches for infrastructure, PPP. Government support and regulation. Project evaluation objectives, evaluation methods, Project monitoring and control, Various types of Project Termination.

Reference Books:

- Project Appraisal and Financing Lath, Prasar-Himalaya
- Project Management- K. Nagarajan- New Age International
- Project Management and Appmisal-S.Khatua-Oxford
- Project Management-Pinto-Pearson
- Project Management and Control-N Singh-HPH
- Projects Management Prasanna Chandra, Mc GrawHill

Director, Curriculum Development Biju Patnaik University of Technology, Odehn Rourkele

4th Semester	18MBA401B	Business Taxation	The second second second	3 Credits	35 hrs
			3-0-0		

Module-I:

Direct Taxation: Introduction, Constitution and Taxation, Legal Instruments, Income Tax. Residential Status, Previous Year and Assessment Year, Heads of Income, Exemptions.

Module-II:

Income sources: Computation of income: Income from salary, capital gains and house properties and other incomes. Computation of income from business and profession, Various exemptions.

Module-III:

Introduction to indirect taxation: Computation of tax under GST, Value added tax.

Books:

- Business Taxation Mohapatra, Sahu Himalaya
- Business Taxation A. Pathak and S. Godiawala , Mc Graw Hill Publication
- Taxation Singhania , Taxmann
- Taxation Haribaran

Director, Curriculum Development Blju Patnak University of Technology, Odiaha Rouwela

4th Semester I	8MBA402B	Behavioural Finance	L-T-P	3 Credits	35 hrs
			3-0-0		

Module-1

Foundations of Finance: Nature, Scope and Significance Behavioral Finance, Market Strategies, Expected Utility Theory, Risk Attitude, Allais paradox. Building Blocks.

Module -11

Prospect Theory: Prospect Theory. Framing and Mental Accounting, Rationality in investment decision, Elisberg's paradoxes, Investors sentiments and Bubble creation.

Module-III:

External Factors and investors behavior: Heuristics and Biases; Overconfidence, Fear and Greed in Financial Market, emotions and financial markets, statistical methodology for capturing the effects of external influence onto stock market returns. Behavioral Corporate Finance.

Reference Books:

- Behavioral Finance: Sinha PK Himalaya
- Behavioral Finance: Shuchita Singh and Batt, Vikas.
- Value investing and behavioral Finance, Parag Parikh, TMH
- Understanding Behavioral Finance, Cengage
- Behavioral Finance, Chandra, Mc GrawHill

Director, Curriculum Development Biju Patnaik University of Technology, Odisha Rourkela

4th Semester	18MBA403B	Mergers and Corporate Restructuring	L-T-P	3 Credits 35 hrs
			3-0-0	

Module-I:

Financial Policy and Corporate Strategy: Strategic decision making framework; Interface of financial policy and strategic management; Balancing financial goals vis-à-vis sustainable goals

Module-II:

Mergers and Takeover: Meaning of mergers and acquisition, categories, purposes. Process of M & A – identification and valuation of the target, acquisition through negotiation, due diligence, post mergers integration, legal and regulatory requirement, M&A agreement, reverse merger, potential advise, effects of mergers. Major causes of M&A failures. Corporate take overs: Motivation, co-insurance effect, cross border take overs, forms of take overs, takeover defenses. Going private and other controlled transactions: CBO, MBO, spin offs and asset divestures

Module-III:

Corporate Restructure: Refinancing and rescue financing, reorganization of debtors and creditors, sale of assets, targeted stock offerings, downsizing and lay off program, negotiated wage give backs, employee buy outs financial reconstruction, process of corporate restricting, techniques of corporate restricting.

Books:

- Mergers Acquisiotn and corporate restructuring Sinha PK Himalay
- Mergers and Acquisition, A.P.Dash, IK Internationals, New Delhi
- Strategic Financial Management, Jakhotia, Vikas
- Strategic Financial Management, Ravi M Kishore, Taxman

Director, Curriculum Development Blu Patish University of Technology, Odisha Rouriels

SI No	Sem ester	Sub. Code	Elective Papers	L-T-P	Credit	University Marks	Internal Evaluation
i.	3rd	18MBA301C	Manpower Planning	3-0-0	3	100	50
2.	3rd	18MBA302C	Employee Relations	3-0-0	3.	100	50
3.	3rd	18MBA303C	Compensation and Benefit Management	3-0-0	3	100	50
4.	3rd	18MBA304C	Performance Management System	3-0-0	3:	100	50
5.	4th	18MBA401C	Team Dynamics at work	3-0-0	3	100	50
6.	4th	18MBA402C	Strategic HRM	3-0-0	3.	100	50
7.	4th	18MBA403C	Industrial Legislations	3-0-0	30	100	50
			TOTAL		21	700	350

Director, Curriculum Development Biju Patnak University of Technology, Odisha Rourkals

3 rd Semester	18MBA301C	Manpower	Planning	L-T-P	3 Credits	35 hrs
		2	100	3-0-0		

Course Objective: To enable the students to acquire knowledge and skill necessary for preparing the manpower plan of the business enterprise or to understand such a plan drawn up by the manpower planning cell of company.

Module -1:

Manpower Forecasting: Introduction, Manpower Planning Objective (Micro & Macro Levels), HR Planning linkage with other HR function, Influencing factors in Manpower Planning. Forecasting, Necessity for forecasting, Steps in forecasting, Demand and supply forecasting, Demand & Supply Forecasting techniques, Forecasting accuracy, Benefits of forecasting — Manpower Planning, Strategic staffing—HR planning process,—Job analysis and description. Problems in HRP, Guidelines for effective HRP, Recent trends in HRP.

Module - II:

Developing a Manpower Plan: Introduction, Developing a Manpower Plan, Qualitative Side of Manpower Planning, Behavioral Event Interviewing, Standard Interviews, Competency Mapping (Skill Inventory), Sample Manpower Plan Competency mapping – procedures and steps, methods of data collection for mapping, developing competency models from raw data, Use and applicability of Statistical and Mathematical Models in Manpower Planning: Cohort Analysis, Census Analysis and Markov Models

Module - III:

Strategic HRP: Definition & Concept, Benefits of strategic manpower planning (SMP), strategies, methods, and tools for SMP, key steps in SMP: Assessing competencies, Gap analysis and strategy development. A Business process approach to HRP.

Books :

- Human Resource Planning and Strategic Change Acharya, Tripathy-Himalaya
- Manpower planning and the development of human resources by Thomas Henry Patten published by Wiley-Interscience, 1971
- Human Resource Planning by Dipak Kumar Bhattacharyya, Excel Books
- Manpower Planning and Strategic Change- Acharya and Tripathy, HPH

Director, Curriculum Development Blju Patriali University of Technology, Odleha Rourkela

3rd Semester	18MBA302C	Employee Relations	1,-T-P	3 Credits 35 hrs
D- 100-11-00-11-0		The same of the sa	3-0-0	

- Describe the nature and importance of employee relation to develop a good and healthy employee-employer relationship in the organization.
- To know the different acts of industrial relation system for effective management of trade unions.

