

**SIDO KANHU MURMU UNIVERSITY,**  
**DUMKA**



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**MINOR FROM DISCIPLINE**  
**STATISTICS**

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**PAPER:**

- MN-1A: INTRODUCTORY STATISTICS - I
- MN-2A: INTRODUCTORY STATISTICS - II
- MN-3A: INTRODUCTORY PROBABILITY
- MN-4A: STATISTICAL INFERENCE

**DEPARTMENT OF STATISTICS, S.K.M.U, DUMKA, JHARKHAND**

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**B.SC: FIRST SEMESTER**

**PAPER CODE: STATS-MN-1**

**FULL MARKS: 100 (External-75: Internal-25)**

**PAPER NAME: INTRODUCTORY STATISTICS - I**

Course Credits	No. of Teaching Hours Per Week	Total No. of Teaching Hours
04	04 Hrs	60 Hrs

**Course Objectives & Learning Outcomes:** This course will enable the students to:

- Familiarize with various Statistical Data Analysis tools that can be used for effective decision making. Emphasis will be on the application of the concepts learnt.
- Enable the students with basic idea of dealing with observations/ data through the techniques of Descriptive Statistics including measures of central tendency, Dispersion, Correlation and Regression.

**Course Content:**

**UNIT :- 01**

Introduction to Statistics : Definition of Statistics, Importance and Scope of Statistics, Statistical tools used in economic Analysis, Limitations of Statistics, Collection of data – primary and secondary data, classification of data - Frequency Distribution (individual, discrete and continuous), cumulative frequency distribution, presentation of data – tabular form, bar graphs, Histogram, frequency polygons, Tables, Frequency Curve and Ogives,

**UNIT :- 02**

Measures of Central Tendency: Meaning of central tendency, Mean, Median and Mode Empirical Relation Mean, Median and Mode, Geometric mean, Harmonic mean, Relationship among A.M, G.M and H.M, Weighted Harmonic means .

**UNIT-03**

Measure of Dispersion :- Introduction and definition, Absolute and relative measures of Dispersion, Range ,Quartile Deviation. Mean deviation and Standard deviation . Coefficient of variation.

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**Suggested Readings:**

- *Gun A.M., Gupta M.K. and Dasgupta B. (2002): Fundamentals of Statistics, Vol. I & II, 8th Edn. The World Press, Kolkata.*
- *Fundamentals of Statistics, S. C. Gupta. Himalaya Publishing House*
- *Elementary Statistics : R. S RASTOGI [ Publisher : Neelam publication, delhi]*
- *Statistics and Probability by lalji Prasad [ Publisher : Paramount publication ]*
- *Statistics and Probability by Asit das Gupta and S.N Thakur [Publisher : Bharati Bhawan publication ]*

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**B.SC: THIRD SEMESTER**

**PAPER CODE: STATS-MN-2**

**PAPER: INTRODUCTORY STATISTICS - II**

**FULL MARKS: 100 (EXTERNAL-75 & INTERNAL-25)**

Course Credits	No. of Teaching Hours Per Week	Total No. of Teaching Hours
04	04 Hrs	60 Hrs

**Course Objectives & Learning Outcomes:** This course will enable the students to:

- Familiarize with various Statistical Data Analysis tools that can be used for effective decision making. Emphasis will be on the application of the concepts learnt.
- Enable the students with basic idea of dealing with observations/ data through the techniques of Descriptive Statistics including measures of central tendency, Dispersion, Correlation and Regression.

**Course Content:**

**UNIT :- 01**

Skewness : Introduction and definition , Measures of Skewness – Karl Pearson’s, Bowley’s and Kelly’s coefficient of Skewness. Moments- about mean, about Arbitrary point A and Kurtosis – Leptokurtic, Mesokurtic, platykurtic.

**UNIT :- 02**

Correlation : Introduction and definition, Types of correlation, Correlation and causation, Methods of measure of correlation coefficient – Karl Pearson’s coefficient of correlation, Rank correlation coefficient method. Probable error.

**UNIT :- 03**

Regression : Introduction and definition, Types of Regression – Linear and Non Linear regression, Line of Regression – derivation, angle, Coefficient of Regression, Correlation analysis vs Regression analysis.

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**Suggested Readings:**

- *Gun A.M., Gupta M.K. and Dasgupta B. (2002): Fundamentals of Statistics, Vol. I & II, 8th Edn. The World Press, Kolkata.*
- *Fundamentals of Statistics, S. C. Gupta. Himalaya Publishing House*
- *Elementary Statistics : R. S RASTOGI [ Publisher : Neelam publication, delhi]*
- *Statistics and Probability by Lalji Prasad [ Publisher : Paramount publication ]*
- *Statistics and Probability by Asit das Gupta and S.N Thakur [Publisher : Bharati Bhawan publication ]*

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**B.SC: FIFTH SEMESTER**

**PAPER CODE: STATS-MN-3**

**PAPER: INTRODUCTORY PROBABILITY**

**FULL MARKS: 100 (EXTERNAL-75 & INTERNAL-25)**

Course Credits	No. of Teaching Hours Per Week	Total No. of Teaching Hours
04	04 Hrs	60 Hrs

**Course objectives & Learning Outcomes:** This course will enable the students to:

- Learn the concept of various approaches of probability.
- Calculate probabilities using probability laws and theoretical results.
- Understand the concept of random variable and probability distributions.
- Identify an appropriate probability distribution for a given random variable and use its properties to calculate probabilities.

