

# CERTIFICATE COURSES (2025-2026)

CENTRE FOR DISTANCE AND ONLINE EDUCATION



## INFORMATION BROCHURE



MAHARAJA SRIRAM CHANDRA BHANJA DEO UNIVERSITY  
SRIRAM CHANDRA VIHAR, TAKATPUR, BARIPADA,  
MAYURBHANJ, ODISHA- 757003

## **THE CREST OF THE UNIVERSITY**

The ship in the logo represents maritime culture of Odisha. This also represents Odisha's past glory in trade and commerce. The inkpot with pen symbolizes education in the ancient period which needs to be developed in recent times to cater to modern needs. The tribal couple with firewood on their heads represents the tribal life and culture in Mayurbhanj district. The pulley used in extracting minerals from the mines and the vehicle used for transportation of those minerals to the industries symbolize rich potential of minerals in Mayurbhanj district that are the basic ingredients in setting up of industries in this district.

**Dr. Hari Babu Kambhampati**  
*Hon'ble Chancellor*

**Prof. P.K. Satapathy**  
*Hon'ble Vice-Chancellor*

**Prof. S.K. Nayak**  
*Director, CDOE*

**Dr. P.K. Jena**  
*Deputy Director, CDOE*

## **ABOUT THE MSCB UNIVERSITY**

The Maharaja Sriram Chandra Bhanja Deo University (MSCB University), formerly North Orissa University (NOU) was established by the Government of Orissa, under the Section 32 of the Odisha University Act, 1989 (Act 5 of 1989), vide notification No. 880 dated 13th July 1998. It was carved out of the Utkal University and became operational since 1999 at Takatpur (98.84 acres) of Baripada in the Mayurbhanj District of Odisha as an affiliating university. The University is recognized by the University Grants Commission under Sections 2(f) and 12(B) of UGC Act, 1956 with effect from 15th February 2000 and 21st June 2006, respectively. MSCBU is accredited with an 'A' grade by NAAC in its 3rd cycle (valid until April 10, 2028). It is also recognized by the Bar Council of India, DEC, IGNOU, NCTE, and is a member of the Association of Indian Universities and the Association of Commonwealth Universities. The university's campus, Sriram Chandra Vihar, spans 98.84 acres, located 250 km from Kolkata and 260 km from Bhubaneswar. MSCBU's jurisdiction covers 56 colleges including 2 Autonomous Colleges, 1 Medical College, 1 Teachers' Education (B.Ed.) College along with 26 P.G. Departments running in the University campus and imparting education to a large number of students at the graduate and post-graduate levels.

## CERTIFICATE COURSES

Sl. No.	Name of the Course	Course Code	Offering Department
1	Tribal development	CC-TD	ATS
2	Clinical Biochemistry and Molecular Diagnostic	CC-CBMD	Biotechnology
3	Assessment of Biodiversity & Conservation	CC-ABC	Botany
4	Business Environment and Law	CC-BEL	Business Administration
5	Analytical Instrumentation Technique	CC-AIT	Chemistry
6	“C”	CC-C	Computer Application
7	Core JAVA Programming	CC-CJ	Computer Science
8	Research Methodology for Social Science	CC-RMSS	Economics
9	Indian Literature in translation, tradition and practices	CC-ILTTP	English
10	Organization and Processing of Library Resources	CC-OPLR	Library and Information Science
11	Operations Research	CC-OR	Mathematics
12	Folk Literature	CC-FL	Odia
13	Physics with SCILAB	CC-PS	Physics
14	Basic Principles of Remote Sensing and Applications	CC-BPRSA	RS and GIS
15	Santali Language	CC-SL	Santali
16	Environmental Impact Assessment (EIA) and Management Plan (EMP)	CC-EIAEMP	WLBC
17	Advanced Molecular Biology	CC-AMB	Zoology
18	Early Childhood Care Education	CC-ECCE	Education
19	Dietetics and Nutrigenomics	CC-DN	Yoga & Naturopathy
20	Human Rights: Ideas and Concepts	CC-HRIC	Political Science
21	Entrepreneurship, Finance and Business Law	CC-EFBL	Commerce
22	Manuscriptology	CC-M	Sanskrit
23	NGO Management	CC-NM	Social Work

# **STANDARD OPERATING PROCEDURES OF CERTIFICATE COURSES**

## **01. Purpose of Certificate Courses**

Certificate Courses are short-term academic or skill-based programs designed to:

- Provide specialized knowledge or practical skills on a specific subject.
- Offer flexible learning opportunities to students, professionals, and the public.
- Provide short-term, focused training in specific academic or professional fields.
- Enhance skill development and employability.
- Offer a good learning pathways for students and working professionals.
- Promote industry collaboration and hands-on learning opportunities.

## **02. Eligibility Criteria**

The eligibility criteria for taking admission into the certificate courses are as follows

- Open for all learners, depending on program design.
- Minimum educational qualification is Graduate/Post Graduate in the concern subjects/Allied subjects.
- Relevant background experience, where applicable.
- One candidate is eligible for multiple certificate courses
- Special provisions for working professionals or students depending upon the course.

## **03. Duration of the Course**

- Minimum 25 candidates per batch to start any certificate course
- Minimum duration: **36 hours** (Must be completed within: **4-6 months duration**)
- May be offered full-time, part-time, weekend, holidays or online with due approval

## **04. Course Structure**

Each certificate course include:

- Unit wise syllabus.
- Theory/Practical balance based on discipline.
- Assessment formats through final exam/practical.

## **05. Mode of Delivery**

Certificate Courses may be delivered through

- Classroom-based learning/Offline classroom teaching
- Blended/Hybrid /Online (If required).
- Workshops/Lab visit/Field visit, where relevant
- Practical/Instrument Handling where relevant
- The **Course Coordinator** will contact the respective HODs of the department and fix time. Students will conduct/observe the practical in the fixed time slot.

## 06. Admission Procedure

- Notification through university website.
- Online application form submission.
- Verification of eligibility.
- Full Payment of Course fee. No instalment payment is allowed
- The **Course Coordinator in association with CDOE official staff** will verify the admission process.

## 07. Attendance Requirements

- Minimum **75% attendance** is required for final assessment and evaluation.
- Flexibility for online learners may be allowed through participation tracking.

## 08. Fees Structure and Bank Details

- The course fee is **Rs 1000 /-** per candidate per course. Students required to deposit the course fee at a time during the online payment/ NEFT/ Bank Challan.

<b>Account Name</b>	<b>CERTIFICATE COURSE CDOE</b>
<b>Account Number</b>	<b>551010210000202</b>
<b>IFSC Code</b>	<b>BKID0005510</b>

## 09. Assessment & Evaluation

Final assessment shall be done by a written exam/practical/project depending on course type. The **Course Coordinator** will finalise the date of exam with due consultation with course faculty in each course. The date of exam may be same or different depending upon the course completion.