Module - I:

Introduction to Employee Relations: Introduction, Overview of Employee Relations, Importance of Employee Relations, Employee Relations Management Tool, Core Issues of Employee Relations Management, Strategic Employee Relations Management: Introduction, Different Strategy Levels in an Organization, Strategy and Employment Policies, Future Challenges, The Psychological Contract.

Module - II:

Industrial Relations: Concept, Scope and Approaches to Industrial Relations-Unitary, Pluralistic, and Radical approach, Industrial Relations Systems (IRS), Trade Unionism: Concept, structure and function. Industrial Dispute: Code of Discipline and Grievance Management, Dispute Resolution and Industrial Harmony. Collective Bargaining.

Module-III:

Tripartite and International Bodies: Tripartism and IR, ILC & SLC, ILO-Structure and Functions, Conventions and Recommendations, Bipartism Link with Tripartism, Strengthing Tripartite Social Dialogue, Workers Participation in Management.

Books:

- L. Employee Relations, Elizabeth Aylott, Kogan Page
- 2. Labour Welfare, Trade Unionism and Industrial Relation- Puneker, Deodhar-Himalaya
- Industrial Relations, C.S. VenkataRatnam, Oxford
- 4. Industrial Relations, Trade Unions & Labour Legislation, Sinha & Shekhar, Pearson
- Industrial Relations, Monappa, TMH



3 rd	18MBA303C Compensation and Benefit Management	L-T-P	3 Credits 35 hrs
Semester	X V.	3-0-0	Shaariin a mirr

- 1. To learn basic compensation concepts and the context of compensation practice
- · 2. To learn the concepts of payment and employee benefits issues.
- 3. To understand various benefits an employee can avail during service.

COURSE OUTCOME:

 1. Students can apply various compensation scheme and employee welfare measures at workplace which can help them for better human resource management.

Module I:

Conceptual and Theoretical Aspects of Compensation: Concept of compensation. The 3P Compensation concept, System of Compensation, Compensation Dimensions, Organizational Compensation policy, Methods of Payment: TRS, PBR, MDW; New Trends in compensation, Concept and Components of Wages, Theories of wages; Subsistence theory, Wage Fund Theory, Marginal Productivity theory, Residual Claimant Theory, Surplus Value theory, Bargaining theory, Employment theory, Competitive theory

Module-II:

Wage Administration and Wage Determination: Principles of Wage and Salary administration, Job Evaluation: Concept, Scope, Methods and Techniques, Merit based pay. Types of Incentive plans, Wage differentials, Wage Policy, Socio-Economic objectives of Wage policy, Criteria of wage fixation, Broad-banding, Executive Compensation.

Module III:

Employees Benefits: Overview of Employee's Benefits, Components of Wage and Benefits Structure, Employees Benefits planning, Design and Administration, Statutory Benefits: Health Care. Employee Welfare and Retirement Benefits. Incentive Schemes: Pay for Performance: Types of Incentive Schemes, Wage Incentive Plans, Pre-requisites of Effective Incentive Schemes, Merits and Demerits of Incentives.

Books:

- Compensation Management Bhatia Kanchan, HPH
- Compensation, Milkvich Jerry M Newman, CS Venkata Ratnam, Mc Graw Hill.
- Compensation and Reward Management, B.D. Singh, Excel Books
- Compensation Management in a Knowledge, Based World, Henderson, Pearson

90 Curriculum Development

3 rd Semester	18MBA304C	Performance Management System	L-T-P	3 Credits 35 hrs
			3-0-0	

- 1. To describe the nature of performance management and outline the core objectives of performance management
- 2. To Identify the different performance appraisal techniques that can be used by organizations.

COURSE OUTCOME:

 Students as HR managers can able to measure performance of individual employee and can control them to achieve the greater objective of the organization.

Module-I: Conceptual Approach to Performance Management: Introduction to Performance Management, Process for Managing Performance, Implications for Performance Management, principles of performance Management, benefits of performance Management, Performance Management strategies. Performance Appraisal & Potential Appraisal; Meaning of Performance appraisal, methods and approaches to performance appraisal, Obstacles in appraisal, Potential Appraisal.

Module-II: Measuring Performance: Criteria for performance measures, classification of measures. Types of measures: organizational (Balance score-card, EFQM, EVA), Team, Individual; Guidelines for defining performance measures, Performance reviews.

Reward Systems and Legal issues: Performance Management linked Reward Systems, Reward Management, Objectives, Components of Reward System, Linkage of Performance Management to Reward and Compensation Systems "Do only what you get paid for" Syndrome, Types of pay for Performance Plans — Individual based, Team Based, Plant Wide Plans and Corporate Wide Plans.

Module-III: Performance Management Application & Improvement: Performance Management in practice, Performance Management in Manufacturing and Service sectors. Strategies for Improving performance. Analyzing performance problems, Performance counseling and coaching: Concept, Principles and Skills.

Books :

- Performance Management, Kohli, Deb, Oxford
- Performance Management System, Davinder Sharma, HPH
- Performance Management, Aquinis, Pearson
- Performance Management, Cardy, PHI
- Performance Management System, R.K. Sahu, Excel Books

8

53 | Page

4th Semester 18MBA401C Team Dynamics	L-T-P	3 Credits 35 hrs
	3-0-0	1125.0 88118 1485 244.5

Module-I:

Characteristics and Process: Understanding Teams, Defining Team Success, Characteristics, Purpose of Teams, Group Vs. Teams, Types of Teams, Defining team success, Team building, Basic team process, cooperation and competition, Team Communication.

Module - II:

Busic issues before Team: Managing conflict, Power and social influence, Decision making, Team Leader and his challenges, Problem solving and creativity, Diversity.

Module-III:

Organizational Context of Teams: Team and organizational culture, Virtual Team, Evaluating and rewarding team, Team Training

Hooks:

- Group Dynamics for Teams, Daniel Levi, Sage Publications
- Group Dynamics and Team Intervention, Timothy M Franz, Wiley
- · Team Building, Dyer and Dyer, Wiley
- Group Dynamics, Donelson R Forsythyly, Thomson
- Successful Team Building Tools- Elaine Biech, Pfeiffer

Director, Curriculum Davelopment. Biju Patnah University of Technology, Odaha Routula

54 | Page

4th Semester	18MBA402C	Strategic HRM	L-T-P	3 Credits 35 hrs
			3-0-0	

To provide knowledge to the students about tools and techniques essential as strategic contribution of HRM to organizational growth.

Module - I:

Understanding Strategic HRM: Introduction: Traditional Vs. Strategic HR, Typology of HR activities, 'Best fit' approach Vs 'Best practice' approach; Investment perspective of human resources; Investment consideration, investments in training and development, investment practices for improved retention, investments job secure work courses, Non-traditional investment approaches; Planning and implementing Strategic HR policies; Linkage of corporate strategy, core competencies and competitive advantage with HRM; Aligning HRM with business strategy; emerging issues in strategic HRM.

Module - II:

Aligning HR Systems with business strategy: Alternative HR systems; Universalistic, contingency, configuration, congruence and integrated HR systems, Designing congruent HR systems; Linking HRM practices to organizational outcomes; Human Resources Strategy Formulation; HR Strategy in workforce utilization; Strategic performance management; HR strategy for training and development.