**Course Content:**

**UNIT-I:**

Probability: Introduction and Definition of probability, approach of probability: Classical, Empirical, and Axiomatic, terminology: random experiment, Sample space, trail and event, Exhaustive, Mutually Exclusive, Equally likely, Independent event, simple problems on single events.

**UNIT-II:**

Conditional Probability, laws of addition and multiplication, independent events, theorem of total probability, Inverse probability - Bayes' theorem using Set Theory and Tree diagram and its applications.

**UNIT-III:**

Random Variables: Discrete and continuous random variables, Probability Distribution function for Discrete - p.m.f. and continuous - p.d.f., c.d.f. Mathematical Expectation, Theorem of expectation, Variance and co-variance of expectation, Two dimensional random variables: discrete and continuous type, joint and marginal probability distribution, Binomial, Poisson's and normal distribution

**Suggested Readings:**

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- *Hogg, R.V., Tanis, E.A. and Rao J.M. (2009): Probability and Statistical Inference, Seventh Ed, Pearson Education, New Delhi.*
- *Fundamentals of Mathematical Statistics, S. C. Gupta & V.K. Kapoor.*
- *Gun, A.M., Gupta M.K. & Das Gupta, Fundamentals of statistics, Vol.-I (2005).*
- *Fundamentals of Statistics, S. C. Gupta. Himalaya Publishing House*

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**B.SC: SEVENTH SEMESTER**

**PAPER CODE: STATS-MN-4**

**PAPER: STATISTICAL INFERENCE**

**FULL MARKS: 100 (EXTERNAL-75 & INTERNAL-25)**

Course Credits	No. of Teaching Hours Per Week	Total No. of Teaching Hours
04	04 Hrs	60 Hrs

**Course objectives & Learning Outcomes:** This course will enable the students to:

- Gain insight regarding the population parameters from the observed data.
- Estimate the sample to sample variation or uncertainty.
- Provide estimates of unknown parameters from sample statistics.
- Quantify the chance of obtaining a particular random sample result if the null hypothesis were true.

**Course Content:**

**UNIT-I:**

Sampling theory : Introduction, Population vs sample, parameter vs statistic, errors in statistics, types Of samplind, Estimation Problem of estimation, Properties of a good estimator - unbiasedness, consistency, efficiency and sufficiency. Factorization theorem (Without proof).

**UNIT-II:**

Estimation theory: point estimation, interval estimation, Properties of a good estimator - unbiasedness, consistency, efficiency and sufficiency. Factorization theorem (Without proof). Sampling distribution of a Statistic .

**UNIT-III:**

Hypothesis testing: Basic terminologies in hypothesis testing: Null and Alternative hypotheses, Types of error, level of significance, critical region, one tailed and two tailed tests, critical values. Procedure for testing of hypothesis.

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**Suggested Readings:**

- Daniel, Wayne W., *Bio-statistics: A Foundation for Analysis in the Health Sciences*. John Wiley (2005).
- Gun, A.M., Gupta M.K. & Das Gupta, *Fundamentals of statistics, Vol.-I & II* (2005).
- Das, M. N. & Giri, N. C.: *Design and analysis of experiments*. John Wiley.
- Dunn, O.J *Basic Statistics: A primer for the Biomedical Sciences*. (1964, 1977) by John Wiley.
- Bancroft, Holdon *Introduction to Bio-Statistics* (1962) P.B. Hoebar New York.
- Goldstein, *A Biostatistics-An introductory text* (1971). The Macmillan New York.
- *Fundamentals of Mathematical Statistics*, S. C. Gupta & V.K. Kapoor
- *Fundamentals of Statistics*, S. C. Gupta .

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**MINOR FROM DISCIPLINE**  
**BANKING AND FINANCIAL SERVICES**

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**PAPER:**

- MN-1: FUNDAMENTAL OF BANKING
- MN-2: FUNDAMENTAL OF FINANCIAL SERVICES
- MN-3: COMMERCIAL BANKING
- MN-4: FINANCIAL PRODUCTS AND SERVICES

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**B.COM: FIRST SEMESTER**

**PAPER CODE: B&F (COM)-MN-1**

**FULL MARKS:100 (External-75: Internal-25)**

**PAPER NAME: FUNDAMENTAL OF BANKING**

Course Credits	No. of Teaching Hours Per Week	Total No. of Teaching Hours
04	04 Hrs	60 Hrs

**Course Objective and Outcome:** The main objective of this course is to introduce the basic concepts of banking as a financial intermediary and bank as a financial institution to the students.

**Course Contents:**

**UNIT –I:** Meaning and origin of the Bank, Evolution of Banking in India, Types of Banks, Banking System and Structure in India, Meaning and Functions of Commercial Banks, Credit Creation, Unit Banking Vs. Branch Banking.