### Exam Types

- **Fill in the blanks/MCQs (Multiple Choice Questions)** – Most common.
- **Descriptive/Short Answer Questions** – For theoretical understanding.
- **Practical/Project Work** – Especially for IT, programming, or skill-based courses.
- **Internal Assessment (Assignments/Quiz)** – Some courses give grades based on assignments or quizzes throughout the course.

### Marks Distribution (Typical)

- Theory (Long/Short type/Fill in the blanks/MCQs) : 70%
- Practical/Project : 20%
- Internal Assessment (Quiz/assignment/MCQs) : 10%

### Passing Criteria

- Minimum passing percentage is 50% individually for theory and practical.

### Mode

- **Online** – With assessment/quiz (If any).
- **Offline** – Written exams in exam centers of the university

# **1. TRIBAL DEVELOPMENT**

## **Course objective:**

- To train student about the discourse over the concept of Adivasi in India.
- To make student out about the situation of the tribals in India and Odisha.
- To train student about the critical analysis of the development intervention of the state towards tribal development.
- To make students aware about the various tribal assertion of colonial and post-colonial period.
- To percolate knowledge among the student about the critical perspective of tribal movements in relation to rights and identity.
- To help in imparting transferable and life skills particularly for tribal peoples
- To help in getting employability in Govt. & NGO Sectors
- To take up problems of societal issues and make proper policies to combat them.

## **Contents**

### **Unit – I**

Tribes as a category Tribes and Tribal: Nomenclature and Conceptual discourse; Distribution and Classification of Tribes in India and Odisha; Tribes/ adivasi as indigenous people: contemporary discourse; Particularly Vulnerable Tribal Group (PVTGs) of India and Odisha; Non-Scheduled category of Tribes: De-notified tribe, Nomadic tribes, criminal tribes; Pseudo-tribalism; Indigeneity.

### **Unit – II**

Tribal situations in India and Odisha; Major tribal problems: land-alienation, indebtedness, Illiteracy, unemployment, migration, health and nutrition, displacements and rehabilitation, shifting-cultivation, Deforestation and its impact on tribal population

### **Unit – III**

History of tribal administration; Constitutional safeguards for scheduled tribes; Mandal Commission, Dhebar Commission, Draft National Tribal Policy, Issues of acculturation assimilation and integration; Neheruvian approach to tribal development; Development Programmes in Five Year Plans, Tribal Sub Plan; Tribal Rights on Forest and Land; Forest Policies and Tribals; Impact of development programmes on tribal life.

### **Unit – IV**

Ethnic Group; Ethnicity: Concept and Theories; Tribal Assertion and Question of Indigeneity: Demand for scheduled tribe status (Teagarden communities, Meena and Gurjar agitation; Movement for livelihood: Kalinga Nagar Incident; Niyamgiri Movement; Kashipur agitation; Pathalgadi movement; Tribal Autonomy movements in India: Naga movement, Bodo movement, Gorkha movement; Ethnic problems and quest for identity formation

**Course Outcome**

- Critically analysis the concept of tribes and Adivasi in India
- Demonstrate knowledge about the situation of the tribal people.
- Influence the state for the cause of tribal society.

## **2. CLINICAL BIOCHEMISTRY AND MOLECULAR DIAGNOSTICS**

### **Course objective:**

This course will add value in academics promote professional ethics, human values, skills in clinical diagnostics and life skills. It will generate self-employability, services in medical, pharma and nutraceutical industries, hospitals, clinics, diagnostic centres and in academics.

### **Contents**

#### **Unit – I**

Clinical Microbiology: Overview of diseases, Triodes of the disease (Host, pathogens, environment and their interaction), Common pathogenic bacteria, virus, fungi, protozoan diseases. Emerging infectious diseases and Clinical diagnosis, Antimicrobial Sensitivity Testing - Antimicrobials and their mode of action -Mechanisms of drug resistance Practical related to collection of samples/specimen, Culture Media & Transport Media, isolation and culture Techniques of microorganisms, microscopic examination of bacteria, yeast and mould, Identification of microorganisms. Staining procedures, Antimicrobial susceptibility testing, pooling of samples, test for diagnostic performances (Sensitivity, specificity)

#### **Unit – II**

Clinical Biochemistry: Overview of the functioning of Clinical Biochemistry, Clinical importance of Enzymes and Isoenzymes in pathological disorders, Composition of blood, Hematological parameters and their significance in disease diagnosis (Anemia, thrombocytopenia and others). Biochemical parameters in diagnosis (Level of sugar and HbA1C, HDL, LDL, cholesterol, and amino acids in blood and urine) Nutritional disorders. Practical related to collection of blood, Sputum, throat swab, nasopharyngeal swab, Swabs (pus, wound) CSF and other body fluids, pooling of samples, blood film preparation and identification of cells; blood grouping (forward and reverse), diagnosis of G6PD deficiency, Sickle-cell hemoglobin (Paper electrophoresis), thalassemia (dot blots and other methods).

#### **Unit – III**

Diagnostic Immunology: Antigen, Allergen, Antibody, Basic principles of antigen antibody reactions, Applications of immunological techniques in the diagnosis of microbial infections, and immunological diseases, agglutination, precipitation reaction, immunodiffusion, immunoelectrophoresis, ELISA. Practical related to antigen based rapid diagnostic tests, immunofluorescence antibody test (IFAT), western blotting.

#### **Unit – IV**

Molecular diagnostics: past, present, and future, history & scope, PCR-based diagnosis (conventional PCR, nested-PCR, RT-PCR, PET-PCR, CLIP-PCR, NALFIA), Isothermal amplification methods (LAMP, NASBA), signal amplification molecular technique (b-HCR, aptamer), biosensor and CRISPR-based identification. Practical related to the principles of Colorimetry, Spectrophotometry, Fluorescence photometry, Advanced Microscopy, PCR.

## **Course Outcome**

1. Describe disciplines and specimen types within the field of medical diagnostics
2. Select appropriate diagnostics tools for specific scenarios
3. Name the most common clinical chemistry and hematology analyses and understand the science behind the analyses
4. Give examples of how to diagnose common infections
5. Describe molecular diagnostics tools and their relation to precision medicine
6. Describe the most common imaging technologies and their utility in the clinic

### **3. ASSESSMENT OF BIODIVERSITY AND CONSERVATION**

#### **Course objective:**

This course will add value in academics promote awareness for environment and its sustainability, human values and ethics. It will help in developing skills in plant classification, assessment and conservation of biodiversity and ecosystems of the plants and generate employability in research institutes, forestry, horticulture, botanical gardens and in academics

#### **Contents**

##### **Unit – I**

Principles of nomenclature, Salient features of ICN, Major rules of ICN: Author citation, Type method, Rules of Priority and its limitations, Effective and Valid publications. Plant identification and use of Botanical keys.