Module - III:

International and comparative strategic HRM: Managing global human resources; Evaluating HR functions in International context; Multinational, Global and Transnational strategies in HRM: Multinational, Global and Transnational Strategies Strategic Alliances, Sustainable Global Competitive Advantage, Globally competent Managers; Expatriation and repatriation management in global HRM; High Performance work practices.

Books:

- Gury Dessler, Human Resource Management, PHI, New Delhi, 2003.
- Strategic Human Resource Management-Rajees Viswanthan -Himalay
- Charles R. Greer, Strategic Human Resource Management, Pearson Education, 2003.
- Peter J. Dowling, Denice E. Welch, Randall S. Schuler, International Human Resource Management, Thomson South – Western, 2002.

Director, Curriculum Development Biju Patnals University of Technology, Odisha Roustella

4th Semester 18MBA403C Industrial Legislations	L-T-P	3 Credits 35 hrs
M 1000-0000	3-0-0	

Module-1:

Labour and Employment Laws in India: Overviews of labour laws in India, Historical background, objectives, mechanism of dispute settlement, mediation and conciliation, investigation, employment health, benefit, Statutory Regulation of condition of service in certain establishments. Factories Act, 1948; Employees' Compensation Act, 1923.

Module - II:

Minimum Wages Act, 1948; Payment of Wages act, 1936; Employees' Provident Fund Act, 1952; Employees' State Insurance Act, 1972; Payment of Bonus Act, 1965.

Module - III:

Industrial Employment (Standing Order) Act, 1946; Industrial Dispute Act, 1947; Trade Union Act, 1926.

Books:

- Industrial Jurisprudence & Labour Legislation, A.M. Sharma, HPH
- Industrial Relations, Trade Union & Labour Legislation, Sinha, Sinha, Shekhar, Pearson
- Industrial and Labour Legislations, L.M. Porwal and Sanjeev Kumar , Vrinda
- Labour Laws, Taxmann.

Director, Curriculum Development Blu Patnalit University of Technology, Oxfatha Routhela

SI No	Sem ester	Sub. Code	Elective Papers	L-T-P	Credit	University Marks	Internal Evaluation
L	3rd	18MBA301D	Supply Chain Management & Logistics	3-0-0	3	100	50
2,	3rd	18MBA302D	Pricing and Revenue Management	3-0-0	3	100	50
3.	3rd	18MBA303D	Operations Strategy	3-0-0	3	100	50
4.	3rd	18MBA304D	Sales and Operation Planning	3-0-0	3	100	50
5,	4th	18MBA401D	Management of Manufacturing System	3-0-0	3	100	50
6.	4th	18MBA402D	Sourcing Management	3-0-0	3	100	50
7.:	4th	18MBA403D	Operations Research Applications	3-0-0	3	100	50
			TOTAL		21	.700	350

Director, Curriculum Development Biju Patnati University of Technology, Odena Rourkela

3rd Semester	ISMBA301D	Supply Chain Management & Logistics	L-T-P	3 Credits 35 hrs
		200.00	3-0-0	

- To analyze the supply chain scenario and to make understand the students the insights on supply chain process from sourcing to distribution
- To enhance the supply chain integration and sustainable supply chain strategic skills among the students

Module I: Supply Chain Foundations: Supply Chain as a network of entities, concept of Value Chain, Impact of Supply Chain Management on Sales, Cost, Profit, Profitability, Profit and Loss Account, and Customer Accounts Profitability. Centralized and Decentralized Supply Chains: their coordination and aligning business activities. Demand forecasting and management: Methods, Bull whip effect, CRM in supply Chain Management.

Module II: Distribution Management: Distribution Channels: Structure and Operation, Distribution Cost Components, Pipe line Inventory and Response Considerations, Hub and Spoke Models, Cross docking, Lots streaming, Container Selection, Vendor Consolidation, Warehousing: Facility location and Network design, Vehicle Loading and Vehicle Routing Methods, Lead time Components and their Compression, Use of IT for tracking in supply chain. Supply chain sustainability in business management.

Module III: Aligning logistics to customer needs: Quick response logistics, Green Logistics, Reverse Logistics, Vendor Managed Inventory, Cross docking, Packaging Innovations, Third Party Logistic and Service concepts and applications. Procurement Logistics: Global Vs. Domestic Sourcing, Landed Cost Computation, Vendor Rating: Contract Negotiation, Consolidation, Self Certified Vendor Management, Individual component Vs. Module Purchases, Vendor Development and Vendor Relationship Management, Vendor Performance Monitoring.

Books:

- Supply Chain and Logistics Management, Bowersos, Mc GrawHill
- Operations and Supply Chain Management, Chase Shankar, Jacobs, Mc GrawHill
- Supply Chain and Logistics Management, Janat Shah

Director, Curriculum Development Biju Painaik University of Technology, Odieha Rounkela

3rd Semester	18MBA302D	Pricing and Revenue Management	L-T-P	3 Credits 35 hrs.
			3-0-0	

- To offer fundamental understandings of pricing and revenue management with respect to operations management
- To analyze the impact of different types of pricing and economy on revenue management
- To provide Network and Capacity Control ideas in Revenue Management
- To practice the students by apply pricing and revenue management in various fields

Module - I: Introduction to Revenue Management [RM] :

Prices & Revenue Management Concept, Application in Air Lines, Railways, Hospitality Industries, Steps Involved in setting the price, Types of Pricing, Dynamic Pricing — Introduction and overview, Single Product Dynamic Pricing with and without Replenishment, Multi Product and Multi Source Pricing, Finite Population Models and Price Skimming, Cost revenue trade off, Relationship to List Pricing.

Module - H: Economy of Revenue Management:

Introduction, Perfect Competition, Perfectly Competitive Markets, Firm level decision under perfect competition, Pre-commitment and Demand Uncertainty, Peak-load pricing under perfect competition, Identifiable peak periods competition, Monopoly Pricing, Price and capacity competition in Oligopoly and monopolistic market.

Module - III: Network and Capacity Control in Revenue Management

Promise and Challenge of Network Control, Types of Controls, Theory of Optimal Network Control—Structure of Optimal Control, Bid Price Control, Non Optimality of Bid Price Control, Evidence in support of Bid Price, Bid Prices and Opportunity Cost, Approximations based on network models—Deterministic Linear Programming, Simulation method for price revenue trade off. Pricing and Revenue Management Practice applied to Airlines, Hotels and hospitals, Revenue Opportunity Assessment and Revenue Benefits Measurement

BOOKS:

- Kalyan T Talluri, Garrent J. Van Ryzin, The Theory and Practice of Revenue Management, Springer Publications, New York, 2004
- Gabor Forgacs, —Revenue Management, Maximizing Revenue in Hospitality Operational, Amer Hotel and Motel Association, 2010



3rd Semester 18MBA303D	Operations Strategy	L-T-P	3 Credits 35 hrs
		3-0-0	

- To make understand the students about what is operations strategy and how its
 applied in the field of operations management
- To offer operations strategy in terms of business process, capacity, technology and facilities domains
- To analyze the operations strategy in terms of quality and cost perspective
- To build the students to use operations strategy in the filed of purchasing/sourcing and supply chain management

Module – I: Operations strategy – Introduction, Innovation and operations discipline— Operations performance – Operations Strategy framework – Developing an operations strategy – Value chain dynamics and operations decisions – Manufacturing Architecture and operations strategy in sales, service, Operation strategy model for service and product, Operational Strategy formulation, operation strategy evaluation and control, operation strategy competitiveness.