**UNIT-II:** Central Banking: Functions of Central Bank, Quantitative Credit Controls and Qualitative Credit Controls, History of Reserve Bank of India.

**UNIT – III:** Unit Banking, Branch Banking, Investment Banking, Innovation in banking, E-banking, Online and Offshore Banking, Internet Banking – Anywhere Banking – ATMs – RTGS – Indigenous Banking – Cooperative Banks, Regional Rural Banks, SIDBI, NABARD – EXIM Bank.

**UNIT – IV:** Meaning and Definition of Banker and Customer – Types of Customers – General Relationship and Special Relationship between Banker and Customer – KYC Norms.

**UNIT – V:** Concepts – Duties & Responsibilities of Collecting Banker – Holder for Value – Holder in Due Course – Statutory Protection to Collecting Banker – Responsibilities of paying Banker – Payment Gateways.

**Books for Reference:**

- Banking Theory: Law & Practice: KPM Sundaram and V L Varsheney
- Banking Theory, Law and Practice: B. Santhanam; Margam Publications
- Banking and Financial Systems: Aryasri

*Dr. J. K. Jha*

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- Introduction to Banking: Vijaya Raghavan
- Indian Financial System: M. Y. Khan
- Indian Financial System: Murthy & Venugopal

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**B.COM: THIRD SEMESTER**

**PAPER CODE: B&F (COM)-MN-2**

**PAPER: FUNDAMENTAL OF FINANCIAL SERVICES**

**FULL MARKS: 100 (EXTERNAL-75 & INTERNAL-25)**

Course Credits	No. of Teaching Hours Per Week	Total No. of Teaching Hours
04	04 Hrs	60 Hrs

**Course Objectives & Learning Outcomes:** After completion of the course, students will be able to:

- Interpret the concept of Financial Services
- Describe and Distinguish between Various Financial Services.
- Describe the structure of banking system and functions of Banks.
- Analyse the Role of the Financial Markets regulators.

**Course Content:**

**UNIT 1:** Meaning, Features of Financial Services, Classification, Scope; Modern Activities, Sources of Revenue, Causes of Financial Innovation, Financial Services and Promotion of Industries,

**UNIT II:** New Financial Products and Services, Innovative Financial Instruments, Challenges Facing the Financial Services Sector, Present Scenario.

**UNIT III:** Fund Based Financial Service: Meaning, definition, Features, Types Lease Financing: Meaning, Definition features; Hire Purchase: Meaning, Definition features; Factoring and Forfaiting: Meaning, Definition features; Venture Capital: Meaning, Definition features.

**UNIT IV:** Fee Based Financial Services: Meaning, definition, Features, Credit Rating: Meaning, definition, Features; Merchant Banking: Meaning, Definition features; Securitisation of Debt: Meaning, Definition Features; Underwriting Services: Meaning, Definition Features.

- Gordon, N., and Natarajan, V. Financial Markets and Services. Himalaya Publishing House. (8th edition)
- Agarwal, O. P. Modern Banking of India. Himalaya Publishing House. (22nd edition)



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- Bedi, H. L., and Hardikar, V. K. Practical Banking Advances. UBS. (10th edition)
- Bhole, L. M., and Mahakud, J. Financial Institutions and Markets: Structure, Growth and Innovations. Tata-McGraw Hill. (6th edition)
- Gupta, P. K. (2014). Essentials of Insurance and Risk Management. Himalaya Publishing House.

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**B.COM: FIFTH SEMESTER**

**PAPER CODE: B&F (COM)-MN-3**

**PAPER: COMMERCIAL BANKING**

**FULL MARKS: 100 (EXTERNAL-75 & INTERNAL-25)**

Course Credits	No. of Teaching Hours Per Week	Total No. of Teaching Hours
04	04 Hrs	60 Hrs

**Course objectives & Learning Outcomes:**

- To understand the fundamental principles and concepts of commercial banking, including its role in the financial system.
- To analyze the functions, services, and products offered by commercial banks.
- To evaluate the regulatory framework governing commercial banking operations and its implications on banking activities.
- To foster critical thinking and problem-solving abilities through case studies and real-world scenarios relevant to commercial banking.
- To prepare students for careers in commercial banking by providing practical insights and industry-relevant knowledge.

**Course Content:**

**UNIT-I:** Commercial Banking: Meaning, Functions, Importance, Goals and Constraints and Forms of Commercial Banks. Definition of Banking as per Banking Regulation Act 1949, Banking Systems –Deposit Banking Vs Commercial Banking.

**UNIT-II:** Opening of an Account, Types of Deposit Accounts, Types of Customers (individuals, firms, Trusts, and Companies): Importance of customer relations – Customer grievances and redressal. Cheques Essentials of Valid Cheques, Payment of Cheques, Statutory Protection to the Paying Banker, Refusal of Payment of Cheques, Statutory Protection to the collecting Banker.