##### **Unit – II**

Plant exploration, herbarium methodology, functions of herbarium, management, changing concept of herbarium, important herbaria and gardens of the world with special reference to Central National Herbarium Plant exploration, herbarium methodology, functions of herbarium, management, changing concept of herbarium, important herbaria and gardens of the world with special reference to Central National Herbarium.

##### **Unit – III**

Biodiversity: Concept and significance; Rare, Endemic and Threatened (RET) Taxa, Prioritization of Taxa; Biodiversity indices (Species Richness Index, Shannon-Weiner diversity Index, Simpson's Index and Evenness Index); Phytogeographical zones of India; Indian Biological Diversity Act.

##### **Unit – IV**

Biodiversity Conservation: In situ conservation (Wildlife Sanctuaries; National Parks; Biosphere Reserve and Sacred groves), Ex situ conservation (Botanic Garden; Gene Bank; Seed Bank; Cryopreservation); Biotechnological approaches for conservation: Tissue culture technique; Micropropagation; Marker assisted breeding; Haploid culture and Transgenic crops.

#### **Course Outcome**

- Enable to learn the concept of plant nomenclature, the techniques of correct identification, exploration and preservation of plants.
- Students will get an insight into the assessment of biodiversity and prioritization of taxa.
- Imbibe skills on the application of biotechnological approaches in conserving biodiversity.

## **4. BUSINESS ENVIRONMENT AND LAW**

### **Course objective:**

To give orientation about Business Environments different forms of Business organisations along with an exposure to elements of business laws and entrepreneurship.

### **Contents**

#### **Unit – I**

Introduction to the Concepts of Vision & Mission Statements; Types of Business Environment: Internal and External Environment to the Enterprise, Comparative Analysis of Business Environment: India and Other Countries. Forms of Business Organization Concept and Features in relation to following business models-Sole Proprietorship; Partnership; Company.

#### **Unit – II**

Scales of Business Micro, Small and Medium Enterprises; Large Scale Enterprises and Public Enterprises; MNCs. Emerging Trends in Business Concepts, Advantages and Limitations Franchising, Aggregators, Business Process Outsourcing (BPO) & Knowledge Process Outsourcing (KPO); E-Commerce, Digital Economy.

#### **Unit – III**

Introduction to Law Meaning of Law and its Significance; Relevance of Law to Modern Civilized Society; Sources of Law. Meaning and Nature of Company; Promotion and Incorporation of a Company; Familiarization with the Concept of Board of Directors, Shareholders.

#### **Unit – IV**

Law relating to Contract Meaning of Contract; Essentials of a Valid Contract; Nature and Performance of Contract; Termination and Discharge of Contract; Law of Agency Definition of a Negotiable Instrument; Instruments Negotiable by Law and by Custom; Types of Negotiable Instruments; Parties to a Negotiable Instrument. Cyberspace; Cyber laws; Scope of Cyber Laws; Classification of Cyber Crime.

### **Course Outcome**

- Enable the students to know about different types of business, their ethics
- Development of business environment and laws at national and international levels
- Get a comprehensive knowledge on business and cyber laws
- Generate self-employability, entrepreneurship and professionals in industries and academics.

## **5. ANALYTICAL INSTRUMENTATION TECHNIQUES**

### **Course objective:**

- To provide concepts on the several instrumentation techniques at the structural and chemical level which has become essential tools for chemical research.
- To understand and describe the fundamental principles behind the methods of characterization which are included in the course.
- To acquire skills in the use and selection of instrumental techniques for characterization of molecules, materials and application of these techniques to solving problems.
- To develop tools for analysis and methodologies that promotes multidisciplinary research for better understanding of composition-structure-properties correlation.

### **Contents**

#### **Unit – I**

General Introduction: Instrumentation methods of analysis, classification, advantage of instrumental methods, limitations, sensitivity and detection limit, precision and accuracy

#### **Unit – II**

Basic principles, general instrumentation and applications: UV-Visible spectroscopy and IR  
Basic principles, general instrumentation and applications of Fluorescence Spectrophotometer: relationship between excitation spectra and fluorescence spectra, factors affecting fluorescence emission. Basic principles, instrumentation and applications of Atomic Absorption Spectroscopy (AAS).

#### **Unit – III**

Basic principles, general instrumentation and applications: TGA (Thermo Gravimetric Analysis), DTA (Differential Thermal Analysis), DSC (Differential Scanning Calorimetry).

#### **Unit – IV**

Basic principles, general instrumentation and applications: X-ray powder diffraction (XRD), Zeta Sizer and Surface Area Analyzer.

### **Course Outcome**

- To provide a general understanding of instrumental techniques & will prepare students for advanced research or development in industry.
- To provide opportunity to undertake guided reading and to develop their own portfolio of learning to enhance transferable skills and knowledge.
- To recognize the characterization techniques, capabilities and limitations, allowing them to identify and select the most appropriate methods for their research needs.

## **6. CERTIFICATE COURSE ON 'C'**

### **Course objective:**

- To know how to solve computational problems using C language
- To understand the process of compiling and executing C program
- To understand the language elements of C language and use them for problem solving
- To start a career in programming which is almost a mandatory skill for employability in Software Industries and academics.

### **Contents**

#### **Unit – I**

Introduction to Programming, Introduction to C Language, C Program Compilation & Execution, Language Elements, Operators, Control Statements, Looping Structures

#### **Unit – II**

Arrays, Multidimensional Arrays, String Handling, User-defined functions

#### **Unit – III**

Storage classes, Pointers, Structures, Unions, Typedef and Enumeration

#### **Unit – IV**

Dynamic Memory Allocation, Pre-processor directives, File Handling, Command Line Arguments

### **Course Outcome**

- Write code in C and execute programs
- Understand the flow of data and instructions in programming
- Get an in-depth understanding of the language elements

## **7. CERTIFICATE COURSE ON CORE JAVA**

### **Course objective:**

- To become familiar with the features of Java Language.
- To discover how to write Java code according to Object-Oriented Programming principles.
- To become comfortable with concepts such as Classes, Objects, Inheritance, Polymorphism and Interfaces.
- To learn Java APIs for Collections, I/O Streams.
- To design GUI applications and Applets using AWT and Swing.
- To develop Multithreaded and Networking applications.