Module – II: Systems & Processes and Capacity Strategy and Management – Vertical integration and outsourcing –Business processes –Process of operations strategy substitution for strategy – Process of operations strategy implementation – Service Strategy – Service development and organization strategy, Capacity Strategy and Management–How to make decisions on capacity and capacity expansion – Technology Strategy-Process technology decisions – Facilities strategy – facilities strategy and globalization

Module – III: Quality Strategy, Purchasing and Supply network strategy - Quality Strategy and Change / Action programs-Sources of quality – Measures of quality – Competing on cost versus availability, cost versus features and innovativeness - Competition in the housing industry: Improving cost, quality, Purchasing and Supply network strategy-Sourcing and supplier management, Logistics systems and the fulfillment of supply chain – Supplier power and overseas sourcing: Moving up the value chain in outsourcing – Environmental and Social sustainability strategy – Models for gaining advantage in a global environment; How to position within a value chain

BOOKS:

- Nigel Slack and Michael Lewis, Operations strategy, Second edition, Pearson publication,
- . C. Donald J. Waters, Donald Waters, Operations Strategy, Thomson publications,
- Terry Hill, Operations Strategy: Design, Implementation and Delivery, Macmillan Education.
- Yeming Gong, Global Operations Strategy: Fundamentals and Practice, Springer publication.
- Norman Guither and Greg Frazier, Operations Management, 9th Edition, Cengage publications.

60 Page

3 ^{rit} Semester	18MBA304D	Sales and Operation Planning	L-T-P	3 Credits 35 hrs
			3-0-0	

- To make the students to familiarize on operations planning and control activities in both manufacturing and service organizations
- To build the students to take decisions on operations planning and control
 activities through by estimating forecasting future requirements, capacity,
 aggregate requirements, and material requirements

Module – 1: Operations Planning: Introduction – Relationship between Sales and Operations Planning – Need for operation planning and control – Functions of operation planning and control – Different phases of operation planning and control – Comparison of operations planning and control activities in manufacturing and service organizations, Objective of Forecasting in operations – Elements of a good forecast – Major Factors that Influence the Demand Forecast – Classification of Forecasting Methods.

Module - II: Capacity Planning: Capacity Planning Classification - Measuring Capacity, Determining Capacity Requirements - Forecasting v/s Capacity Planning - Aggregate Operations planning - Concept of aggregation - Factors Affecting Aggregate Planning, Aggregate Planning Goals - Forecasts of Aggregate Demand - Aggregate Planning Techniques, Materials Requirement Planning (MRP)

Module – III: Operations Scheduling & Distribution Planning: Master Production Scheduling (MPS) – Meaning and Concepts – MPS Model – Purpose of Scheduling – Scheduling Methods: Forward Scheduling, Backward Scheduling, Scheduling Activities: Routing, Loading, Dispatching – Scheduling by Type of Operations: Job Operations Repetitive Operations, Labor–Intensive Operations, Service Operations, Role of ERP in operation planning and control, Operations planning Insights from the TOC school of thought

BOOKS:

- Ajay K Garg, Production and Operations Management, McGraw Hill Education (India) Pvt. Ltd., 2012, Reprint 2017.
- William J Stevenson, Operations Management, Twelfth Edition, McGraw Hill Education (India) Pvt. Ltd., 2017, Reprint 2018.
- R. Panneerselvum, Production & operations management, Prentice Hall India private limited, 2017.
- Aswathappa, K., ShridharaBhat, K., Production and Operations Management, Himalaya Publishing House, 2014
- Mahadevan B., Operations Management Theory and Practice, Pearson Publication, 3rd Edition, 2015
- Norman Gaither and Greg Frazier, Operations Management, 9th Edition, Cengage publications, 2002 (Reprint 2013)

Director, Curriculum Development Blu Patnaik University of Technology, Odisha

61 Page

4th Semester	18MBA401D	Management of Manufacturing System	L-T-P	3 Credits 35 hrs
			3-0-0	

- To make the students to understand underlying concepts of general manufacturing systems
- To provide more insights on cellular manufacturing systems
- To expose the students in to Just-in-Time conceptual ideas and familiar about the same
- To provide knowledge on synchronizing and Flexible manufacturing systems

Module – I: Manufacturing systems – Types and Process mapping –Manufacturing Process Planning – Definition, Scope and Elements –Manufacturing concept planning – Requirements of good manufacturing and assembly lines –Layout planning and analysis, Cellular manufacturing systems (Group Technology) – Cellular manufacturing formation –Cell formation –Methods and production flow analysis & minimization of inter-cell movement.

Module – II: Just-in-time systems – Overview, Principles and Benefits – Seven Wastes – Elements of JIT – Design and Improvement aspects of JIT – Kanban systems, –Definition and Principles – Types of Kanban Single card and Two card Kanban – Push and Pull Concepts of Kanban – Constant Work-in-Process (CONWIP) –Concept and comparison with Kanban system

Module – III: Synchronous manufacturing (Theory of Constraints) – Definition, Operation planning and control based on theory of constraints – Measures of Performance – Constraints in manufacturing system – Drum–Buffer–Rope (DBR) Methodology – Flexible manufacturing systems (FMS) – Meaning, Components and types – Conceptual model of FMS – Applications of FMS, Machine loading and scheduling.

BOOKS:

- Shahrukh A. Irani, Handbook of Cellular Manufacturing Systems, John Wiley and Sons Inc., 1999
- T.C. Cheng, S. Podolsky, Just-in-Time Manufacturing: An introduction, Second edition, Chapman and Hall Publications, 1996
- Mahadevan B., Operations Management Theory and Practice, Pearson Publication, 3rd Edition, 2015
- R. Parmeerselvam, Production & operations management, Prentice Hall India private limited, 2017.
- Aswathappa, K., ShridharaBhat, K., Production and Operations Management.
 Himalaya Publishing House, 2014

Director, Curriculum Development Biju Patnalk University of Technology, Odisha Rourkela 62 | Page

4th Semester 18MBA	402D Sourcing Management	L-T-P	3 Credits 35 hrs
		3-0-0	

- To provide knowledge on global sourcing principles and practices
- To inculcate the habit of Negotiation, Risk analysis, Market Research and Evaluation of suppliers before selecting them
- To expose various methods and analytical tools for Supplier Rating and Selection
- To offer insights on Electronic Sourcing and Sustainable Sourcing Strategies

Module — I: Introduction to Global Sourcing — Objectives, Process and Trends in Global Sourcing — Supply Management — Strategic Sourcing Plan, Strategy and Model—Environmental and Opportunity Analysis — Global Operational Sourcing Strategy, Negotiation — Nature, Strategy and Planning—Performance Measurement and Evaluation—Risk Management in Sourcing (Concepts) — Nature and Principles of Risk Management, Risk management process, Risk management tool and technique, Managing risk in international business.