**UNIT-III:** Credit Management in Banks: Types of credit. Modes of credit delivery– Loan Policy, Modes of creating charges- Lien, Pledge, Hypothecation and advance against documents of title to goods, discounting bills– Compliance with RBI guidelines – Credit



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Appraisal and Credit Decision Making – Monitoring and Review of Loan Portfolio –  
Management of Non-Performing Assets (NPAs) – Classification of NPAs.

**UNIT-IV:** Analysis of the Banking Structure and Performance Measurement: Interpreting  
Bank Balance Sheet and Income Expenditure Statements. Financial Statement Analysis and  
Bank Performance Measurement: CAR, NPA, Liquidity Ratios, Structural Ratios and  
Profitability Ratios.

Note: Case Study Analysis is compulsory after each unit.

**Text books:**

- Varshney and Malhotra, “Principles of Banking”, Sultan Chand & Sons.
- Reddy.P.N, Appannaiah.H.R. Theory & Practice of Banking; Himalaya Publishing House. Machiraju.H.R. Modern Commercial Banking; Vikas Publishing House Pvt. Ltd.
- Chhabra.T.N. Banking, Theory & Practice; Dhanpat Rai & Co.
- K.P.M. Sundharam, Money, Banking & International Trade - Sulltan Chand & Sons - NewDelhi.
- S.V. Vasudevan, Theory of Banking - S.Chand & Company Ltd., - NewDelhi.





**B.COM: SEVENTH SEMESTER**

**PAPER CODE: B&F (COM)-MN-4**

**PAPER: FINANCIAL PRODUCTS AND SERVICES**

**FULL MARKS: 100 (EXTERNAL-75 & INTERNAL-25)**

Course Credits	No. of Teaching Hours Per Week	Total No. of Teaching Hours
04	04 Hrs	60 Hrs

**Course objectives & Learning Outcomes:**

- To familiarize students with a broad range of financial products and services available in the market.
- To understand the features, characteristics, and uses of various financial products such as stocks, bonds, mutual funds, and derivatives.
- To explore the role of financial institutions in offering and facilitating financial products and services.
- To examine the regulatory framework governing the offering and trading of financial products and services.

**Course Contents:**

**UNIT –I:** Leasing and Hire Purchase: Leasing: Meaning and Types of Leasing. Legislative Frameworks related to leasing. Depreciation implecability with reference to Leasing. Problems on Leasing with Tax imposition. Introduction to Hire Purchasing. Concept and features of Hire Purchase. Tax and depreciation implication. Problems on Hire Purchase.

**UNIT –II:** Credit Rating and Securitization of Debt: Meaning and Process of Credit rating of financial instruments. Rating methodology. Introduction to various Rating Agencies. Rating Symbols of different companies. Securitization of Debts- Meaning and Features. Special Purpose Vehicle, Pass through certificate and mechanism. Benefits of Securitization. Issues of Securitization.

**UNIT –III:** Depository Services and Mutual Funds: Depository services: Role and Advantages of the Depository system, NSDL and CDSL, Depository participants and their roles. Stock broking services including SEBI guidelines. Mutual Fund: Structure of Mutual Funds, Types of Mutual Funds, Exchange Traded Funds, Hedge Funds and Advantages of Mutual Funds, Accounting Aspects and Performance Evaluation of Mutual Funds and Regulations.

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**UNIT- IV: Factoring and Forfeiting, Credit Cards and Venture Capital Finance: Factoring: Types, Mechanism, Advantages and Disadvantages of Factoring. Forfeiting: Types, Mechanism, Advantages and Disadvantages of Forfeiting. Operational Procedure related with the working of Credit Card mechanism. Advantages and Disadvantages of Credit Cards. Procedure to obtain Venture Capital Finance Importance and advantages of Venture Capital Finance Note: Case Study Analysis is compulsory after each unit.**

**Text Books:**

- Bharti Pathak “Indian Financial System”, Pearson Education.
- M. Y. Khan “Financial Services”, Tata McGraw Hill.
- SEBI Manual, Taxman.
- RBI Manual, Taxman.
- Meir Kohn, Financial Institutions and Markets, Tata McGraw Hill.
- Machiraju H.R “Indian Financial System”, Vikas Publishing House Pvt. Ltd.
- L.M. Bhole, “Financial Institutions and Markets”, TMH.
- Various manuals and guidelines issued by Financial Institutions.



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**MINOR FROM DISCIPLINE**  
***COMPUTER APPLICATION***

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**PAPER:**

- MN-1: FUNDAMENTALS OF COMPUTER
- MN-2: ARTIFICIAL INTELLIGENCE
- MN-3: COMPUTER NETWORK
- MN-4: MACHINE LEARNIN

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**B.A/B.SC/B.COM-FIRST SEMESTER**

**PAPER CODE: CA-MIN-01**

**PAPER NAME: FUNDAMENTALS OF COMPUTER**

**FULL MARKS: 100 (External-75: Internal-25)**

**DURATION: 3 Hrs.**

Course Credits	No. of Teaching Hours Per Week	Total No. of Teaching Hours
04	04 Hrs	60 Hrs

**Course Objective:** To provide a basic understanding of computer and functionalities. The course aim to teach students about basic computer, operating system, internet, file management and cyber security.