### **Contents**

#### **Unit – I**

Introduction to Java: History of Java, Features of Java, Concepts of OOP, Java Development Kit (JDK), Security in Java. Java Basics: Keywords; Working of Java; Including Comments; Data Types in Java; Primitive Data Types; Abstract / Derived Data Types; Variables in Java; Using Classes in Java; Declaring Methods in Java, Code to Display Test Value; The main () Method, invoking a Method in Java; Saving, Compiling and Executing Java Programs. Operators and Control Statements: Operators, Arithmetic Operators, Increment and Decrement Operators, Comparison Operators, Logical Operators, Operator Precedence; Control Flow Statements, If-else Statement, Switch Statement, For Loop, While Loop, Do...While Loop, Break Statement Continue Statement.

#### **Unit – II**

Arrays and Strings: Arrays; String Handling; Special String Operations; Character Extraction; String Comparison; Searching Strings; String Modification; String Buffer. Inheritance, Package and Interface: Inheritance, Types of Relationships, what is Inheritance? Significance of Generalization, Inheritance in Java, Access Specifiers, The Abstract Class; Packages, defining a Package, CLASSPATH; Interface, Defining an Interface, Some Uses of Interfaces, Interfaces versus Abstract Classes.

#### **Unit – III**

Exception Handling: Definition of an Exception; Exception Classes; Common Exceptions; Exception Handling Techniques. Streams in Java: Streams Basics; Abstract Streams; Stream Classes; Readers and Writers; Random Access Files; Serialization. Applets: What are Applets?; The Applet Class; The Applet and HTML; Life Cycle of an Applet; The Graphics Class; Painting the Applet; User Interfaces for Applet; Adding Components to user interface; AWT (Abstract Windowing Toolkit) Controls.

## **Unit – IV**

Event Handling: Components of an Event; Event Classes; Event Listener; Event-Handling; Adapter Classes; Inner Classes; Anonymous Classes. Swing: Concepts of Swing; Java Foundation Class (JFC); Swing Packages and Classes; Working with Swing- An Example; Swing Components. Java Data Base Connectivity: Java Data Base Connectivity; Database Management; Mechanism for connecting to a back-end database; Loading the ODBC driver.

## **Course Outcome**

- Enable the students to understand the basic principles of the object-oriented programming.
- To show competence in the use of the Java programming language in the development of small to medium-sized application programs that demonstrate professionally acceptable coding and performance standard.
- Enable the students to demonstrate an introductory understanding of graphical user interfaces, multithreaded programming, and event-driven programming.
- Enhance analytical skills of object-oriented programming.
- Provides opportunity to get employability as Software Developer or Programmer in software industries and academics.

## **8. RESEARCH METHODOLOGY FOR SOCIAL SCIENCE**

### **Course objective:**

The primary objective of this course is to develop skill of the students for handling of data related to the social issues, challenges and to improve analytical expertise. The course is a value-added course that will help the students to get employability scope in Government, Quasi-Government and Non -Government Organizations

### **Contents**

#### **Unit – I**

Social Science Research; Meaning, Objectives, Types, PAPA Model. Criteria of a Good research and researcher, Problems in Social Science Research. Research Process from Problem Statement to Report Writing. Research Design ; Meaning, Types and Its different Criteria. Literature Review; Meaning, Objectives, Types, Sources, Precautions, and Steps in Literature Review. Training in Linear, Tabular, Integrated and Systematic Literature Review.

#### **Unit – II**

Data; Meaning, Types of data based on entity and interval (*Cross-Sectional, Time Series, Panel & Pool*), Quantitative and Qualitative Data (*NOIR Scales, Likert, Thurstone, Guttman, Stapel, and Semantic Differential Scale*), Geospatial and Geostatistical Data (*Vector, Raster, Lattice, Point Pattern, Attribute, Topological, Temporal and Network*).

Primary and Secondary data; Methods of collecting Primary data, Questionnaire Vs Schedule. Steps in Questionnaire Preparation, Probability and Non-Probability Sampling Techniques. Optimal Sample Size Determination Methods, Sampling and Non-Sampling Error.

Sources of Secondary & Large-Scale Survey Data with Extraction Training (*IMF, WDI, RBI, ABDI, MoSPI, NASA Power Data, PLFS, and NSSO*).

#### **Unit – III**

Testing of Hypothesis; Null & Alternative, Goodness of fit, Confidence Interval, Power of test,  $\alpha$ , Type I & II errors, Procedure for testing of hypothesis, Properties of a good estimator. Data Import, Data Sorting, Data Transformation, Data Visualisation, and Data Tabulation. Cross tabulation, descriptive statistics, correlation, regression, t, Z, F and  $\chi^2$  test.

#### **Unit – IV**

Research Ethics; Meaning, Types, Ethical Guidelines in Social Science Research. Ethical Publication and Impact Factor (*h, g & i10*) Calculation. Plagiarism; Meaning, Types, Why do People Plagiarise?, How to Avoid Plagiarism?, Do's and Don'ts.

Report Writing; Types of Reports, Steps in Report Writing, Format of the Research Report, Principles of Writing, Referencing Using APA & MLA Style, Do's and Don'ts of Report.

### **Course Outcome**

- Enable students to understand the basics of research, the tools and techniques to be employed for computation and analysis of data.
- Train the students to prepare comprehensive research report.
- It will help the students to enhance the skill as researcher for undertaking independent research work.

## **9. INDIAN LITERATURE IN TRANSLATION: TRADITIONS AND PRACTICES**

### **Course objective:**

1. To provide hands-on experience in translation.
2. To enhance language-based skills and editing skills of students and make them competent
3. bilinguists and improve scope of employment in publishing houses, academics and as transcriptionists and translators in different Government and Non-Government Organizations.
4. To identify, translate and publish important texts into English (from Odia, and if possible, from other Indian languages).
5. To focus on inculcating human values in young minds

### **Contents**

#### **Unit – I**

- i. Linguistic, cultural and political aspects of translation
- ii. The impact of translation theory on practice

#### **Unit – II**

Indian Novels in English translation

- i. High Tide Ebb Tide: Gopinath Mohanty (Tr. Bikram Das; Sahitya Akademi:2007)
- ii. Bheda Akhila Nayak (Tr. Raj Kumar, Oxford University Press: 2017)
- iii. Raag Darbari Srilal Shukla (tr. Gillian Wright, Penguin: 2012 edition)
- iv. Samskara U.R. Anantha Murthy (tr. A.K.Ramanujam, Oxford University Press: 2012 edition)