Module – II: Supplier Research and Market Analysis – Vendor Rating – Objectives, Self-certify vendor management. Criteria and Methods of Vendor rating – Supplier Evaluation and Selection (Concepts), Solicitation of Bids and Proposals – Planning and Methods, Contract negotiation, Vendor performance monitoring and controlling.

Module - III: Analytical Tools in Sourcing, Pricing Analyses: Analytical Tools in Sourcing (Foreign Exchange Currency Management, Learning Curve, Quantity Discount Models), Integrative Pacific Systems Case (Supplier Scorecard, Sourcing Risk, Supplier Financial Analysis) - Electronic Sourcing - Sustainability and Sourcing, Green Sourcing.

BOOKS:

- Fred Sollish, John Semanik, Strategic Global Sourcing Best Practices, John Wiley and Sons Inc., Publications, 2011
- Olivier Bruel, Strategic Sourcing Management: Structural and Operational Decision—making, Koganpage Publications, 2017
- SathitParniangtong, Supply Management: Strategic Sourcing, Springer Publications, 2016
- Robert W. Turner, Supply Management and Procurement: From the Basics to Best-in-class, J.Ross Publishing, 2011

Director, Curriculum Development Biju Pathali: University of Technology, Odiena Rourkeis

4th Semester ISMBA403D Operations Research Applications	L-T-P 3-0-0	3 Credits 35 hrs
---	----------------	------------------

- To create exposure to the students to apply operations research tools & techniques in various business environment.
- To provide insights on dynamic programming, integer programming, and Quadratic Programming applications
- To make use of operations research tools in the field of operations scheduling and supply chain distributions

Module — I: Overview of Operations Research —Review of Scope, Types of Operation Models, OR Techniques and tools, Dynamic programming: Dynamic programming models and applications — Graphical representation — Optimality principle. Integer programming models: Gomory's Cutting plane Algorithm, Branch—and—bound algorithm for Integer Programming.

Module – II: Scheduling System – Single machine, Flow shop and Job shop Scheduling methods –Resource constrained project Scheduling – Vehicle routing problems, Traveling salesmen problem, transportation problem (North West corner method), Queue Model.

Module – III: Bin Packing – Portfolio optimization – Quadratic Programming: Kuhn Tucker conditions, Beale's method and Wolfe's method. Staff transfers Problem – Two stage supply chain distribution problem.

BOOKS:

- KantiSwarup, P. K. Gupta and Manmohan: Operations Research, S. Chand & Co., 2014
- Hamady Taha: Operations Research, Mac Millan Co., 2016.
- Fredericks, Hiller, Gerald J.LiebermanBodhibrata Nag Prectambaso, Operations research 9e, Megraw hill education, 9th edition, 2017.
- J.K.Sharma, Operations research Theory and applications, 2012
- Pradeepprabakarpai, Operations research Principles and practice, oxford higher education, 2012
- Gupta P.K.Hira D.S Problem in operations Research, S.Chand and co., 2003

Director, Curriculum Development Biju Patnelk University of Technology, Odieho Rourkela

and the state of the state of

SI No	Sem ester	Sub. Code	Elective Papers	L-T-P	Credit	University Marks	Internal Evaluation
li:	3rd	18MBA301E	Data Mining for Business Decisions	3-0-0	3	100	50
2.	3rd	18MBA302E	Business Analytics	3-0-0	3	100	50
3.	3rd	18MBA303E	E-Commerce and Digital Markets	3-0-0	3	100	50
4.	3rd	18MBA304E	Managing Digital Platforms	3-0-0	3	100	50
5.	4th	18MBA401E	Strategic Management of IT	3-0-0	3	100	50
6.	4th	18MBA402E	Managing Digital Innovation and Transformation	3-0-0	3	100	50
7.	4th	18MBA403E	Managing Software Projects	3-0-0	3	100	50
			TOTAL		21	700	350

Director, Curriculum Development Biju Patnak University of Technology, Office Rourisia

3 rd Semester	18MBA301E	Data Mining for Business Decisions	L-T-P	3 Credits 35 hrs
			3-0-0	555.000.000.000.000

Course Objectives

- To acquaint students with the theoretical and practical elements of Data Mining and their applications.
- To acquire practical exposure in analyzing a business problem usingappropriate model
- To develop the skills to use the model for a predictive analytical solution.

Module-I: Introduction to Data Mining - Deriving Value from Data Mining - Applications-Basic concepts, Exploratory Analytics using R/Raftle - Basic metrics- Principal Component Analysis- Correlational analysis-Visualizing Data - Applications

Module-H :Predictive Modeling using R/Rattle—Decision Trees—ANN — Clustering— Regression—Logistic Regression—Applications Market Basket Analysis — Association rule mining—Naïve Bayes Analysis—Applications

Module-III :Best Practices in Data Analytics and B1 — clustering — Decision trees-Neural networks-Associations/Market Basket analysis-Text Mining

Books :

- Anil Maheshwari Data Analytics. McGraw Hill, 2017.
- Eric Siegel, Thomas H. Davenport, —Predictive Analytics: The Power to Predict Who Will Click, Buy, Lie, or Diel, Wiley, 2013
- Anasse Bari, Mohamed Chaouchi and Tommy Jung PredictiveAnalytics, Willey, 2015
- Alberto Cordoba, —Understanding the Predictive Analytics Lifecyclel, Wiley, 2014.
- Dean Abbott, Applied Predictive Analytics, Willey, 2014

Director, Curriculum Development Biju Painaik University of Technology, Odieha Rourkeis

3 rd Semester 18MBA302E	Business Analytics	L-T-P	3 Credits 35 hrs
		3-0-0	

- To understand the purpose of using Business Analysis tools within an organization
- · To summarize and analyze a dataset for making informed decisions
- To identify the choice of tools to address the Business problems
- To use advanced analytical tools to analyze complex problems in uncertainty.

Module – I: Business analytics - need - scope – applications – descriptive analytics – predictive analytics – prescriptive analytics; Descriptive analytics – types of data – creating distributions from data – measures of location – measures of variability – measures of variability – measures of association

Module – H: Data Visualization for Manager: Visualization imperative-Message to charts-Visual Perception-Grammar of Graphics (Using R)- Component level design of tables and graphs-Storytelling using Visualization;

Module – III: SPSS – Introduction – Frequency Tabulation – Parametric tests – Non Parametric Tests – Regression Using SPSS – Factor Analysis; Data analysis using R – R Studio – Introduction, Importing Data from Excel – Slicing of data using Inbuilt Data sets – Variables – Regression script – Rattle for R

Books :

- Camm, Cochran, Fry, Ohlmann, Anderson, Sweeney, Williams, Essentials of Business Analytical, Cengage Learning
- SandhyaKuruganti, Business Analytics: Applications To Consumer Marketing —, McGraw Hill
- Bernard Marr, "Big Data: Using Smart Big Data, Analytics and Metrics to Make Better Decisions and Improve Performance", Wiley
- R For Dummies Paperback 21 Jul 2015, Andrie de Vries (Author), JorisMeys (Author)