**Course Outcomes:** This fundamental course outcomes provide students with a solid foundation in computer science and Technology and prepare them for more advanced course in this field.

**UNIT – I Introduction to Computers**

Computer system: characteristics and capabilities. Hardware and Software: Block Diagram of a Computer, Data Processing: Data, Data Processing System, Storing Data, Processing Data Types, Purpose, Components, Generation of Computers, Different Number System and Conversion

**Unit-II Introduction to MS-DOS & Windows**

Fundamentals: Physical Structure of the Disk, Booting Process, Internal DOS Files & Directories, DOS Commands, Creating Batch Files. Microsoft Windows: Operating system-Definition & functions, components. Types of Operating System

**UNIT – III File processing**

Word processing, creating and formatting, editing, creating tables, graphics in documents, spreadsheets, formatting, formulas and functions, data charts, sorting and filtering, introduction to presentation, editing, slideshow, drawing, creating presentation.

**UNIT – IV Use of Computers in Education and Research:**

Data analysis, heterogeneous storage, e-Library, Google scholar, Domain specific packages such as SPSS, Mathematica etc.

**UNIT –V E-Governance**

Meaning, origin, importance, objective, Fundamental, Advantages, Disadvantages, Challenges of e-governance, Elements, Government to Citizens (G2C), Government to Business (G2B), Government to Government (G2G), Government to Employees (G2E)

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Recommended Books:

1. Computer Fundamentals, P. K. Sinha, BPB Publications, Sixth Edition.
2. Introduction to Information Technology, V. Rajaraman, PHI, Second Edition.
3. Fundamental of Information Technology, Chetan Shrivastava, Kalyani Publishers.

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**B.A/B.SC/B.COM-THIRD SEMESTER**

**PAPER CODE: CA-MIN-02**

**PAPER NAME: ARTIFICIAL INTELLIGENCE**

**FULL MARKS: 100 (External-75: Internal-25)**

**DURATION: 3 Hrs.**

Course Credits	No. of Teaching Hours Per Week	Total No. of Teaching Hours
04	04 Hrs	60 Hrs

**Course Objective:** The objective of Artificial Intelligence (AI) is to make machines particularly computers to do things that require intelligence when done by humans.

**Course Outcomes:** This AI course outcome provides students with the necessary knowledge, skills, and ethical awareness to become competent AI practitioners or researcher.

**Unit I Introduction:**

Intelligent Agents, Structure, environments, behaviour, nature of environments, Problem Solving agents. Example problems, searching for solutions, uniformed search strategies, avoiding repeated states.

**Unit II Searching Technique:**

Informed search and exploration, search strategies, heuristic function, local search algorithms and optimistic problems, local search in continuous spaces, online search agents and unknown environments.

**Unit III Knowledge Representation:**

First-order logic, Syntax, and semantics for first-order logic, Knowledge engineering in first-order logic - Inference in First order logic propositional versus first-order logic – unification and lifting – forward chaining – backward chaining.

**Unit IV Learning:**

Learning from observations - forms of learning - Inductive learning - Learning decision trees - Ensemble learning Logical formulation of learning – Explanation-based learning – Learning using relevant information – Inductive logic programming.

**Unit V Applications:** Communication as action, Formal grammar for a fragment of English, Syntactic analysis, Augmented grammar, Semantic interpretation, Ambiguity and disambiguation, Discourse understanding, Grammar induction, Probabilistic language processing.

**Recommended Books:**

1. Ritch & Knight -Artificial Intelligence, TMH Reference Books:

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1. S. Russel and P. Norvig- Artificial Intelligence A Modern Approach, Pearson Education.
2. Patterson -Introduction to Artificial Intelligence & Expert Systems, PHI

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**B.A/B.SC/B.COM-FIFTH SEMESTER**

**PAPER CODE: CA-MIN-03**

**PAPER NAME: COMPUTER NETWORK**

**FULL MARKS: 100 (External-75: Internal-25)**

**DURATION: 3 Hrs.**

Course Credits	No. of Teaching Hours Per Week	Total No. of Teaching Hours
04	04 Hrs	60 Hrs

**Course Objective:** The course aims at introducing the basic concepts and techniques of client side web programming. The student shall be able to develop simple websites using HTML, CSS and JavaScript.

**Course Outcomes:** Understanding of the principles of creating an Effective web pages using PHP and Java script.

**Unit I**

HTML, Browsers, URL's, Domain Names, static and dynamic sites and active web pages, Files Creation, Web Server, HTML Tags, HTML Commands, External

**Unit-II: Cascading Style Sheets (CSS)**

Introduction to CSS, Features and benefits, syntax and structure, linking CSS, selectors, background images, colors and properties, manipulating texts, fonts, borders and boxes, margins, padding lists.

**Unit III Introduction to JavaScript**

JavaScript, Data Types and Literal, Type Casting, Variables, Array, Operators, and Expressions, JavaScript Programming Constructs, If - then - else, Immediate If, For Loop, Built-in Functions, and User defined functions.