#### **Unit – III**

- i. “Widow’s Brat” Fakir Mohan Senapati (tr. K.K. Mohapatra et.al. Bride Price and Other Stories, Rupa Publishers:2005)
- ii. “Witness” Sachidananda Routray (tr. K.K. Mohapatra et.al. The Harper Collins Book of Odia Short Stories, Harper Collins: 1999)
- iii. “The Descent” Tarunkanti Mishra (tr. Jatin Nayak, Katha Publications)
- iv. Postscript|| Kalindi Charan Panigrahi tr. J.P. Das (ed. J.P. Das, Vikas Publishing House, 1983)
- v. “Kafan” Premchand (tr. Md Asaduddin, Premchand: The Complete Short Stories, Penguin:2017)
- vi. “The Music Room” Tarashankar Bandopadhyay (tr. Arunava Sinha, The Greatest Bengali Stories Ever Told, Aleph: 2016)
- vii. “The Cardsharp’s Daughter” Vykom Mohammad Basheer (Modern Indian Literature, Oxford University Press)

viii. “Guest is God” Abdul Bismillah (Matter of Taste: The Penguin Book of Indian Writing on Food, Penguin: 2004)

#### **Unit – IV**

Selections from Bichitra Ramayana:

- i. A Voice from Wilderness (tr. Basant kumar Tripathy, Manohar Publishers)
- ii. Selections from Verses from the Void Bhima Bhoi (tr. Johannes Beltz, Bhima Bhoi: Verses from the Void, Manohar: 2010)
- iii. Love Stands Alone: Selections from Tamil Sangam Poetry tr. M.L. Thangappa (Penguin: 2010)
- iv. Selected ghazals Mirza Ghalib (tr. Frances W Prichett and Owen T.A. Cornwall Ghalib: Selected Poems and Letters, Columbia University Press, 2017)

#### **Course Outcome**

- Enhancing the bilingual skills of students and improve their employment prospects.
- By offering training in translation and editing, it hopes to non- practical skills of students especially from humanities and social sciences, but it would be equally helpful to anyone interested in literature.
- Since translation involves intense engagement with language, it will contribute to students’ communication skills

## **10. ORGANISATION AND PROCESSING OF LIBRARY RESOURCES**

### **Course objective:**

- To develop an understanding of the concept of library classification, theoretical and practical aspects of classification in the library.
- To develop an understanding of the concept of library cataloguing, theoretical and practical aspects of cataloguing in the library.
- To help in getting job in Government and Private Libraries and academics.

### **Contents**

#### **Unit – I**

- i. Definition, need and purpose of classification
- ii. Notational technique- Structures, Types and qualities
- iii. Call Number- basic concept and different parts

#### **Unit – II**

- i. Definition, need and purpose of cataloguing
- ii. Forms of catalogue- Inner and Outer forms
- iii. Kinds of entries and their functions according to AACR-II

#### **Unit – III**

- i. Dewey Decimal Classification (DDC)- Basic concept, Main classes, Tables
- ii. Design of class number of the documents related to simple subjects
- iii. Design of class number of the documents related to compound subjects

#### **Unit – IV**

- i. Anglo American Cataloguing Rules, 2nd edition (AACR-II)- Basic concept, rules for making cataloguing entries.
- ii. Preparation of main entry and added entries according to AACR-II of book materials relating to Personal Authors, Pseudonymous Authors and Corporate Authors.
- iii. Preparation of main entry and added entries according to AACR-II of Periodicals.

### **Course Outcome**

- Enables the students to understand the general theory of classification and universe of knowledge.
- To learn basic concept and importance of library cataloguing.
- Makes the students skilled in designing class number and shelving books in the library in a classified manner.
- Makes students skilled in methods of preparing catalogue of documents in the library.

## **11. OPERATIONS RESEARCH**

### **Course objective:**

- Operations research is often concerned with determining the extreme values of some real-world objective: the maximum (of profit, performance, or yield) or minimum (of loss, risk, or cost).
- It is the scientific study of operations for the purpose of making better decisions and improve professional ethical consideration

### **Contents**

#### **Unit – I**

Origin, Development, Nature, Features, and Applications of Operations Research. General Solution Methods for OR Models. Introduction to LPP, Graphical Solution Method of LPP, Simplex Method, Two Phase and Big M Simplex Method, Dual simplex Method, Post-Optimal Analysis.

#### **Unit – II**

Integer Programming: Fractional Cut Method-All Integer, Fraction Cut Method-Mixed Integer, Branch and Bound Method. Transportation Problem: Introduction, Solution of TP (North-West Corner Method, Least-Cost Method, Vogel's Approximation Method), Test for Optimality, Degeneracy in TP, Transportation Algorithm (MODI Method).

#### **Unit – III**

Assignment Problem, Travelling Salesman Problem, Sequencing Problem: Introduction, Processing N Jobs Through Two Machines, Processing Two Jobs Through K Machines. Games & Strategies: Introduction, Two-Person Zero-Sum Games, The Maximin-Minimax Principle. Games Without Saddle Points-Mixed Strategies, Dominance Property.

#### **Unit – IV**

Network Scheduling by PERT/CPM: Introduction, Network and Basic Components, Logical Sequencing, Rules of Network Construction, Critical Path Analysis. Non-Linear Programming Methods: Introduction, General Non-Linear Programming Problem, Constrained Optimization with Equality Constraints, Constrained Optimization with Inequality Constraints.

### **Course Outcome**

- Enables the student to develop skills in Finance, Budgeting and Investments: Credit policy analysis, Cash flow analysis, Dividend policies, and Investment portfolios.
- It will enhance skill in Marketing, and Distribution policy, Production scheduling, Optimum product mix, Project scheduling and allocation of resources.
- Generates scope to get employed in various industries and academics as well as in research institutes.

## 12. FOLK LITERATURE

### Course objective:

The course adds value to enhance human values and develops skills to grasp knowledge on Folk Literature of Odia. It helps the students to get employability in institutes and organization which deals with conservation and propagation of culture, tradition and literature along with a scope in academics.

### Contents

#### Unit – I

ଲୋକ ସାହିତ୍ୟର ସଂଜ୍ଞା, ସ୍ୱରୂପ ଓ ପ୍ରକାରଭେଦ

#### Unit – II

ଲୋକ ଗୀତ ଓ ଲୋକ କାହାଣୀ

#### Unit – III

ଲୋକ ନାଟକ ଓ ଲୋକୋକ୍ତି

#### Unit – IV

ବିଦଗ୍ଧ ସାହିତ୍ୟ ରୂପରେ ଲୋକ ସାହିତ୍ୟର ପ୍ରଭାବ

### Course Outcome

- Enables the student to skills learning folk literature
- Promotes skill in comparing folk literature with modern literature of Odia
- Helps the students to admire and conserve human values, Odia folk culture and literature

## **13. PHYSICS WITH SCILAB**

### **Course objective:**

- To enhance skill in solving different computational problems pertaining to physics and its allied subject
- To increase scope to find employability in research institutes, industries and academics.