Director, Curriculum Development Blu Palnak University of Technology, Odleha Rourisia

3 rd Semester 18MBA303E	E-Commerce and Digital Markets	L-T-P	3 Credits 35 hrs
		3-0-0	

- Students will learn about foundations of E-Commerce.
- Students will able to E-Business plan and address E-Commerce related issues.
- Students will gain insights on Business incubators.
- Students will learn about the E-marketing strategies and digital payment systems.
- Students learn about E-marketing tools and E-Businessentrepreneurship

Module - I:

E-Commerce: Understanding E-Commerce - E-Business models - E-Business and the global economy - Creating E-Business plan - Social and Behavioral issues - Ethical and regulatory issues Technology and growth of E-Commerce - Economic foundations of E-Commerce - The strategy of e-business - Economics of e-business - E-Business Technologies

Module - II:

Digital Payment SystemsIntroduction to digital marketing – E-Marketing strategies – E-CRM – Electronic payment methods – Types of payment gateway – Digital Currencies – Digital signature

Module - III:

E-business Channel functions & E-Business EntrepreneurshipBusiness models on the Internet – Intermediation and dis-intermediation in e-commerce – Business Incubators – Distribution channel length function, Designing Electronic market – strategic E-Marketing – E – Marketing Tool – E-Business Entrepreneurship

Books :

- Kenneth C.Laudon Carol Guercio Traver E-Commercel , 14th edition, 2018, Pearson.
- Russ, Henneberry —Digital Marketing for Dummiest Willey January 2017.
- S.J.P.T.JOSEPH E-Commerce: An Indian PerspectivelPHI, Edition, 2016
- Gary P.Schneider Electronic Commercel Course Technology Inc 12th edition 2017
- VandanaAhuja —Digital marketingl OXFORD HIGHER Education, 3th edition 2017
- ShivaniArora —E—Commercel 2017 edition.

Director, Curriculum Development Biju Patnak University of Technology, Odisha Rourkela

3rd Semester	18MBA304E	Managing Digital Platforms	L-T-P	3 Credits 35 brs
			3-0-0	

- · To understand the Fundamentals of Digital Platforms
- · To assess the competition in the digital environment
- To analyze the choice of marketing strategy in the Digital Platform

Module - I: Digital Platforms - Introduction - Types - Enterprise Digital Ecosystems - Challenges in modern digital enterprises -Platform Economics - Platform Architecture - Governance - Media Optimization - Channel optimization - Audience platform Utilization

Module - II: Platform competition - Platform Technologies and political culture -Intellectual properties in Digital Economy - Pricing Policies ,Future of Digital Platforms - Participation - Social Media Strategies.

Module – III: Digital Media and the Roots of Marketing Strategy – Cross media Marketing Strategy – Marketing self-Branding Strategies – Digital business Innovation – Decision Rights and Control

Books:

- Shailesh Kumar Shivakumar, Enterprise Content and Search Management for Building Digital Platforms, John Wiley & Sons, 16

 – Dec

 – 2016
- Craig Dempster, John Lee, The Rise of the Platform Marketer: Performance Marketing with Google, Facebook, and Twitter, Plus the Latest High-Growth Digital Advertising Platforms, John Wiley & Sons, 2015.
- Yu-li Liu, Robert G. Picard, Policy and Marketing Strategies for Digital Media, Routledge, 2014.
- Dal Yong Jin Digital Platforms, Imperialism and Political Culture Routledge, 2015
- Don Passey, Steve Higgins, Learning Platforms and Learning Outcomes, Routledge, 08— Apr-2016

Director, Curriculum Development Biss Petralik University of Technology, Odisha Rourkela

4th Semester 1	18MBA401E	Strategic Management of IT	L-T-P	3 Credits 35 hrs
			3-0-0	

- · To understand the approaches of strategic IT applications
- To analyze the value chain for service industries
- · To examine the organizational movements around the Strategic Grid
- Articulate the importance of drivers behind the transformation and implications
- To develop action plans with clear goals through technology, evaluate the progress and facilitate the plan

Module – I: Strategy Formulation: Levels and formulation of strategy – Process – Types of Strategy–Top–down approaches to Planning for Strategic IT Applications Value Chain Analysis: The Value Chain Analysis Approach to IS/IT Strategy Formulation – Value Chain Analysis for Service Industries

Module – II: IT Strategy: Special Considerations for IT Strategy – IT Strategic Planning – IT Critical Success Factors – IT Future Scenarios, Strategy Information: Strategic information systems (SIS) – Organizational movements around the Strategic Grid – inter organizational systems (IOS), Information Systems and Information Technology Strategies

Module - III: Transformation Drivers: Drivers behind the transformation- Implications of the drivers - Visioning of the strategic role of IT in the organization

Books :

- CA. Deepak Pandian& CA. Ancesh Noor Mohammed , StrategiManagement& Information Technology Paperback, Kothari Academic & Research Publications, 2016.
- Neil Ritson, Strategic Management, Ventus Publishing ApS, 2011.
- Thomas L. Wheelen, J. David Hunger, Alan N. Hoffman, Bentley University, Charles E. Bamford, Iowa State University , Concepts in Strategic Management and Business Policy: Globalization, Innovation and Sustainability plus Pearson MyLab Management with Pearson eText, Global Edition, ©2019 Availability: 01 Mar 2018 •
- Business Strategy: Managing Uncertainty, Opportunity, and Enterprise Publishers, 1st Edition, by J.-C. Spender, Oxford University Press, 2014
- Linda Parker Gates, Strategic Planning with Critical Success Factors and Future Scenarios: An Integrated Strategic Planning Framework, Software Engineering Institute, November 2010

Director, Curriculum Development Siju Palnak University of Technology, Odisha Roukela

4th Semester	ISMBA402E	Managing	Digital	Innovation	and L-T-P	3 Credits 35 hrs
		Transforms	ation		3-0-0	

- · To understand digital transformations and information in the globalization world
- To explore social media transformation in the business world
- · To develop on building digital capabilities
- To understand the challenges on using digital platform for business
- To learn digital transformations in the space of cloud computing

Module-I: Introduction to Digital Transformations: The five domains of digital transformations
— customer, competition, data, innovation, and value, Harness customer networks, turn data into
assets, adapt value proposition

Module-II: Classification of Digital Transformations: Business Model, product development, data, processes, knowledge, self-service, and organizational culture: Social Media Transformation: understand requirements, document goals, objective and social media tactics, establish potential future state operating model, gap analysis and recommendations.