**Unit IV Introduction to the Internet**

Concept of WWW, internet and WWW, protocols and programs, secure connections, application and development tools, web browser, URL, web server, web site designing principles, Domain Name.

**Unit-V: Introduction to PHP**

Introduction and basic syntax, Installing, Variables, Data Types, Strings, Constants, Operators, Programming Loops, Functions, Arrays, Forms and Form Handling, Form Validation PHP.

**Recommended Books:**

1. Robin Nixon, Learning PHP, MYSQL, JavaScript, CSS & HTML5 3ed: A Step-by-Step Guide to Creating Dynamic Websites, O'Reilly

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2. Jon Duckett, HTML and CSS: Design and Build Websites, Wiley.
3. Jon Duckett, JavaScript and JQuery: Interactive Front-End Web Development, Wiley

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**B.A/B.SC/B.COM-SEVENTH SEMESTER**

**PAPER CODE: CA-MIN-04**

**PAPER NAME: MACHINE LEARNING**

**FULL MARKS: 100 (External-75: Internal-25)**

**DURATION: 3 Hrs.**

Course Credits	No. of Teaching Hours Per Week	Total No. of Teaching Hours
04	04 Hrs	60 Hrs

**COURSE OBJECTIVES:**

1. To understand pattern classification algorithms to classify multivariate data
2. To understand the Implementation of genetic algorithms
3. To gain knowledge about Q-Learning
4. To create new machine learning techniques.

**COURSE OUTCOMES:** Upon completion of the course, the students will be able to:

1. Develop and apply pattern classification algorithms to classify multivariate data.
2. Develop and apply regression algorithms for finding relationships between data variables.
3. Develop and apply reinforcement learning algorithms for learning to control complex systems.
4. Write scientific reports on computational machine learning methods, results and conclusions.

**UNIT I: BASICS**

Learning Problems Perspectives and Issues Concept Learning Version Spaces and Candidate eliminations – Inductive bias – Decision Tree learning – Representation – Algorithm – Heuristic Space Search

**UNIT II: NEURAL NETWORKS AND GENETIC ALGORITHMS:**

Neural Network Representation Problems Perceptions Multilayer Networks and Back Propagation Algorithms – Advanced Topics – Genetic Algorithms Hypothesis Space Search– Genetic Programming – Models of Evolutions and Learning.

**UNIT III: BAYESIAN AND COMPUTATIONAL LEARNING:**

Bayes Theorem Concept Learning Maximum Likelihood Minimum Description Length Principle Bayes Optimal Classifier Gibbs Algorithm Naïve Bayes Classifier Bayesian Belief Network EM Algorithm Probability Learning Sample Complexity Finite and Infinite Hypothesis Spaces – Mistake Bound Model.

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**UNIT IV: INSTANT-BASED LEARNING:**

K- Nearest Neighbour Learning Locally weighted Regression Radial Bases Functions – Case Based Learning.

**UNIT V ADVANCED LEARNING:**

Learning Sets of Rules Sequential Covering Algorithm Learning Rule Set First Order Rules Sets of First Order Rules Induction on Inverted Deduction Inverting Resolution Analytical Learning Perfect Domain Theories Explanation Base Learning – FOCL Algorithm - Reinforcement Learning Task Learning Temporal Difference Learning

**TEXTBOOK:**

- Tom M. Mitchell, “Machine Learning”, McGraw-Hill, 2010
- Bishop, Christopher. Neural Networks for Pattern Recognition. New York, NY: Oxford University Press, 1995
- Ethem Alpaydin, (2004) “Introduction to Machine Learning (Adaptive Computation and Machine Learning)”, The MIT Press
- T. astie, R. Tibshirani, J. H. Friedman, “The Elements of Statistical Learning”, Springer(2nd ed.), 2009

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**MINOR FROM DISCIPLINE**  
**MANAGEMENT**

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**PAPER:**

- MN-1: FUNDAMENTAL OF MANAGEMENT
- MN-2: MARKETING MANAGEMENT
- MN-3: FINANCIAL MANAGEMENT
- MN-4: HUMAN RESOURCE MANAGEMENT

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**B.COM: FIRST SEMESTER**

**PAPER CODE: MGT-MN-1**

**FULL MARKS:100 (External-75: Internal-25)**

**PAPER NAME: FUNDAMENTAL OF MANAGEMENT**

Course Credits	No. of Teaching Hours Per Week	Total No. of Teaching Hours
04	04 Hrs	60 Hrs

**Course Objective and Outcome:** The objective for this course to provide an understanding of the task and functions of management and to acquaint the participants with the developments in concept. Theories and practices in the overall field of management.

**Course contents:**

**UNIT-I:**

Meaning, Nature and significance of Management, Approaches of management, Contributions of Taylor, Fayol and Barnard, Functions of a Manager, Social responsibility of Managers, Values in management.

**UNIT-II:**

The Nature & significance of Planning, Objectives, Steps of Planning, Decision making as key step in planning. The Process and Techniques of Decision Making.

**UNIT-III:**

Organizing: Nature - purpose - organizational structure - Theories of organization - span of control - Line & staff functions. Authority & Responsibility -centralization and decentralization -delegation of authority.