### **Contents**

#### **Unit-I**

Introduction to Scilab environment, Scilab data types, Scilab environment, Command window, Figure window, Edit window, Variables and arrays, Initialising variables in Scilab, Variable passing in Scilab, optional arguments, preserving data between calls to a function, Complex and Character data.

#### **Unit-II**

String function, Multidimensional arrays, Sub-array, Special values, Displaying output data, data file, Scalar and array operations, Hierarchy of operations, Introduction to Scilab functions Built in Scilab functions, User defined functions, Branching Statements and program design, Relational & logical operators, the while loop, for loop, details of loop operations, break & continue statements, nested loops, logical arrays and vectorization. An introduction to Scilab file processing, file opening and closing, Binary I/o functions, comparing binary and formatted functions, Numerical methods and developing the skills of writing a program, Introduction to plotting, 2D and 3D plotting.

#### **Unit-III**

Curve fitting, Least square fit, Ohms law to calculate R, Solution of Linear system of equations by Gauss elimination method and Gauss Seidal method, Solution of mesh equations of electric circuits (3 meshes), Diagonalization of matrices, Inverse of a matrix, Eigen vectors, Eigen values problems. Solution of ODE First order Differential equation, Euler, modified Euler and Runge-Kutta second order methods Second Order differential equation. Fixed difference method. Radioactive decay, Current in RC, LC circuits with DC source, Second order Differential Equation, Harmonic oscillator (no friction), Damped Harmonic oscillator, Over damped, Critical damped, Oscillatory, Forced Harmonic oscillator.

#### **Unit-IV**

Solve boundary value differential equations; solve problems related to Dirac Delta Function, Fourier series, Frobenius method and special functions and Related problems Calculation of error from each data point of observations recorded in experiments, Calculation of least square fitting manually without giving weightage to error, Evaluation of trigonometric functions, complex analysis (integration), Integral transform Solve s-wave Schrodinger equation for the ground state and the first excited state of the hydrogen atom, Solve the s-wave radial Schrodinger equation for an atom influenced by screened Coulomb potential (With suitable parameters).

**Course outcome:**

- It provides all basic operations on matrices through built-in functions required to understand Physics.
- Its ability to plot 2D and 3D graphs helps in visualizing the data we work with (both theoretical and laboratory work).
- All these make Scilab an excellent tool for calculation, especially that involve matrix operations.

## **14. BASIC PRINCIPLES OF REMOTE SENSING AND APPLICATIONS**

### **Course objective:**

- To congregate the basic concepts and fundamentals of physical principles of remote sensing
- To impart the knowledge of fundamental of Thermal & Microwave Remote sensing and its applications
- To create a firm basis for successful integration of remote sensing in any field of application.
- To enhance the employability scope in Government, Non-Government and Quasi-Government Organizations, research institutes, industries engaged in developing Remote sensing devices and software and in academics.

### **Contents**

#### **Unit – I**

Fundamental & concept of Remote sensing, Basic Principle of electromagnetic radiation, basic laws of EMR, Interaction of EMR with Atmosphere and terrain features, Spectral reflectance curves, Spectral indices.

#### **Unit – II**

Remote sensing satellite, Concept of platforms and sensors, Types of sensors, Resolution of Sensors-spatial, spectral, radiometric and temporal.

#### **Unit – III**

Fundamental and concept of Thermal remote sensing, and Microwave Remote Sensing.

#### **Unit – IV**

Applications of RS for land use and land cover monitoring, water resources management.

### **Course Outcome**

- Enable students to gain knowledge in Concept and fundamental of Remote sensing, EMR and basic laws of EMR.
- Enhance skills in understanding the fundamentals of thermal & Microwave Remote Sensing.
- Develops skill of the students on application of remote sensing data separately and in combination with GIS techniques for Land use Land cover & water resource management and generates employability in different Government and Non-Government sectors.



## **16. ENVIRONMENTAL IMPACT ASSESSMENT (EIA)** **AND MANAGEMENT PLAN (EMP)**

### **Course objective:**

- To add values and skills in the minds of young students towards environmental protection, conservation and sustainability conservation, and make them the future guardians of nature.
- To promote skill of students to understand, think and evolve strategies for management and conservation of the environment for sustaining life on earth.
- To generate employability scope in various industries, Government and Non-Government Organizations to carry out research studies on EIA and EMP and during Project Feasibility Report preparation and their implementation

### **Contents**

#### **Unit – I**

General Introduction of EIA: Definition, purpose and characteristics of EIA, origin and evolution of EIA, participants in EIA process, stages of EIA, types of EIA, EIA regulations in India, National Environmental Policy (NEP), 2006 (objectives, principle and, strategies and action), Risk Assessment v/s Environmental Impact Assessment, Environmental Impact Statement (EIS) and Environmental Management Plan (EMP), Procedure of EIA

#### **Unit – II**

EIA Process and Methodologies: Screening, Scoping, Baseline data on EIA (environmental data, project data and project alternative data), Measurement of impact ( physical, social, economic, natural), Impact Identification ( Adhoc method, Checklist Method, Interaction Matrices- Network and overlays approach), Impact Prediction (positive and negative impacts, primary and secondary impacts, Impact on physical, social and biotic environments), Criteria and standards for assessing significant Impact, Cost- Benefit Analysis and Valuation of Environmental Impacts, Public Participation in environmental decision making, Documentation, presentation and review, Project Implementation, EIA monitoring and auditing

#### **Unit – III**

EIA Practice: Assessment of air, water and soil quality, Biodiversity in impact assessment (monitoring and mapping of biodiversity, guiding and operating principles of biodiversity), Social impact assessment (activities, guidelines, principles and core values), Landscape and visual impact assessment, Cumulative effects assessment, Major limitations of environmental impact assessment.

#### **Unit – IV**

Environmental Monitoring and Management: Management of physical, social, and economic

environment, Concepts and scope of environmental planning, regional planning and management, Basic laws of Ecology and their relevance for ecosystems management, Management practices for various ecosystems (grasslands, forests, mountains, wetlands and coastal areas), Environmental planning and management of wastelands, reclaimed lands, mining areas, human settlements, industrial lands and agricultural lands, Eco restoration/remediation using local and scientific knowledge.

### **Course Outcome**

- Students gain specific skills for monitoring the health of environmental systems.
- Students learn skills required to analyze environmental issues scientifically and to solve those issues using the analytical skills learned.

## **17. ADVANCED MOLECULAR BIOLOGY**

### **Course objective:**

- To add values and helps in developing skills in the minds of young students on various concepts and techniques involved in carrying out research in the field of molecular biology, biotechnology and allied fields.
- To have employability scope in various pharmaceutical, nutraceutical industries, research institutes, and in academics.