Module-III: Building digital capabilities: challenges ongoing digital, handling employee during digital transformations, developing companywide strategy; Digital transformations in the space of cloud computing; prepare and drive digital transformations

Books :

- Herbert, Lindsay; Digital Transformation: Build your organization's Future for the Innovation Age, Bloomsbury Publication, 2017
- Venkatraman, V; The Digital Matrix: New rules for business transformation through technology; Lifetree Media Ltd, 2017
- Velte, A. T; Velte, T. J; and Elsenpeter, R; Cloud Computing: A Practical Approach, Mcgraw Hill Education (India) Private Limited, 2017 (23rd reprint)
- Rogers, David, The Digital Transformation Playbook Rethink your Business for the Digital Age (Columbia Business School Publishing), 2016.
- Westerman, G; Bonnet, D; and McAfee, A; Leading Digital: Turning Technology into Business Transformation; Harvard Business Review Press, 2014.
- Srinivasan, J., and Suresh, J., Cloud Computing: A Practical Approach for learning and implementation, Pearson Publication, 2014

Director, Curriculum Development Biju Pahalk University of Technology, Odlaha Rourkeis

4th Semester	18MBA403E	Managing Software Projects	L-T-P	3 Credits 35 hrs
			3-0-0	

- To understand software Project Management and to know the different software development models.
- To understand Software Project Evaluation and know how tomanage Programmes.
- To know how to select projects and to carry out software effortestimation.
- To know the Risk Management Process and how to allocateresources for Software Projects.
- To know how to monitor and control Software Projects.

Module - I:

Introduction to Software Project Management: Introduction—Software Project—vs—other Projects, Activities covered by Software Project Management—Plans, Methods and methodologies, Some ways of categorizing software projects, stakeholders—Project success and failure—Management Control

Module - II:

Project Evaluation and ProgrammeManagement: Project Portfolio Management, Evaluation of Individual projects, CBA techniques, Risk Evaluation, Programme Management, Managing the allocation of resources within programmes, Strategic Programme Management, Aids to programme management, Stepwise Project Planning

Module-III:

Selection of an appropriate project approach and Software Effort estimation: Build or buy-Choosing methodologies and technologies, Choice of process models, structure -vs- speed of delivery. Waterfall model, Spiral model, software prototyping, Selecting the most appropriate process model, Basis for Software Estimating, Software effort estimation techniques

Books :

- Bob Hughes, Mike Cotterell and Rajib Mall Software Project Management TMH– 2017
- Joel Henry, Software Project Management, Pearson, 2011
- Kathy Schwalbe, Project Management in IT, Cengage, 2011
- Sanjay Mohapatra Software Project Management Cengage –2011



SI No	Sem exter	Sub. Code	Elective Papers	L-T-P	Credit	University Marks	Internal Evaluation
12	3rd	J8MBA301F	Agribusiness Management	3-0-0	3.	100	50
2.	3rd	18MBA302F	Roral Marketing	3-0-0	3:	100	50
3.	311	18MBA303F	Rural Development	3-0-0	3	100	50
4.	3rd	18MBA304F	Livelihood and Development Management	3-0-0	3	100	50
5.	4th	18MBA401F	Rural Credit and Micro Finance	3-0-0	3	100	50
6.	4th	18MBA402F	Cooperative Management	3-0-0	3	100	50
7,	4th	18MBA403F	Strategies for Smart Villages	3-0-0	3	100	50
			TOTAL		21	700	350

Director, Curriculum Development Blu Patneit University of Technology, Odiah Rounteia

3 rd Semester	18MBA301F	Agribusiness Management	L-T-P	3 Credits 35 hrs
201100100		27.	3-0-0	

Module -I

Introduction of Agri Business

Scope, Nature, Significance and challenges. Functional Classification of Agri Business, Agribusiness Network, Agri Business value chain, contract farming, cooperative farming, Group farming, corporate farming, Production of hi-tech agri crops, agro based industries, Role of Agriculture in Indian Economy.

Module-II

Agri-Business Environment

Characteristics of demand for farm products, Characteristics of farm product markets in India, Forecasting demand for food products.

Institutional Framework of Indian Agriculture- institutions of ownership holdings and operational holding, land tenure system. Land reform policy. Agricultural Finance: Sources, Institutional system, NABARD and co-operative credit for Agriculture sector, Crop insurance and Kisan Credit card.

Module - III

Legislations and Recent trends

Essential Commodities Act, Food Adulteration Act, Food safety and standards.

Recent trends- Green houses, Role of Bio Technology in Agriculture, Commercialization of agriculture, Tissue culture, Green house operations, Genetically modified crops, Emerging trends in production, marketing and exports of agro products.

Books:

- Fundamentals of Agricultural Economics, Sandhu and Singh, HPH
- Agricultural Problemsin India, Agrawal and Kundan, Vikas
- Transforming Traditional Agriculture, TW Schultz.
 Bare Acts.
- Agriculture and Agri-Business management, Smita Diwase, Krish Resource Management Network, 2009.

2

3 rd Semester 18ME	A302F Rural Marketing	L-T-P	3 Credits 35 hrs
		3-0-0	

Objectives: Its objective is to equip students more strongly for a career in marketing agri-inputs and outputs, food products, consumer goods, crafts and services, and in developing rural markets and value chains.

Module-I:

Rural Market Structure, Rural consumer buying behaviour, Rural Marketing environment, Rural Marketing Information System, Research and Forecasting, Rural demand, Segmentation, Targeting, Positioning, Problems of Rural marketing, Rural Marketing Agencies.

Module-II:

Rural Marketing Mix, Product decisions, Pricing Decisions, Promotion decisions, Distribution and Cannel Management, Relationship Management, Physical distribution, Sales force management

Module-III:

Agri-marketing Scope, Role in Economics development, Demand and Supply of farm products, Marketing of Agriculturalinputs and farm products, Strategy for agri-marketing

Books:

- Rural Marketing- R Ramakrishnan, Pearson
- Rural Marketing- Dogra and Ghuman, TMH
- · Rural Marketing- Badi and Badi- HPH
- · Rural Marketing, Kashyap

Director, Curriculum Development Biju Palnaik University of Technology, Odiet

3rd Semester	18MBA303F	Rural Development	L-T-P	3 Credits 35 hrs
			3-0-0	

Module-1:

Meaning, Importance, scope and objectives of rural Development; Various approaches to Rural Development — Gandhian approach for Community development, I.A.D.P., I.R.D.P., N.R.E.G.A., Neo Gandhian, (PURA), Need Based and demand based centers. Rural Development experiences of some Asian Countries—China, Malaysia, Sri Lanka, Bangladesh.

Module-2:

Programmes for Rural Development in India since Independence, Rural Development policies during planning period; Administrative structure, The focus and thrust of Rural Development programmes: Poverty alleviation, employment generation; Current status of Rural Development programmes and the emerging challenges. Process of Urbanization and Rural-Urban link.

Module-3:

Rural Development Administration and Panchayat Raj Institutions: Panchayat Raj System, functions of Panchayat Raj System, Sources of income for Panchayats, merits and demerits of Panchayat system, strengthening of Panchayat Raj System, Rural Development administration, People's Participation in Rural Development: Importance of people's participation, some problems, measures of strengthen people's participation.

Government Agencies: Work and planning of central and state government, role of Banking and Co-operative sector for tribals, rural youth, women and children, BPL group, mal-nutrition group and farmers. Voluntary Agencies or Autonomous Organization: importance, superiority, limitations and strengthening, Gandhian approach of Rural Reconstruction.

Books:

- Rural Development-Principles, Policies and Management, Katar Singh
- · Fundamentals of Rural Development, Tahiri lussain
- Rural Development in India, B.K.Sahu

Director, Curriculum Development Biju Pelneik University of Technology, Odiena Rountela

3rd Semester 18MBA304F	Livelihood	and	Development L-T-P	3 Credits 35 hrs
	Management		3-0-0	

Objective: It is aimed at providing a closer understanding of various livelihood models and approaches, and their applications and experiences at national and international level, and the issues and challenges confronted in building sustainable livelihoods.