**UNIT-IV:**

Staffing: Nature and Significance, Selection, Appraisal and Development of Managers. Directing: Issues in managing human factors, Motivation, nature and Significance's, Theories and Techniques.

**UNIT-V:**

Directing: Nature of directing - leadership qualities - styles - motivation - morale and discipline. Controlling: The objectives and process of control - Role of information in control- Performance standard – Measurement of performance, remedial act – Integrated control system in an organization. Control techniques.

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**Suggested Readings:**

- Koontz H., Weihrich H. (2009); Principles of Management; Tata Mc Graw Hill; 8th Edition.
- Williams C (2009) Principles of Management; South-Western/Cengage Learning; 5th Edition.
- Prasad L.M, principles and Practice of Management, Sultan Chand & Sons, 20th Edition.
- Jaiswal B. & Maheshwari R.K. (2010), Essentials of Management: NRBC.
- Weihrich Heinz and Koontz Harold (2013); Management: A Global, Innovative, and Entrepreneurial Perspective; Mc Graw Hill; 14th Edition.
- Andrew Leigh (2012); The Essentials of Management: Everything you need to succeed as a new manager; Pearson UK; 2nd Edition.

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8/4/22

**DEPARTMENT OF MANAGEMENT, S.K.M.U, DUMKA, JHARKHAND**

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**B.COM: THIRD SEMESTER**

**PAPER CODE: MGT -MN-2**

**PAPER: MARKETING MANAGEMENT**

**FULL MARKS: 100 (EXTERNAL-75 & INTERNAL-25)**

Course Credits	No. of Teaching Hours Per Week	Total No. of Teaching Hours
04	04 Hrs	60 Hrs

**Course Objectives & Learning Outcomes:** The goal of the course is to gain knowledge of the fundamental ideas, techniques and problems associated with the exchange of goods and services.

**UNIT-I**

Introductory Concept of marketing, difference between marketing and selling, modern marketing concept, marketing mix, market segmentation, marketing planning, strategy and approaches.

**UNIT-II**

Consumer Behaviour: Concept of consumer behaviour, buying motives, study of consumer behaviour and motivational research – its types, nature, scope and role. Method of conducting marketing research, sales promotion and advertising, factors influencing consumer behavior.

**UNIT-III**

Product Management: Nature and scope of product policy decisions, product-mix, product-line and product-life cycle, product planning and development, product diversification, product improvement. Branding and Trade Marks, packaging. Product Pricing-Concept, nature and scope of product pricing decisions; price policy considerations, objectives and strategies of pricing.

**UNIT-IV**

Distribution Management & Marketing communication, Decisions relating to channels of distribution management of physical distribution, sales promotion, sales planning and forecasting, management of sales force, analysis of sales performance and marketing of

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services, functions of distribution channel, factors influencing distribution channel, integrated marketing communication.

**Suggested Readings:**

- Kamal Y. (2020), Marketing Management, Sahitya Bhawan Publication.
- Kotler, Keller, Koshi & Jha (2015) Marketing Management South Asian Perspective. Pearson Publication. 3. Ramaswamy & Namakumari (2009) Marketing Management- Concepts and Cases. Macmillan
- Arun Kumar & Meenakshi N.(2006) Marketing Management. Vikas Publication
- Saxena R. (2003) Marketing Management. Mc.Graw Hill. 6th Edition



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**B.COM: FIFTH SEMESTER**

**PAPER CODE: MGT -MN-3**

**PAPER: FINANCIAL MANAGEMENT**

**FULL MARKS: 100 (EXTERNAL-75 & INTERNAL-25)**

Course Credits	No. of Teaching Hours Per Week	Total No. of Teaching Hours
04	04 Hrs	60 Hrs

**Course objectives & Learning Outcomes:** The purpose of this course is to provide the students with an in-depth knowledge of Financial Management. This course aims to teach basic concepts of Financial Management to the students. The objectives of this course will be to:

- Provide the students with a thorough knowledge of Business Finance and Investment Decisions.
- Provide them with knowledge of Financing and Dividend Decisions.
- Give them an overview of working capital.

**UNIT-I**

Introduction to Financial Management: Concept of Financial Management, Finance functions, objectives of financial management- Profitability vs. Shareholder wealth maximization. Time Value of Money - Compounding Discounting. Investment Decisions: Capital Budgeting-Payback, NPV, IRR and ARR methods and their practical applications.

**UNIT-II**

Financing Decision: Capitalization Concept, Basis of Capitalization, consequences and remedies of over and under capitalization, Cost of Capital, WACC, Determinants of Capital structure, Capital structure theories.

**UNIT-III**

Dividend Decision: Concept and relevance of dividend decision, Dividend Models-Walter's, Gordon's and MM Hypothesis, Dividend policy-determinants of dividend policy.

**UNIT-IV**

Management of Working Capital: Concepts of working capital, Approaches to the financing of current Assets, Management of different components of working capital: Cash, receivables and inventory.