### **Course Contents:**

#### **Unit – I**

Introduction to Molecular Biology and techniques, methods of sterilization for microbial and animal cell culture experiments, Bacterial growth Curve, Antibiotic Sensitivity, Phage Titration., CRISPERCAS Pathway, FACS and Centrifugation Techniques for animal cell isolation, Primary cell culture and established cell lines, Cytotoxicity assays for drug efficacy.

#### **Unit – II**

Electrophoresis techniques (Horizontal and Vertical), Isolation, visualization and quantification of nucleic acids (RNA and DNA), Blotting Techniques (Southern, Northern, Western), Molecular Markers and DNA fingerprinting, Primer Designing, PCR, qPCR and DNA Sequencing.

#### **Unit – III**

Protein Purification through Chromatographic techniques and their estimation, Immunoelectrophoresis, Double Diffusion, Radial Immunodiffusion, ELISA and its types; Protein sequencing, Protein engineering.

#### **Unit – IV**

Introduction to Histology, Microtomy, Stains and Staining methods, Enzyme histochemistry, Immunohistochemistry, Probe preparation, in situ hybridization, Image processing and analysis using various software.

### **Course Outcome**

- Students gain specific skills for drug designing, isolation, purification and characterization of different biomolecules.
- Students increase their skill in developing antibodies and other immunological processes and products.
- Helps in the enhancement employability scope in various government and private research institutes, pharmaceutical industries and in academics.

## **18. EARLY CHILDHOOD CARE EDUCATION**

### **Course objective:**

The objective of this course is to equip students with skills for fostering holistic child development, emphasizing play-based Learning, Care, Empathy, and Foundational education.

### **Course Contents :**

#### **Unit-I :**

Introduction to Early childhood care education (ECCE), Principles of growth and development with relation to domains of development. Health, hygiene, nutrition and safety practice. Brain development in early years.

#### **Unit-II :**

Theoretical foundations and implications towards learning and development in early years: Behaviourism and social learning, Piaget's cognitive developmental theory.

#### **Unit-III :**

Concept, meaning and benefits of play way approach. Curriculum of play way approach: communication skills, early literacy, numeracy and reading skills.

#### **Unit-IV :**

Guiding concepts and developmentally appropriate methods: for infants to three years, three to six years. Management of behaviour, observation and assessment tools with strategies.

### **Course Outcome :**

The outcome of this course is to establish supportive learning environments that promote holistic development, early literacy, creativity, and lifetime educational achievement for young learners; the ECCE certificate course will demonstrate knowledge in child development, curriculum design, and inclusive teaching approaches.

## **19. DIETETICS & NUTRIGENOMICS**

### **Course Objectives:**

The course aims to:

1. Provide foundational knowledge of dietetics, nutrition science, and nutrigenomics.
2. Explain gene–diet interaction and the role of nutrients in regulating metabolic pathways.
3. Develop skills in nutritional assessment and therapeutic diet planning for clinical conditions.
4. Interpret genetic information to design personalized nutrition plans.
5. Understand ethical, social, and technological aspects of nutrigenomics.
6. Apply evidence-based strategies in clinical practice, research, and public health nutrition.

### **Course Contents :**

#### **Unit-I :**

- Introduction to nutrition and dietetics
- Classification, functions, and metabolism of nutrients
- Energy balance, dietary guidelines, RDA standards & WHO Standards
- Nutritional assessment and dietary survey methods
- Balanced diet planning for different age groups

#### **Unit-II :**

- Principles of diet therapy and modification
- Therapeutic Diets for Diabetes, Obesity, CVD, Renal Disorders, Liver Diseases, GI Disorders, Onco-nutrition, Neuro-nutrition
- Perinatal Nutrition, Pediatric Nutrition, Adult Nutrition & Geriatric Nutrition.
- Sports and performance nutrition
- Nutritional counseling and diet planning techniques

#### **Unit-III :**

- Concepts of nutrigenomics and nutrigenetics
- Gene structure, polymorphisms, SNPs, metabolism-related genes (MTHFR, APOE, FTO, etc.)
- Role of nutrients on gene expression & epigenetic regulation
- Gene–diet interactions in chronic diseases
- The Nutrient – Neuron relationship: effects of dietary patterns on brain health

**Unit-IV :**

- Personalized and precision nutrition approaches
- Genetic testing tools, SNP analysis, bioinformatics databases
- Microbiome and nutrigenomics
- Ethical, legal, and social considerations
- Global trends, innovations, and research opportunities

**Course Outcome :**

After completing the course, learners will be able to:

- Demonstrate understanding of macro & micronutrients and their physiological functions.
- Conduct nutritional assessments and prepare therapeutic diets for various health conditions.
- Explain the scientific basis of nutrigenomics and gene–diet interactions.
- Integrate genetic data to develop personalized diet and lifestyle recommendations.
- Critically evaluate current research trends and ethical issues in dietetics and nutrigenomics.

## **20. HUMAN RIGHTS: IDEAS AND CONCEPTS**

### **Course Objectives:**

The course aims to introduce students to global and Indian human rights frameworks, fostering understanding of fundamental rights, international conventions, and mechanisms protecting dignity, equality, and justice in society.

### **Course Contents:**

#### **Unit-I: Introduction**

- 1.1 Meaning, nature, and scope of human rights,
- 1.2. Historical development of human rights:
  - Magna Carta
  - American Revolution
  - French Revolution
- 1.3 Universal Declaration of Human Rights (UDHR)

#### **Unit-II: Evolution of Human Rights**

- 2.1 Three generations of human rights :
  - Civil and political rights
  - Economic, social, and cultural rights
  - Collective/solidarity rights
- 2.2 Human dignity, equality, and justice

#### **Unit-III: International Covenants: ICCPR, ICESCR**

- 3.1 UN Human Rights Council, UNICEF, UNHCR, UNESCO
- 3.2 International Humanitarian Law (Geneva Conventions)
- 3.3 Enforcement mechanisms & challenges
- 3.4 Role of international NGOs : Amnesty International, Human Rights Watch

#### **Unit-IV: Human Rights in India**

- 4.1 Human rights in the Indian Constitution
- 4.2 Fundamental Rights & Duties
- 4.3 Directive Principles of State Policy
- 4.4 National Human Rights Commission (NHRC) & State commissions
- 4.5 Human rights courts & legal aid services
- 4.6 Major issues : custodial violence, trafficking, bonded labour, women's rights, child rights, tribal rights

**Course Outcome :**

This course enables learners to understand the foundations of human rights, key international conventions, and Indian constitutional safeguards. It develops awareness, analytical skills, and the ability to identify violations while promoting respect, equality, and justice in society through informed participation and responsible citizenship.