Module-1:

NGO Management, Agri-based, livestock-based and natural resource-based livelihood options in rural areas. Development Programs in various sectors (Health, Education, WASH, Food Security and Nutrition), policies, institutional mechanisms.

Module-II:

Decentralized planning and governance, Disaster Management, Relief and Rehabilitation and Development Training.

Module-III:

Processing and preservation of foods.

Scope of food processing; historical developments; principles of food processing and reservation. Processing and preservation by heat: blanching, pasteurization, sterilization and UHT processing, cunning, extrusion cooking, dielectric heating, microwave heating, baking, roasting and frying, etc.

Processing and preservation by low-temperature-refrigeration, freezing, CA, MA, and dehydrofreezing. Processing and preservation by drying, concentration and evaporation-types of dryers and their suitability for different food products; ultra-filtration, reverse osmosis.

Processing and preservation by non-thermal methods, irradiation, high pressure, pulsed electric field, hurdle technology. Use and application of enzymes and microorganisms in processing and preservation of foods; food fermentations, pickling, smoking etc; Food additives: definition, types and functions, permissible limits and safety aspects.

Books:

- Rural Development and Livelihoods in India, NiranjanSahoo
- Food Processing and Preservation, S Sivasankar, PH

Director, Curriculum Development Biju Patnak University of Technology, Odishe Rouriela

4th Semester	18MBA401F	Rural Credit and Micro Finance	L-T-P 3-0-0	3 Credits 35 hrs
			2-4-11	

MODULE-I:

Financing Rural development: Functions and policies of RBI in Rural banking, NABARD—Functions, Role, Refinance support. Lead Bank Approach, State level and District level credit committees. Rural credit institutions: Co operative credit societies and Banks, LDBs, RRBs, Commercial banks. Financial inclusion and inclusive growth for Rural development banking, concept of Business facilitation and Business correspondents in Rural financing.

Financing agricultural and allied activities like horticulture, fishery, social forestry etc. Croploans— Assessment, sanction, disbursement, rephasement. Term loans for irrigation, Farmmechanization. Financing Rural Non Farm sector(RNFS), segments in RNFS, role of Development and Promotional institutions in RNFS.

MODULE-II:

Problems and Prospects in Rural banking and Priority sector financing:

Components of Priority sector, RBI guidelines for priority sector financing, Rural housing and Urban housing schemes under priority sector and their refinance, Education loans, Role of Rural hanking, Problems of Rural branches of Commercial banks- transaction costs and risk costs. Technology based Financial inclusion, Emerging trends in Rural banking- Financing poor as bankable opportunity.

MODULE: III:

Perspectives of Micro finance: Definition, Scope and importance of Micro Finance, Evolution and character of Micro Finance in India, Supply of Micro Finance: Non institutional sources and Institutional sources, Transaction of borrowing and lending from institutional sources; Micro finance distribution models, Regulation and supervision of NGOs, MFIs, MACSs; MFIs as Banks, Micro Finance credit lending models: Association model, Community Banking model, Credit union model, Co-operative model, Grameen Joint liability group model, SHG model, Village Banking model, Indian SHGs; problems and issues; SHG-Bank linkages programmes in India.

Micro Finance products: Micro credit, Micro savings, Micro insurance; Micro Finance services, Micro Finance and Rural financial services, Agriculture Micro Finance. Risks in MFIs: Functional risks, Financial risks and External risks; Risks in Agricultural Micro Finance and Feasibility tests for agricultural credit, Strategic Risk Minimization. Accounting and Financial Reporting. Financial Analysis, Impact Assessment of Micro Finance: Household level, Individual level, Enterprise level. Social Assessment of MFIs: Measuring social performance, Social rating components

Books:

- Microfinance-Principles and Approach, V Rengarajan
- Microfinance in India, Rais Ahmad
- Essentials of Microfinance, Sulphey, Vivek Vaswan

Director, Curriculum Development Biju Patnaik University of Technology, Odlaha Rourksia

4th Semester	18MBA402F	Cooperative Management	L-T-P	3 Credits 35 hrs
			3-0-0	

Module-1:

Theory of Co-operation: Definition-Scope and importance of Co-operation-Basic Values & Principles of Co-operation – Cooperation versus capitalism & socialism- Co-operative sector school and Common wealth school-Federal Vs Unitary structure – Small size Vs Large size society- Advantages and limitations of state aid to co-operatives - Role of officials and non-officials in Co-operative movement.

Origin and growth of Co-operative movement in India -- Major developments in postindependence period-Short-term& Medium term credit structure-(SCBS, DCCBS & PACS) --Long term credit structure-(SCARDBs & PCARDBs) National Level Cooperative institutions in India-NCDC, NCCF, NDDB, NCUL

Module - H

Cooperative Management: Concept of Management-Definition- Principles-Functions-Problems of Management - Cooperative Management - Principles of Cooperation and Principles of management - Role of Officials in Cooperative Management-Registrar of Co-operative Societies and his Role-General Body of Members - Board of Directors- Managing Committee -Functions of Board of Directors- Powers and Functions of Chairman/ President-Duties and Functions of Secretary of Cooperative Societies-maintenance of Records and Statistics.

Module - III:

Cooperative Banking: Special features of Cooperative banking – structural pattern and functions- Role of Cooperative banking in India-Vaidyanathan Committee recommendations on Cooperative credit -Urban cooperative banking in India-Need, importance, structure and functions, Banking regulation Act as applicable to Cooperative banks in India.

Books:

- Co-operative Management- Principles and Techniques, S Nakkiran
- A text Book on Cooperative Management, DrP.C.Dhal

Director, Curriculum Development. Biju Patnaik University of Technology, Odish-Routteis

4th Semester 18MBA403F Strategies for Smart Villages	1T-P 3-0-0	3 Credits 35 hrs
--	---------------	------------------

Module-I:

Introduction of a smart village, Issues concerning income generation, Education and skill development and Agriculture

Module - II:

Issues relating to Housing, Energy, Waste Management and water and sanitation management

Module - III:

Issues concerning Transport, Health and well-being, Environment and Governance

Books:

 Planning, Housing and Infrastructure for smart villages, HemantDoloi, Ray Green and Sally Donovan, Routlege

9/

Director, Curriculum Development Blu Painalk University of Technology, Odaha Routela

Seminar Presentation

4th Semester	18MBA404	SEMINAR	L-T-P	2 Credits
			0-0-1	CA 6230000000

All the students are required to present a seminar on any topic of their choice from the specialization registered in the 4th semester. A faculty may be attached to such students who shall guide them to carry out a research oriented presentation.

The evaluation shall be done out of 100 marks by a team of senior faculty members of the Institute.

The Principal shall constitute the Team. He may invite outside expert who must have a Ph.D degree in the relevant field.

The process should be completed well in time and the marks shall be sent to the university in specified portal.

Director, Curriculum Development Biju Patnak University of Technology, Odisha Rourkels