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**Suggested Readings:**

- Pandey I. M. (2017). Financial Management, Vikas Publishing, 11th Edition
- Rustagi, R.P. (2019). Fundamentals of Financial Management, Taxman , 14th Edition
- Kishore, Ravi M (2016). Financial Management, Taxman's, 8th Edition.
- Khan, M.Y., & Jain, P.K. (2018). Financial Management: Text, Problems and Cases, Mc Graw Hill Publication, 8th Edition
- Jaiswal B. & Shimpee L. (2019), Concept in Valuation Financial Management, Sahitya Bhawan.
- Maheshwari S.N. (2019). Financial Management: Principles and Practice, Sultan Chand and Sons, 5th Edition

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**B.COM: SEVENTH SEMESTER**

**PAPER CODE: MGT -MN-4**

**PAPER: HUMAN RESOURCE MANAGEMENT**

**FULL MARKS: 100 (EXTERNAL-75 & INTERNAL-25)**

Course Credits	No. of Teaching Hours Per Week	Total No. of Teaching Hours
04	04 Hrs	60 Hrs

**Course objectives & Learning Outcomes:** The goal of this Human Resource Management course is to provide the students with an understanding of the concepts, theories and methods of human resource management and to provide them with the fundamental methods of acquiring, rewarding, motivating and managing human resources in an organization.

**UNIT-I**

Introduction to Human Resource Management: Personnel vs. Human Resource Management, Significance, Functions and Objectives of HRM. Evolution and Development of HRM. Human Resource Planning: Process, Significance and Integration with Strategic Planning. Job Analysis: Concept and Components.

**UNIT-II**

Recruitment: Concept, Sources and Assessment of Recruitment Techniques. Selection: Concept and Procedure. Placement and Induction, Training and Development: Concept, Need, Objectives and Methods, Stages in Training Process. Job Design: Approaches and Techniques of Job Design.

**UNIT-III**

Job Evaluation: Concept, Objectives and Methods/ Techniques. Employee Remuneration: Concept of Wage and Salary, Reward Management. Fringe Benefits and Incentive Payments. Performance Appraisal: Concept, Objectives, Process and Techniques.

**UNIT-IV**

Industrial Relations: Concept, Objectives, Approaches and Actors of Industrial Relations. Discipline: Disciplinary Procedure, Objectives and Aspects of Discipline. Grievance Procedure: Characteristics, Need and Model Grievance Procedure. Trade Unionism: Concept, Functions, Objectives and Problems of Trade Unions. Collective Bargaining and Industrial Disputes

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**Suggested Readings:**

- Dessler, G. & Varkkey, B. (2015); Human Resource Management; New Delhi: Pearson; 14th Edition.
- Armstrong, M. & S. Taylor. (2017); Armstrong's Handbook of Human Resource Management Practice London: Kogan Page; 14th Edition.
- Aswathappa, K. (2010); Human Resource and Personnel Management; Tata McGraw-Hill Education; 6th v 4. Rao, P. S., & Rao, V. S. P. (2009); Personnel and Human Resource Management; Himalaya Publishing House; 5th Edition.
- Bernardin, John H. (2012); Human Resource Management; McGraw Hill; 6th Edition.

# SIDO KANHU MURMU UNIVERSITY

DUMKA – 814110

Email: [s.k.m.university.dumka@gmail.com](mailto:s.k.m.university.dumka@gmail.com)



Website: [skmu.ac.in](http://skmu.ac.in)

Ref : SKMU/DSW/ 48 /24

Date – 08/04/2024

To

All Principal/Prof-incharge  
Constituent/Affiliated Colleges  
S.K.M. University, Dumka

**Sub : Syllabus of Minor From Discipline as per NEP for UG.**

Sir/Madam,

With reference to above subject, kindly find the Syllabus of **Minor From Discipline as per NEP for UG** of following subjects.

1. Management
2. Statistics
3. Computer Application

Syllabus is attached with this letter.

It is for your information & needful action.

Memo No. SKMU/DSW/ /24

Copy to-

1. Controller of Examinations, SKMU, Dumka
2. PA to R/PVC/VC
3. Guard file.

*[Signature]*  
08/04/24  
Sd/-

DSW

Date -

DSW

*[Signature]*  
08/04/24

# SIDO KANHU MURMU UNIVERSITY

DUMKA – 814110

Email: [s.k.m.university.dumka@gmail.com](mailto:s.k.m.university.dumka@gmail.com)



Website: [skmu.ac.in](http://skmu.ac.in)

Ref : SKMU/DSW/ 51 /24

Date – 10/04/2024

To

All Principal/Prof-incharge  
Constituent/Affiliated Colleges  
S.K.M. University, Dumka

**Sub : Syllabus of Minor From Discipline as per NEP for UG.**

Sir/Madam,

With reference to above subject, kindly find the Syllabus of **Minor From Discipline as per NEP for UG.**

**1. Banking and Financial Services**

Syllabus is attached with this letter.

It is for your information & needful action.

Memo No. SKMU/DSW/ /24

Copy to-

1. Controller of Examinations, SKMU, Dumka
2. PA to R/PVC/VC
3. Guard file.

Sd/-

DSW

Date -

*Genra*  
10/4/24.  
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10/4/24