## **21. ENTREPRENEURSHIP, FINANCE AND BUSINESS LAW**

### **Course Objectives:**

1. To provide foundational knowledge of business law, entrepreneurship, management, and financial literacy.
2. To develop essential employability skills such as resume writing, interview preparation, and digital presentation.
3. To prepare learners for professional and entrepreneurial opportunities through practical, skill-oriented training.

### **Course Contents:**

#### **Unit-I : Commerce and Law**

1. Basics of Business Law for Beginners
2. Consumer Protection Act, 2019
3. Competition Act, 2002
4. Basics of Intellectual Property Rights (IPR)

#### **Unit-II : Skill Development**

1. Resume Building
  - Structure, content, and tips for an impactful resume
2. Interview Skills
  - Preparation, common questions, communication, and body language
3. Digital Presentation Skills
  - Tools-PowerPoint

#### **Unit-III : Business and Management Skills**

1. Entrepreneurship
  - Meaning, concept, and types
  - Government initiatives and support
  - Case studies of successful entrepreneurs
2. Leadership and Teamwork
  - Leadership styles, qualities, and importance of team work
3. Business Ethics and Corporate Governance
  - Principles : transparency, accountability, fairness
  - Role in sustainable business practices

#### **Unit-IV : Financial Literacy**

1. Basic Understanding of Finance
  - Banking skills: accounts, debit/credit operations

- Loans and interest (simple & compound)
  - Credit score: importance and factors affecting it
  - Online banking: tools and safety
2. Basics of Investment
    - Stocks, mutual funds, fixed deposits, recurring deposits
    - Risk vs. return, diversification
  3. Insurance
    - Meaning, principles, and types (life, health, property, vehicle)
    - IRDAI Act, 1999
    - Benefits of insurance

### **Course Outcome:**

Upon successful completion of the course, learners will gain a foundational understanding of business law, entrepreneurship, management practices, and financial literacy. They will be able to apply essential employability skills such as resume writing, interview communication, and digital presentation. Additionally, learners will be equipped to make informed financial decisions and demonstrate professional readiness for business or entrepreneurial pathways.

## **22. MANUSCRIPTOLOGY (पाण्डुलिपि-विज्ञानम्)**

### **Objectives of the Course**

- To introduce students to the science of Manuscriptology (पाण्डुलिपि-विज्ञानम्)
- To train students in identifying, reading, and preserving Sanskrit manuscripts
- To develop skills in cataloguing and descriptive listing of manuscripts
- To create awareness about Indian manuscript heritage and conservations techniques

### **Course Contents :**

#### **Unit-I: Introduction to Manuscriptology पाण्डुलिपि-विज्ञानस्य भूमिका**

- पाण्डुलिपि-विज्ञानस्य परिभाषा स्वरूपं च (Meaning and Scope of Manuscriptology)
- भारतस्य पाण्डुलिपि-परम्परा (History of Manuscripts in India)
- पाण्डुलिपिनां सांस्कृतिकं शास्त्रीयं च महत्त्वम् (Importance of Manuscripts in Indian Knowledge Systems)
- पाण्डुलिपिनां प्रकाराः (Types of Manuscripts)
  - तालपत्र-पाण्डुलिपयः (Palm-leaf)
  - भूर्जपत्र-पाण्डुलिपयः (Birch-bark)
  - कर्गद-पाण्डुलिपयः (Paper Manuscripts)

#### **Unit-II: लेखन-सामग्री तथा लिपयः (Scripts and Writing Materials)**

भारतस्य प्रमुखा लिपयः (Major Indian Scripts) :

- ब्राह्मी (Brāhmī)
- गुप्त (Gupta)
- शारदा (Śāradā)
- नागरी (Nāgarī)
- ग्रन्थ (Grantha)
- नन्दिनागरी (Nandināgarī)
- ओडिया, बाङ्गला-लिपी च (Bengali, Oriya)
- लिप्याक्षराणां विकास

### **Unit-III: लिपिविज्ञानम् (Paleography)**

- लिपीनां ऐतिहासिक-विकासः (Evolution of Indian Scripts)
- अक्षर-रूप-भेदाः (Letter forms and variations)
- लिप्या आधारेण पाण्डुलिपि-काल-निर्णयः (Dating of manuscripts based on script)
- विविध-लिपिषु पठन-अभ्यासः (Practice in reading different scripts)

### **Unit-IV: पाण्डुलिपि-भौतिकविज्ञानम् (Codicology)**

- पृष्ठ-सङ्ख्याङ्कनम् (Physical features of manuscripts)
- सीमालेखाः, टिप्पण्यः च (Foliation, Pagination, and Marginal notes)
- पाठ-दोषाः – लोप, अधिक, विपर्यय (Errors in manuscripts)
- डिजिटलीकरणम् (अङ्क-रूपान्तरणम्) (Digitization of manuscripts)

### **Course Outcome:**

After completing this course, the learners will be able to :

- Identify various types of Sanskrit manuscripts
- Read and analyse basic manuscript scripts
- Prepare descriptive catalogue entries
- Apply preservation and digitization methods

## **23. NGO MANAGEMENT**

### **Course Objectives:**

- Identify some essential features of an NGO;
- Understanding the issues and challenges to NGO Management;
- Develop skills to analyze and understand NGOs;
- Emphasize the importance of governance and leadership in Managing the NGOs effectively;

### **Course Contents:**

#### **Unit-I : NGO: An Introduction**

Definition, Kinds of NGOs functioning in India, Role of NGOs in Special Reformation : Formation of NGO, Working of NGOs, Government recognize NGOs.

#### **Unit-II : NGO Management**

Understanding the context, Aid to development, Poverty & Development, Poverty & Vulnerability, Poverty & powerlessness, Dependency to sustainability, Development Indicators, Leadership, Need for Leadership with values.

#### **Unit-III : Problem Identification and governance**

Problem Identification, Problem of NGOs, strengthening voluntary efforts, Managing People, Fund Raising, Fund Utilization, Concept, Governance and Management, Need for good Governance for NGOs, Ethical Challenges.

#### **Unit- IV : NGO Management and social Work**

Resources Mobilization, Funding agencies: Type & Patterns of funding, Records, Records, Problem of Organization, PRA (Participatory Rural Approaches).

### **Course Outcome :**

- To understand the concept NGO
- To know about the voluntary organizations work
- To gain knowledge on Project and Planning
- To implement skills of fundraising applications

### **IMPORTANT DATES AND LINK**

Starting date of Application cum Admission	22 <sup>nd</sup> December, 2025
Last date of Application cum Admission	5 <sup>th</sup> January, 2026
Fees and mode of Payments	Online/ NEFT/ Bank Challan
Link for Admission	<a href="https://forms.gle/T5YbxFheXoVA5fTaA">https://forms.gle/T5YbxFheXoVA5fTaA</a>